

Speakers and Vacuum Tubes

Buzzers & Transducers



R 1

Speakers



R 9

Audio Amplifiers



R 21

Speaker Accessories



R 23

Car Speakers



R 26

Vacuum Tubes

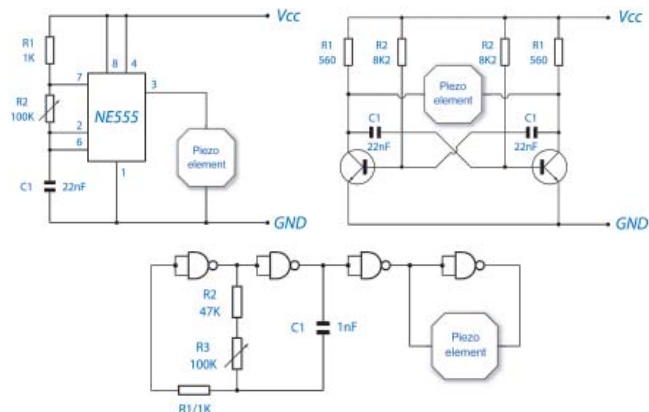


R 28

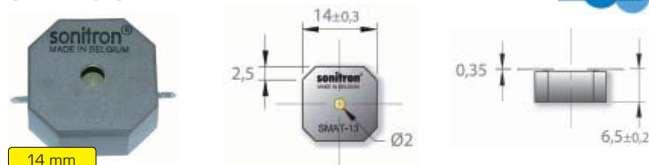
Piezo Buzzers without Driver

SMAT Series

The SMAT transducers are specifically developed to meet various requirements, such as loud sound pressure level, mounting methods, connection possibilities and dimensions. The transducers do not have a built-in oscillator. The drive frequency must be generated with electronics outside the transducers. Our transducers produce a highly reliable tone signal, giving either an extremely clear and penetrating tone or a soft sound for non-aggressive signals.



SMAT-13-S



Technical Parameters		SMAT-13-S
Frequency Range		800 - 5000 Hz
Operating Voltage		0 - 30 VACpp
Max. SPL at 10Vpp		82 dB/3 kHz/30cm
Capacitance		7,8 nF
Operating Temperature		-20°C to +70°C

Part No.	Ord.No.
S SMAT-13-S	64094

SMAT-17-S



Technical Parameters		SMAT-17-S
Frequency Range		800 - 5000 Hz
Operating Voltage		0 - 30 VACpp
Max. SPL at 10Vpp		84 dB/3,5 kHz/30cm
Capacitance		17,5 nF
Operating Temperature		-20°C to +70°C

Part No.	Ord.No.
S SMAT-17-S	64095

SMAT-21-S



Technical Parameters		SMAT-21-S
Frequency Range		600 - 5000 Hz
Operating Voltage		0 - 30 VACpp
Max. SPL at 10Vpp		90 dB/3,8 kHz/30cm
Capacitance		12,4 nF
Operating Temperature		-20°C to +70°C

Part No.	Ord.No.
S SMAT-21-S	64096

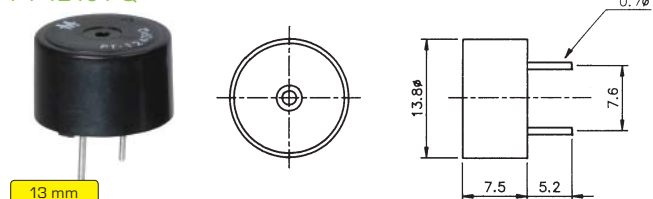
SMAT-24-S



Technical Parameters		SMAT-24-S
Frequency Range		400 - 5000 Hz
Operating Voltage		0 - 30 VACpp
Max. SPL at 10Vpp		86 dB/3kHz/30cm
Capacitance		18,6 nF
Operating Temperature		-20°C to +70°C

Part No.	Ord.No.
S SMAT-24-S	64097

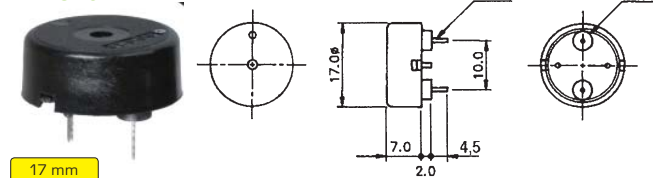
PT 1240 PQ



Technical Parameters		PT 1240 PQ
Resonant Frequency		4,1 kHz
Max. Operating Voltage		20 VDC
SPL at 5V		80 dB/10cm
Current Consumption		2 mA
Capacitance		17 000 pF
Operating Temperature		-20°C to +70°C

Part No.	Ord.No.
S PT 1240 PQ	7742

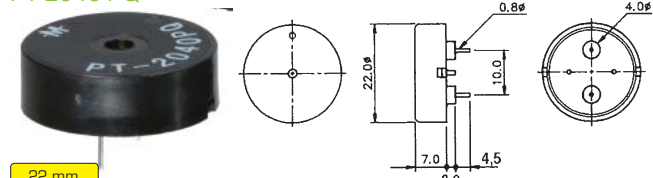
PT 1540 P



Technical Parameters		PT 1540 P
Resonant Frequency		4,0 kHz
Max. Operating Voltage		25 VDC
SPL at 5V		80 dB/10cm
Current Consumption		1,5 mA
Capacitance		14 000 pF
Operating Temperature		-20°C to +100°C

Part No.	Ord.No.
S PT 1540 P	4658

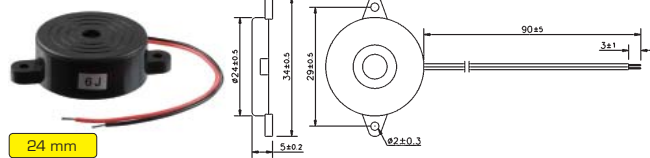
PT 2040 PQ



Technical Parameters		PT 2040 PQ
Resonant Frequency		4,0 kHz
Max. Operating Voltage		30 VDC
SPL at 5V		90 dB/10cm
Current Consumption		1,5 mA
Capacitance		20 000 pF
Operating Temperature		-20°C to +85°C

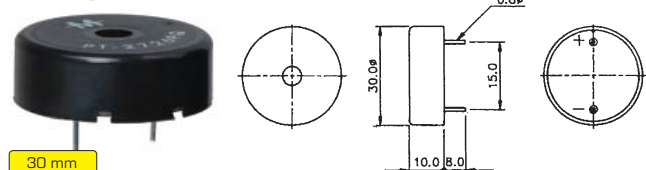
Part No.	Ord.No.
S PT 2040 PQ	5181

PT 2060 WQ



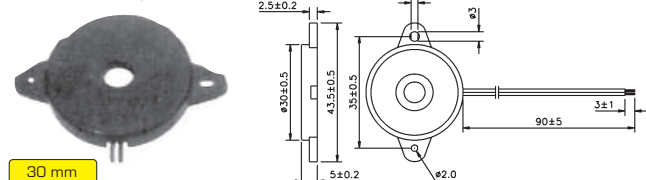
Technical Parameters		PT 2060 WQ
Resonant Frequency		6,0 kHz
Max. Operating Voltage		30 VDC
SPL at 5V		90 dB/10cm
Current Consumption		1,5 mA
Capacitance		12 000 pF
Operating Temperature		-20°C to +70°C
Part No.	Ord.No.	
S PT 2060 WQ	5088	

PT 2726 P



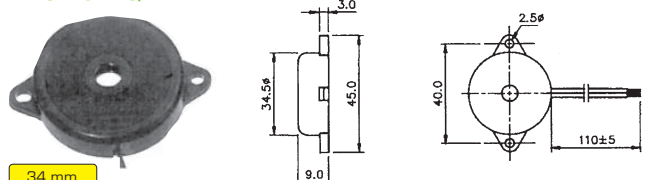
Technical Parameters		PT 2726 P
Resonant Frequency		2,5 kHz
Max. Operating Voltage		30 VDC
SPL at 5V		90 dB/10cm
Current Consumption		1,5 mA
Capacitance		30 000 pF
Operating Temperature		-20°C to +70°C
Part No.	Ord.No.	
S PT 2726 P	4924	

PT 2745 WQ



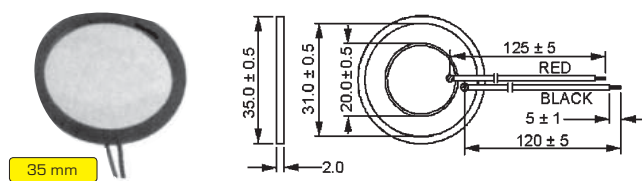
Technical Parameters		PT 2745 WQ
Resonant Frequency		4,5 kHz
Max. Operating Voltage		30 VDC
SPL at 5V		90 dB/10cm
Current Consumption		1,5 mA
Capacitance		20 000 pF
Operating Temperature		-20°C to +90°C
Part No.	Ord.No.	
S PT 2745 WQ	5087	

PT 3110 WQ



Technical Parameters		PT 3110 WQ
Resonant Frequency		1,1 kHz
Max. Operating Voltage		30 VDC
SPL at 5V		85 dB/10cm
Current Consumption		2 mA
Capacitance		48 000 pF
Operating Temperature		-20°C to +90°C
Part No.	Ord.No.	
S PT 3110 WQ	4923	

PB 3112 Q



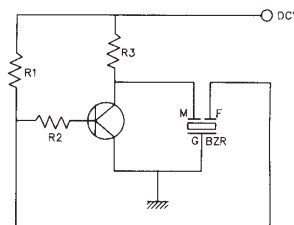
Technical Parameters		PB 3112 Q
Resonant Frequency		1,1 kHz
Max. Operating Voltage		40 VDC
SPL at 5V		75 dB/10cm
Current Consumption		1,5 mA
Capacitance		48 000 pF
Operating Temperature		-20°C to +70°C
Part No.	Ord.No.	
S PB 3112 Q	4925	

Piezo Buzzers with Driver

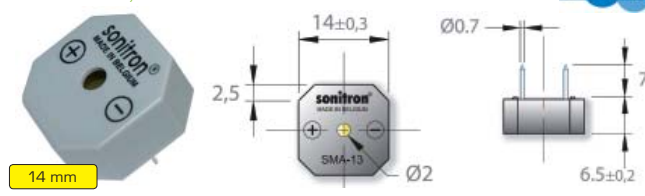
Sonitron SMA



The Sonitron Multi-Application buzzers are low cost commercial grade components for large volume applications. The SMA series are designed to meet various requirements such as Current Consumption, voltage, sound pressure, mounting methods, connection, dimensions and packaging. The buzzers have a built-in oscillator generating their working frequency. They produce a highly reliable tone signal giving either an extremely clear and penetrating tone or a soft sound for non-aggressive signals.

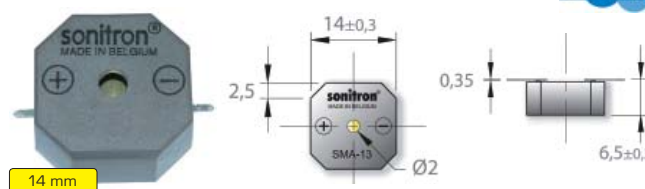


SMA-13-P7,5 14mm



Technical Parameters		SMA-13-P7,5
Sound Frequency		3,0 kHz
Operating Voltage		1,5 - 24 VDC
SPL at 12V		75 dB/30cm
Current Consumption		1,8 mA
Operating Temperature		-20°C to +70°C
Part No.	Ord.No.	
S SMA-13-P7,5	64085	

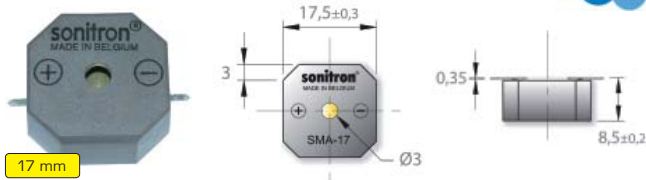
SMA-13-S



Technical Parameters		SMA-13-S
Sound Frequency		3,0 kHz
Operating Voltage		1,5 - 24 VDC
SPL at 12V		75 dB/30cm
Current Consumption		1,8 mA
Operating Temperature		-20°C to +70°C
Part No.	Ord.No.	
S SMA-13-S	64064	

Piezo Buzzers with Driver (continued)

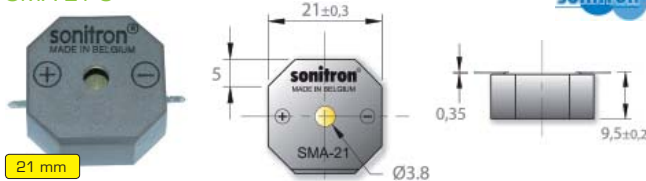
SMA-17-S



Technical Parameters		SMA-17-S
Sound Frequency		3,0 kHz
Operating Voltage		1,5 - 24 VDC
SPL at 12V		82 dB/30cm
Current Consumption		3,3 mA
Operating Temperature		-20°C to +70°C

Part No.	Ord.No.
s SMA-17-S	64067

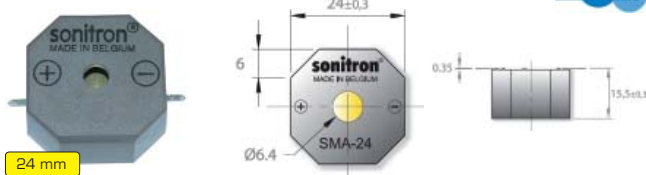
SMA-21-S



Technical Parameters		SMA-21-S
Sound Frequency		3,3 kHz
Operating Voltage		1,5 - 24 VDC
SPL at 12V		85 dB/30cm
Current Consumption		3,8 mA
Operating Temperature		-20°C to +70°C

Part No.	Ord.No.
s SMA-21-S	64068

SMA-24-S

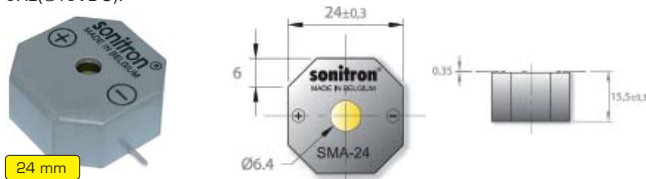


Technical Parameters		SMA-24-S
Sound Frequency		3,0 kHz
Operating Voltage		1,5 - 24 VDC
SPL at 12V		92 dB/30cm
Current Consumption		4,2 ma
Operating Temperature		-20°C to +70°C

Part No.	Ord.No.
s SMA-24-S	64072

SMAI-24-S

*SMAI (Sonitron Multi-Application Intermittent) : intermittent pulse rate of 5Hz@15VDC).



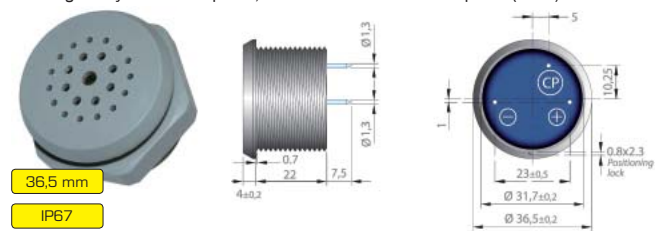
Technical Parameters		SMAI-24-S
Sound frequency*		3,5 kHz
Operating Voltage		5 - 24 VDC
SPL at 12V		92 dB/30cm
Current Consumption		6,2 mA
Operating Temperature		-20°C to +70°C

Part No.	Ord.No.
s SMAI-24-S	64075

SC 235 AF



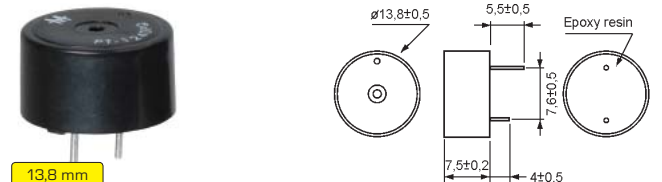
The standard series are based on the highest piezo technology and are considered as most robust series for industrial applications. The standard buzzers use a special shaped membrane (curved edge), which is fixed and glued into the housing. They are shock proof, as well as dust and waterproof (IP67).



Technical Parameters		SC 235 AF
Sound Frequency		2,5 kHz
Operating Voltage		2 - 35 VDC
SPL at 12V		73 dB/1m
Current Consumption		max. 8,6 mA
Operating Temperature		-35°C to +70°C

Part No.	Ord.No.
s SC 235 AF	64102

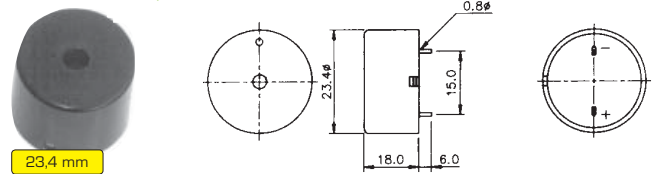
PK 12N40 PETQ



Technical Parameters		PK 12N40 PETQ
Sound Frequency		4,1 kHz
Operating Voltage		3 - 15 VDC
SPL at 5V		83 dB/10cm
Current Consumption		10 mA
Operating Temperature		-20°C to +90°C

Part No.	Ord.No.
s PK 12N40 PETQ	4971

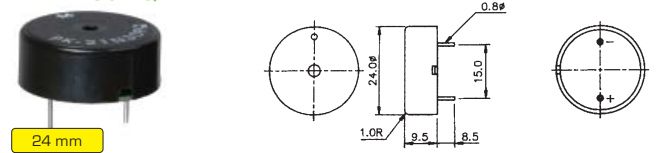
PK 20N38 PQ



Technical Parameters		PK 20N38 PQ
Sound Frequency		3,8 kHz
Operating Voltage		3 - 28 VDC
SPL at 5V		85 dB/10cm
Current Consumption		12 mA
Operating Temperature		-20°C to +70°C

Part No.	Ord.No.
s PK 20N38 PQ	7743

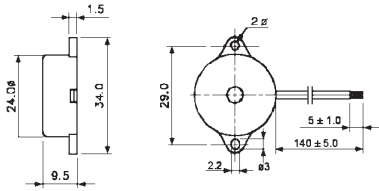
PK 21N30 PQ



Technical Parameters		PK 21N30 PQ
Sound Frequency		3,0 kHz
Operating Voltage		1,5 - 30 VDC
SPL at 5V		80 dB/10cm
Current Consumption		12 mA
Operating Temperature		-20°C to +70°C

Part No.	Ord.No.
s PK 21N30 PQ	3351

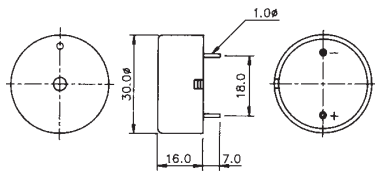
PK 21N30 WQ



Technical Parameters		PK 21N30 WQ
Sound Frequency		3,0 kHz
Operating Voltage		1,5 - 30 VDC
SPL at 5V		80 dB/10cm
Current Consumption		12 mA
Operating Temperature		-20°C to +70°C

Part No.	Ord.No.
S PK 21N30 WQ	4926

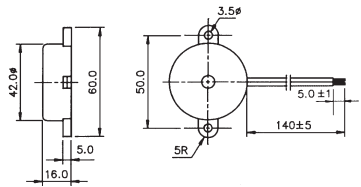
PK 27N35 PQ



Technical Parameters		PK 27N35 PQ
Sound Frequency		3,5 kHz
Operating Voltage		3 - 28 VDC
SPL at 5V		90 dB/10cm
Current Consumption		15 mA
Operating Temperature		-20°C to +70°C

Part No.	Ord.No.
S PK 27N35 PQ	5141

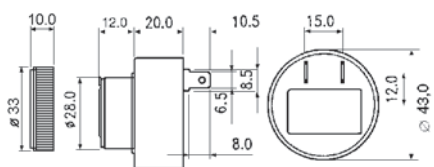
PK 35N29 WQ



Technical Parameters		PK 35N29 WQ
Sound Frequency		2,9 kHz
Operating Voltage		3 - 28 VDC
SPL at 5V		90 dB/10cm
Current Consumption		10 mA
Operating Temperature		-20°C to +70°C

Part No.	Ord.No.
S PK 35N29 WQ	6541

PK 35N29 EPQ

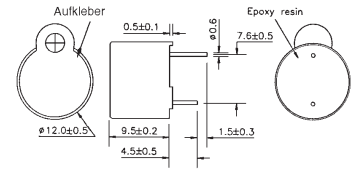


Technical Parameters		PK 35N29 EPQ
Sound frequency		2,9 kHz
Operating Voltage		3 - 28 VDC
SPL at 5V		90 dB/10cm
Current Consumption		8 mA
Operating Temperature		-20°C to +70°C

Part No.	Ord.No.
O PK 35N29 EPQ	7744

DC Type Magnetic Buzzers

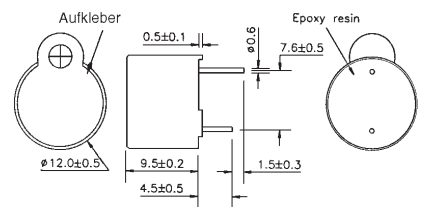
PB 12N23P05Q



Technical Parameters		PB 12N23P05Q
Sound frequency		2,3 kHz
Operating Voltage		4,5 - 5,5 VDC
SPL		85 dB/10cm
Current Consumption		50 mA
Operating Temperature		-20°C to +70°C

Part No.	Ord.No.
S PB 12N23P05Q	8037

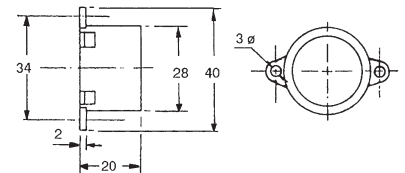
PB 12N23P12Q



Technical Parameters		PB 12N23P12Q
Sound Frequency		2,3 kHz
Operating Voltage		9 - 15 VDC
SPL		85 dB/10cm
Current Consumption		50 mA
Operating Temperature		-20°C to +70°C

Part No.	Ord.No.
S PB 12N23P12Q	8038

PEB 90 S

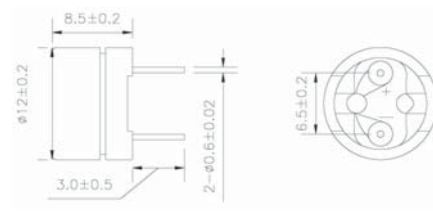
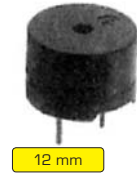


Technical Parameters		PEB 90 S
Sound Frequency		2,8 kHz
Operating Voltage		6 - 11 VDC
SPL		90 dB/30cm
Current Consumption		40 mA
Operating Temperature		-20°C to +60°C

Part No.	Ord.No.
S PEB 90 S	11258

AC Type Magnetic Buzzers

ALP-60P



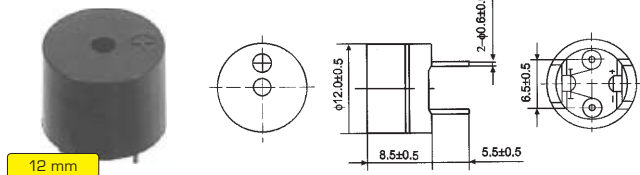
Technical Parameters		ALP-60P
Sound Frequency		2,048 kHz
Max. Operating Voltage		1,5 VAC
SPL		85 dB/10 cm
Current Consumption		32 mA
Operating Temperature		-20°C to +60°C

Part No.	Ord.No.
S ALP-60P	11262

AC Type Magnetic Buzzers

(continued)

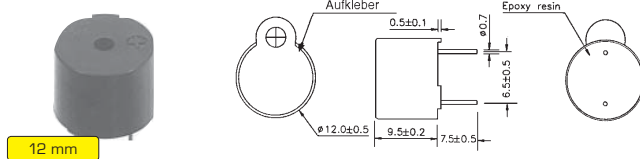
DB111FLF-PN



Technical Parameters	DB111FLF-PN
Sound Frequency	2,048 kHz
Max. Operating Voltage	1,5 VAC
Current Consumption	15 mA
SPL	80 dB/10 cm
Operating Temperature	-20°C to +60°C

Part No.	Ord.No.
S DB111FLF-PN	45182

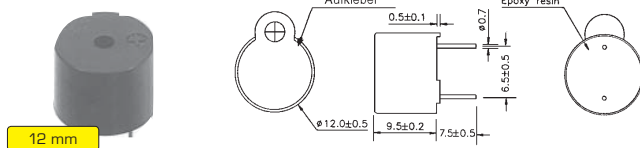
PB 1224PE05Q



Technical Parameters	PB 1224PE05Q
Sound Frequency	2,4 kHz
Max. Operating Voltage	4,5 - 5,5 VAC
SPL	85 dB/10cm
Current Consumption	60 mA
Operating Temperature	-20°C to +70°C

Part No.	Ord.No.
S PB 1224PE05Q	8040

PB 1224PE12Q



Technical Parameters	PB 1224PE12Q
Sound frequency	2,4 kHz
Max. Operating Voltage	9 - 15 VAC
SPL	85 dB/10cm
Current Consumption	40 mA
Operating Temperature	-20°C to +70°C

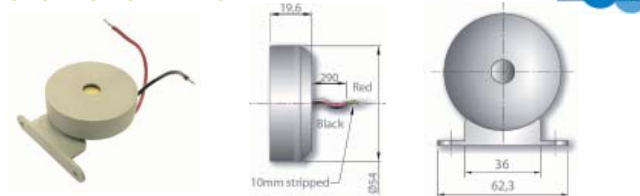
Part No.	Ord.No.
S PB 1224PE12Q	8041

Sirens

SAS-2154 and SAS-2835 Series

This piezo-electric sirens with high sound pressure, low weight and low current consumption. The sound output is a powerful, clear and aggressive warning signal. There are many applications for this siren : all fire alarms, cars and motor vehicles, automation equipment, security devices, etc. The vibrating elements are unique and developed at Sonitron (worldwide patented). This series made of high quality materials, offers extreme reliability and robustness, and features a life time over 2.000 hours in continuous use. Dust tight, waterproof (IP67).

SAS-2154-S-W-MB3

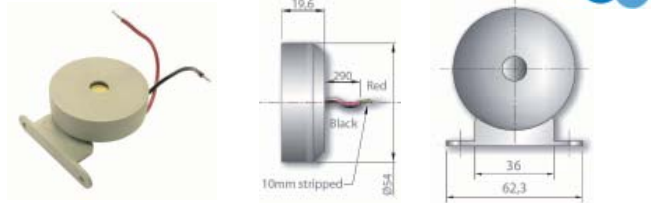


Technical Parameters	SAS-2154-S-W-MB3
Sound Frequency	2 - 3,5 kHz sweep 3 Hz

Operating Voltage	6 - 15 VDC
SPL at 15 VDC	105 dB/1m
Current Consumption at 12 VDC	100 mA
Operating Temperature	-40°C to +60°C
Ingress Protection	IP67

Part No.	Ord.No.
S SAS-2154-S-W-MB3	64101

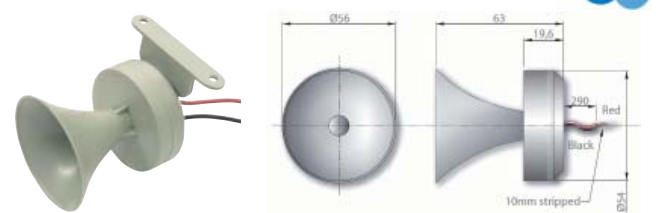
SAS-2154-W-W-MB3



Technical Parameters	SAS-2154-W-W-MB3
Sound Frequency	3 kHz a 3,5 kHz warbler
Operating Voltage	6 - 15 VDC
SPL at 15 VDC	105 dB/1m
Current Consumption at 12 VDC	110 mA
Operating Temperature	-40°C to +60°C
Ingress Protection	IP67

Part No.	Ord.No.
S SAS-2154-W-W-MB3	64100

SAS-2835-12V-W-MB3

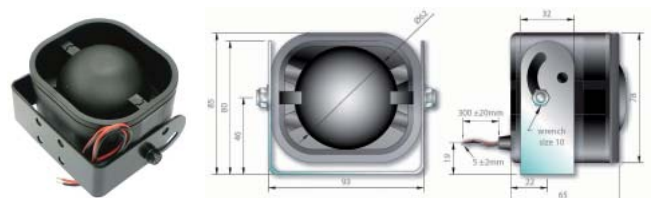


Technical Parameters	SAS-2835-12V-W-MB3
Sound Frequency	1,8 - 3,5 kHz sweep
Operating Voltage	6 - 15 VDC
SPL at 12 VDC	110 dB/1m
Current Consumption	120 mA
Operating Temperature	-40°C to +60°C
Ingress Protection	IP67

Part No.	Ord.No.
S SAS-2835-12V-W-MB3	64099

SAS-325A-6

The SAS-325A-6 is a universal electromagnetic siren with very high sound output. At 30 cm the sound pressure level is about 123 dB(A). Six different alarm tones can be programmed by jumpers selection, which enables the user to choose and pre-select an alarm function for different application fields.



Technical Parameters	SAS-325A-6
Sound Frequency	6 adjustable
Operating Voltage	12 VDC
SPL	123 dB/30 cm
Current Consumption	1 A
Ingress Protection	IP60
Note	Suitable as evacuation alarm

Part No.	Ord.No.
S SAS-325A-6	64034

SAS-81-12V



This small sized piezoceramic siren produces a very powerful sound output at low frequencies and low Current Consumption. It can be used in an endless type of applications such as car and motorbike alarms and for many different security functions.

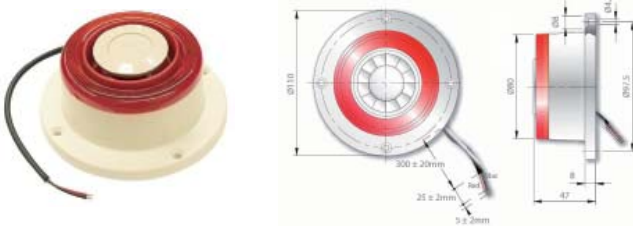


Technical Parameters		SAS-81-12V / SAS-81-24V
Sound Frequency		1,5 - 3,5 kHz sweep 1 Hz
Operating Voltage		6 - 14 VDC / 14 - 28 VDC
SPL		115 dB/30 cm
Current Consumption at 12 VDC		130 mA
Ingress Protection		IP67
Part No.	Ord.No.	
S SAS-81-12V	64036	
S SAS-81-24V	64038	

SAS-87-12V



This ceiling mountable piezoceramic siren is used for very loud immediate attention-getting functions. The sound output level reaches 122 dB(A). Combined with a visual eye-catching flashlight, the siren gets immediate attention. This siren is especially suited for use in applications such as fire alarms, automation equipment, security devices, emergency warnings and as safe guards.

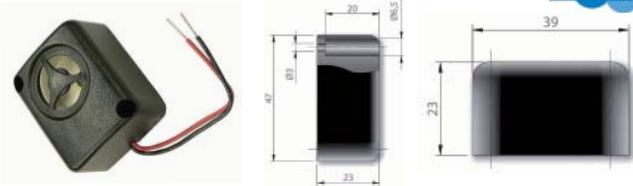


Technical Parameters		SAS-87-12V
Sound frequency		1,5 - 3,5 kHz sweep 1 Hz
Operating Voltage		6 - 14 VDC
SPL		122 dB/30 cm
Current Consumption		250 mA
Ingress Protection		IP65
Part No.	Ord.No.	
S SAS-87-12V	64032	

SAS-RL72 and SAS-RH72 Series

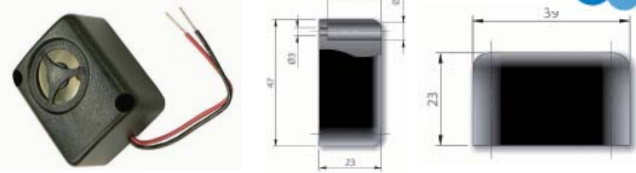
This small sized piezo ceramic alarm creates a low and deep soft clock sound for recalling. The low decibel sound is used for cars and vehicles recalling door danger or other critical situations.

SAS-RH72



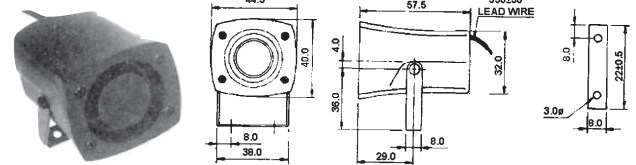
Technical Parameters		SAS-RH72
Sound Frequency		2,7 kHz fast pulse, 3 Hz
Operating Voltage		6 - 14 VDC
SPL		100 dB/30 cm
Current Consumption		10 mA
Ingress Protection		IP60
Part No.	Ord.No.	
S SAS-RH72	64040	

SAS-RL72



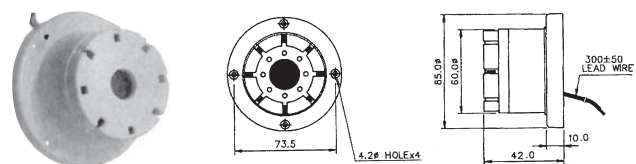
Technical Parameters		SAS-RL72
Sound Frequency		400 Hz fast pulse, 0,5 Hz
Operating Voltage		6 - 28 VDC
SPL		90 dB/30 cm at 12 VDC 95 dB/30 cm at 24 VDC
Current Consumption		max. 45 mA
Ingress Protection		IP60
Part No.	Ord.No.	
S SAS-RL72	64039	

PS 523 AQ



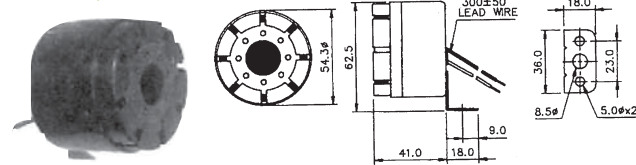
Technical Parameters		PS 523 AQ
Sound Frequency		1,5 - 4 kHz sweep 4,5 Hz
Operating Voltage		12 VDC
SPL		105 dB/1m
Current Consumption		200 mA
Operating Temperature		-20°C to +70°C
Part No.	Ord.No.	
S PS 523 AQ	11259	

PS 532 Q



Technical Parameters		PS 532 Q
Sound Frequency		2,3 - 3,5 kHz high/low 1,2 Hz
Operating Voltage		12 VDC
SPL		105 dB/1m
Current Consumption		200 mA
Operating Temperature		-20°C to +70°C
Part No.	Ord.No.	
S PS 532 Q	4928	

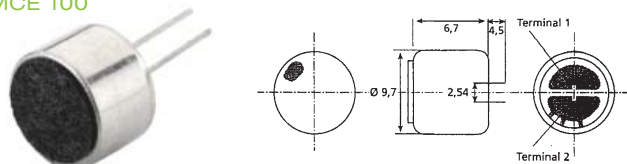
PS 552 Q



Technical Parameters		PS 552 Q
Sound frequency		2,3 - 3,5 kHz high/low 1,2 Hz
Operating Voltage		12 VDC
SPL		105 dB/1m
Current Consumption		200 mA
Operating Temperature		-20°C to +70°C
Part No.	Ord.No.	
S PS 552 Q	4929	

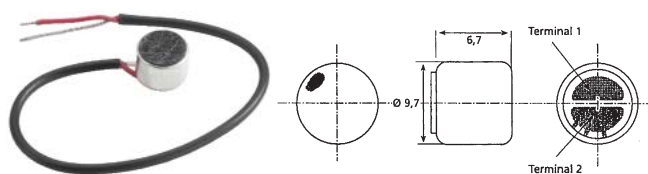
Electret Microphones

MCE 100



Technical Parameters		MCE 100
Frequency Range		50 - 10 000 Hz
Operating Voltage		1,5 - 10 V
Current Consumption		0,5 mA
Output Impedance		2000 Ω
Sensitivity		-5,6 mV/Pa (1 kHz)
Part No.	Ord.No.	
S MCE 100	11261	

MCE 101



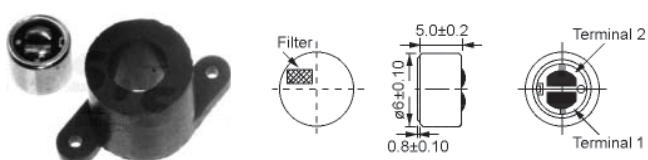
Technical Parameters		MCE 101
Frequency Range		50 - 10 000 Hz
Operating Voltage		1,5 - 10 V
Current Consumption		0,5 mA
Output Impedance		2000 Ω
Sensitivity		-5,6 mV/Pa (1 kHz)
Part No.	Ord.No.	
S MCE 101	4931	

EKM62



Technical Parameters		EKM62
Frequency Range		50 - 10 000 Hz
Operating Voltage		1,5 - 10 V
Current Consumption		0,4 mA
Output Impedance		2000 Ω
Sensitivity		-62 dB
Part No.	Ord.No.	
S EKM62	8042	

PMOF6050NS-45U



Technical Parameters		PMOF6050NS-45U
Frequency Range		20 - 16 000 Hz
Operating Voltage		1 - 10 V
Current Consumption		0,5 mA
Output impedance		2200 Ω
Sensitivity		-65 dB
Part No.	Ord.No.	
S PMOF6050NS-45U	4551	

Dynamic Microphones

CD 202



Technical Parameters		CD 202
Frequency Range		100 - 12 500 Hz
Impedance		600 Ω
Sensitivity		-77 dB
Connector		Jack 6,3 mm
Cable Length		2,5 m
Weight		110 g
Part No.	Ord.No.	
S CD 202	60458	

DM-222



Technical Parameters		DM-222
Frequency Range		50 - 12 500 Hz
Impedance		600 Ω
Connector		XLR / Jack 6,3 mm
Cable Length		3 m
Weight		190 g
Part No.	Ord.No.	
S DM-222	46145	

EH-002



Technical Parameters		EH-002
Frequency Range		50 - 15 000 Hz
Impedance		600 Ω
Sensitivity		-54 dB
Connector		XLR / Jack 6,3 mm
Cable Length		5 m
Weight		285 g
Part No.	Ord.No.	
S EH-002	62242	

Speakers Overview

Speakers for home applications

Tweeters
Woofers
Wideband multi-purpose loudspeakers
Mid-range speakers



Speakers for industrial applications

Water resistant speakers with moulded plastic cone, plastic basket and grille and silicon-coated leads. Clear-cut high-range output, 100 V line distribution network



Car speakers

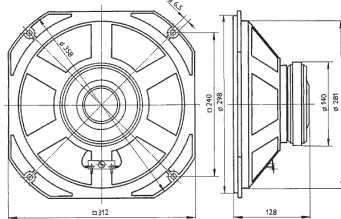
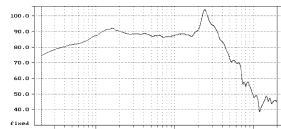
Straightforward installation in vehicles, waterproof cone



TVM Woofers

ARN 312-00/4

Woofer with very low resonance frequency and low distortion intended for use in high quality domestic loudspeaker system.



Technical Parameters ARN 312-00/4 / ARN 312-00/8

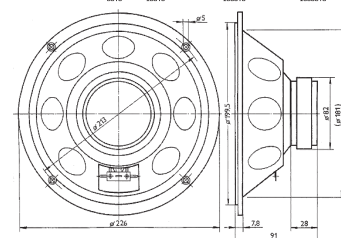
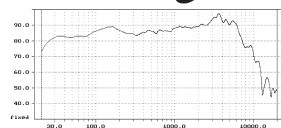
Diameter	312 mm
Depth	128 mm
Rated Noise Power	100 W
Short Term Maximum Power	300 W
Impedance	4 Ω / 8 Ω
Resonant Frequency	24 Hz / 26 Hz
Rated Frequency Range	20-1000 Hz
Sensitivity	90 dB

Part No.	Ord.No.
S ARN 312-00/4	8703
S ARN 312-00/8	8704

ARN 226-05/4

ARN 226-05/8

Woofer for HiFi loudspeaker systems. With coating of cone.



Technical Parameters ARN 226-05/4 / ARN 226-05/8

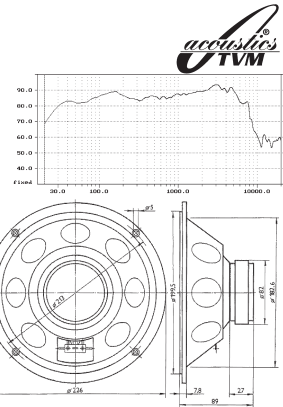
Diameter	226 mm
Depth	91 mm
Rated Noise Power	70 W
Short Term Maximum Power	140 W
Impedance	4 Ω / 8 Ω
Resonant Frequency	33 Hz / 34 Hz
Rated Frequency Range	30-3000 Hz
Sensitivity	86 dB

Part No.	Ord.No.
S ARN 226-05/4	8701
S ARN 226-05/8	8702

ARN 226-08/4

ARN 226-08/8

Woofer for HiFi loudspeaker systems. With coating of polypropylene cone.



Technical Parameters ARN 226-05/4 / ARN 226-05/8

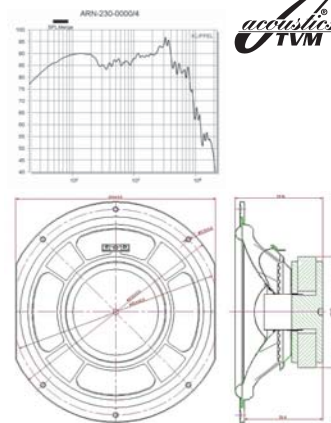
Diameter	226 mm
Depth	89 mm
Rated Noise Power	70 W
Short Term Maximum Power	210 W
Impedance	4 Ω / 8 Ω
Resonant Frequency	34 Hz
Rated Frequency Range	35-3000 Hz
Sensitivity	87 dB

Part No.	Ord.No.
S ARN 226-08/4	8793
S ARN 226-08/8	8794

ARN 230-0000/4

ARN 230-0000/8

Loudspeaker ARN-230-0000/4 and ARN-230-0000/8 is a direct radiator electrodynamic transducer which irradiates the lower up to medium band of the low-frequency spectrum. The loudspeaker is designed to be used in loudspeaker systems as well as in other applications.



Technical Parameters ARN 230-0000/4 / ARN 230-0000/8

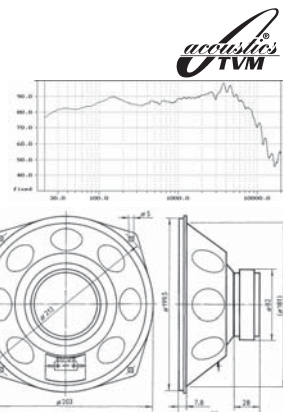
Diameter	230mm/214mm
Depth	92mm
Rated Noise Power	110 W
Short Term Maximum Power	-
Impedance	4 Ω / 8 Ω
Resonant Frequency	35 Hz
Rated Frequency Range	40-3000 Hz
Sensitivity	90 dB / 91 dB

Part No.	Ord.No.
S ARN 230-0000/4	73746
S ARN 230-0000/8	73747

ARN 6614

ARN 6618

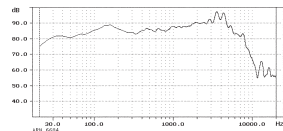
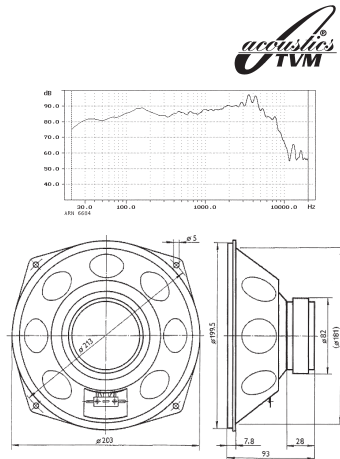
Woofer for HiFi loudspeaker systems.



Technical Parameters	ARN 6614 / ARN 6618
Diameter	203 mm
Depth	93 mm
Rated Noise Power	70 W
Short Term Maximum Power	140 W
Impedance	4 Ω / 8 Ω
Resonant Frequency	33 Hz
Rated Frequency Range	30-3000 Hz
Sensitivity	87 dB

Part No.	Ord.No.
S ARN 6614	8693
S ARN 6618	8694

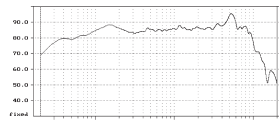
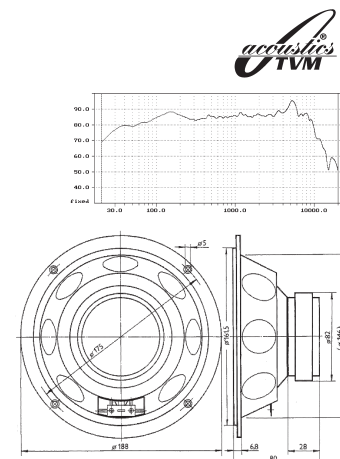
ARN 6684
ARN 6688
Woofer for HiFi loudspeaker systems. With coating of cone.



Technical Parameters	ARN 6684 / ARN 6688
Diameter	203 mm
Depth	93 mm
Rated Noise Power	70 W
Short Term Maximum Power	140 W
Impedance	4 Ω / 8 Ω
Resonant Frequency	32 Hz
Rated Frequency Range	40-4000 Hz
Sensitivity	86 dB

Part No.	Ord.No.
S ARN 6684	8695
S ARN 6688	8696

ARN 188-05/4
ARN 188-05/8
Woofer for HiFi loudspeaker systems. With coating of cone into the spiral.



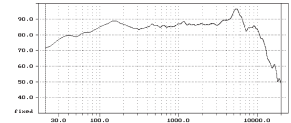
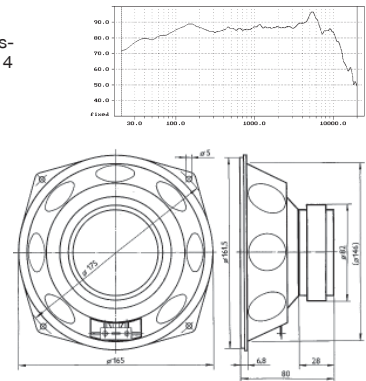
Technical Parameters	ARN 188-05/4 / ARN 188-05/8
Diameter	188 mm
Depth	80 mm
Rated Noise Power	60 W
Short Term Maximum Power	120 W
Impedance	4 Ω / 8 Ω
Resonant Frequency	42 Hz / 43 Hz
Rated Frequency Range	40-4000 Hz
Sensitivity	85 dB

Part No.	Ord.No.
S ARN 188-05/4	8699
S ARN 188-05/8	8700

ARN 5614
ARN 5618
Woofer for HiFi loudspeaker systems.



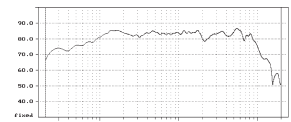
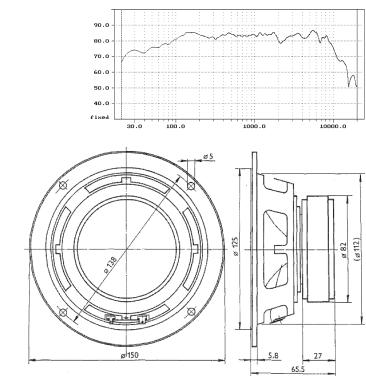
ARN 5684
Woofer for HiFi loudspeaker systems. It differs from type ARN 5614 in coating of cone.



Technical Parameters	ARN 5614 / ARN 5618	ARN 5684
Diameter	165 mm	165 mm
Depth	80 mm	80 mm
Rated Noise Power	60 W	60 W
Short Term Maximum Power	120 W	120 W
Impedance	4 Ω / 8 Ω	4 Ω
Resonant Frequency	42 Hz / 44 Hz	40 Hz
Rated Frequency Range	40-4000 Hz	40-4000 Hz
Sensitivity	86 dB	85 dB

Part No.	Ord.No.
S ARN 5614	8691
S ARN 5618	8692
S ARN 5684	9106

ARN 150-05/4
ARN 150-05/8
Woofer for HiFi loudspeaker systems. With coating of cone.



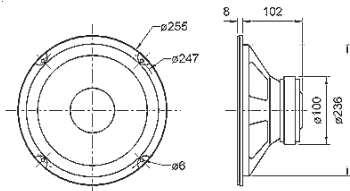
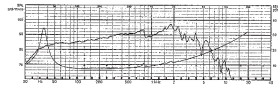
Technical Parameters	ARN 150-05/4 / ARN 150-05/8
Diameter	150 mm
Depth	66 mm
Rated Noise Power	60 W
Short Term Maximum Power	100 W
Impedance	4 Ω / 8 Ω
Resonant Frequency	45 Hz / 50 Hz
Rated Frequency Range	45-5000 Hz
Sensitivity	84 dB

Part No.	Ord.No.
S ARN 150-05/4	8697
S ARN 150-05/8	8698

VISATON Woofers

W 250/8

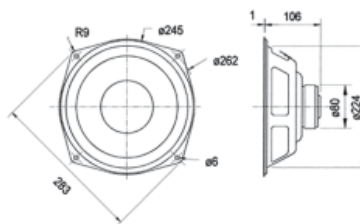
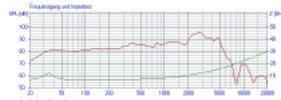
25 cm (10") woofer with air-dried cone and cone reinforcement. Front or rear mounting possible. Very good price/performance ratio and high power handling.



Technical Parameters		W 250/8
Diameter		255 mm
Depth		102 mm
Rated Noise Power		90 W
Short Term Maximum Power		130 W
Impedance		8 Ω
Resonant Frequency		37 Hz
Rated Frequency Range		37-6000 Hz
Sensitivity		90 dB
Part No.	Ord.No.	
S W 250/8	46261	

WS 25 E/8

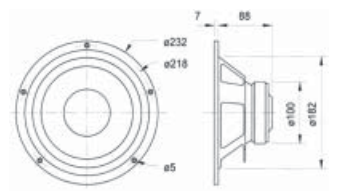
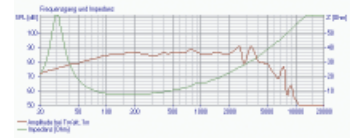
25 cm (10") woofer with coated paper cone, rubber edge and extended rear pole plate for long strokes. Due to the basket design especially suited as replacement woofer for many standard HiFi speakers.



Technical Parameters		WS 25 E/8
Diameter		262 mm
Depth		106 mm
Rated Noise Power		80 W
Short Term Maximum Power		110 W
Impedance		8 Ω
Resonant Frequency		40 Hz
Rated Frequency Range		40-6000 Hz
Sensitivity		88 dB
Part No.	Ord.No.	
S W 25 E/8	46264	

W 200 S/8

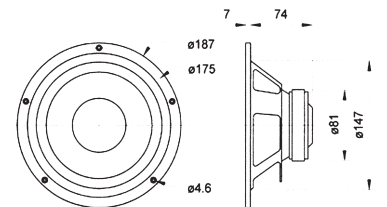
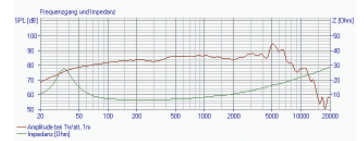
20 cm (8") HiFi woofer with strong drive, extended rear pole plate and 35 mm voice-coil for high power handling. Elastic rubber surround and coated paper cone.



Technical Parameters		WS 200 S/8
Diameter		262 mm
Depth		106 mm
Rated Noise Power		80 W
Short Term Maximum Power		110 W
Impedance		8 Ω
Resonant Frequency		40 Hz
Rated Frequency Range		40-6000 Hz
Sensitivity		88 dB
Part No.	Ord.No.	
S W 200 S/8	46270	

W 170 S/8

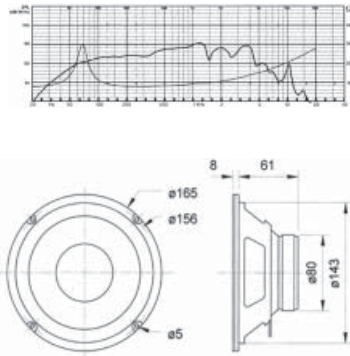
17 cm (6.5") HiFi woofer with coated paper cone, powerful drive and extended rear pole plate. Special voice-coil and elastic rubber surround for long strokes.



Technical Parameters		W 170 S/8
Diameter		187 mm
Depth		74 mm
Rated Noise Power		50 W
Short Term Maximum Power		80 W
Impedance		8 Ω
Resonant Frequency		36 Hz
Rated Frequency Range		36-8000 Hz
Sensitivity		86 dB
Part No.	Ord.No.	
S W 170 S/8	46282	

W 170/8

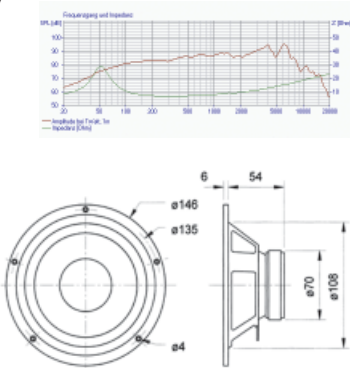
17 cm (6.5") HiFi woofer with very good price/performance ratio. Suitable for simple 2-way speakers and car rear tray systems. Especially suited als replacement driver for many HiFi speakers.



Technical Parameters		W 170/8
Diameter		165 mm
Depth		61 mm
Rated Noise Power		40 W
Short Term Maximum Power		70 W
Impedance		8 Ω
Resonant Frequency		68 Hz
Rated Frequency Range		68-6000 Hz
Sensitivity		87 dB
Part No.	Ord.No.	
S W 170/8	46288	

W 130 S/8

13 cm (5") HiFi low-midrange driver with coated paper cone, elastic rubber surround and 25 mm voice-coil. Suitable as woofer and due to the very balanced frequency response also as low-midrange driver especially in large 3-way speaker systems.



Technical Parameters		W 130 S/8
Diameter		146 mm
Depth		54 mm
Rated Noise Power		50 W
Short Term Maximum Power		80 W
Impedance		8 Ω
Resonant Frequency		49 Hz
Rated Frequency Range		49-12000 Hz
Sensitivity		87 dB
Part No.	Ord.No.	
S W 130 S/8	46299	

Other Woofers

ZYD385B-8-72

15" Kenford woofer for PA systems with paper cone.



Technical Parameters		ZYD385B-8-72
Diameter		350 mm
Depth		160 mm
Rated Noise Power		300 W
Short Term Maximum Power		600 W
Impedance		8 Ω
Resonant Frequency		39 Hz
Rated Frequency Range		39-3500 Hz
Sensitivity		97 dB
Part No.	Ord.No.	
O ZYD385B-8-72	57843	

DY H 1530

The large-diameter diaphragm and low resonant frequencies ensure powerful bass rendition. Strengthened NAWI diaphragms, warp-resistant steel baskets, flexible mounting with foam-plastic bead.



Technical Parameters		DY H 1530
Diameter		358 mm
Depth		120 mm
Rated Noise Power		150 W
Short Term Maximum Power		250 W
Impedance		4 Ω
Resonant Frequency		25 Hz
Rated Frequency Range		25-2500 Hz
Sensitivity		88,6 dB
Part No.	Ord.No.	
S DY H 1530	59964	

ZYD300B-8-67

12" Kenford woofer for PA systems with paper cone.

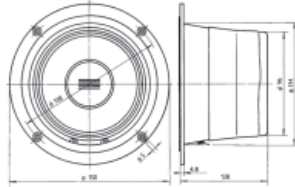
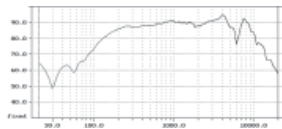


Technical Parameters		ZYD300B-8-67
Diameter		280 mm
Depth		130 mm
Rated Noise Power		250 W
Short Term Maximum Power		500 W
Impedance		8 Ω
Resonant Frequency		54 Hz
Rated Frequency Range		47-4000 Hz
Sensitivity		95 dB
Part No.	Ord.No.	
O ZYD300B-8-6	56540	

TVM Midrange Speakers

ARP 150-00/4 ARP 150-00/8

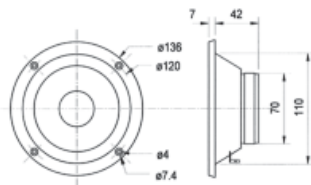
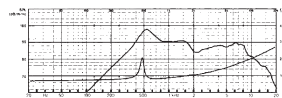
A midrange loudspeaker for demanding applications in quality loudspeaker sets for flats. The cover of inside volume reaching 0,8 m3 prevents interaction between the woofer and the tweeter in the set an is filled with attenuating material which suppresses any oscillations of the bounded space.



Technical Parameters		ARP 150-00/4 / ARP 150-00/8
Diameter		150 mm
Depth		138 mm
Rated Noise Power		50 W
Short Term Maximum Power		150 W
Impedance		4 Ω / 8 Ω
Resonant Frequency		227 Hz
Rated Frequency Range		500-5000 Hz
Sensitivity		91 dB
Part No.	Ord.No.	
S ARP 150-00/4	8705	
S ARP 150-00/8	8706	

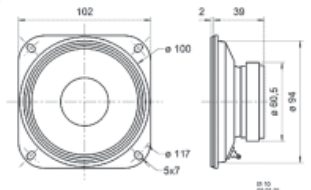
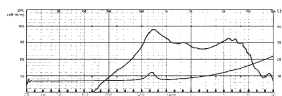
MR 130/8

130 mm (5") cone midrange driver for the midrange band between 1000 and 5000 Hz. Due to the enclosed rear no separate midrange housing construction is necessary. Very good price/performance ratio.



M 10/8

100 mm (4") cone midrange driver for the midrange band between 1000 and 5000 Hz. Due to the enclosed rear no separate midrange housing construction is necessary. Very good price/performance ratio.

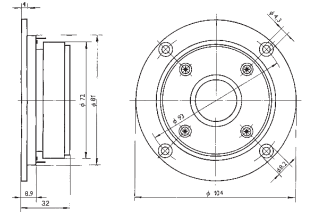
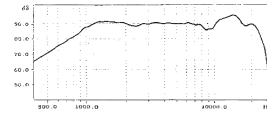


Technical Parameters		MR 130/8	M 10/8
Diameter		136 mm	102 mm
Depth		42 mm	39 mm
Rated Noise Power		80 W	80 W
Short Term Maximum Power		100 W	100 W
Impedance		8 Ω	8 Ω
Resonant Frequency		500 Hz	700 Hz
Rated Frequency Range		400-13000 Hz	450-13000 Hz
Sensitivity		89 dB	90 dB
Part No.	Ord.No.		
S MR 130/8	46368		
S M 10/8	46370		

TVM Tweeters

ARV 104-03/4 ARV 104-03/8

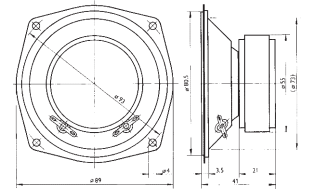
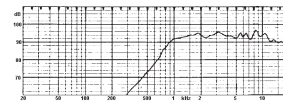
Tweeter with fabric dome and a voice coil with kapton former for use in high quality domestic loudspeaker systems.



Technical Parameters		ARV 104-03/4 / ARP 104-03/8
Diameter		104 mm
Depth		32 mm
Rated Noise Power		45 W
Short Term Maximum Power		200 W
Impedance		4 Ω / 8 Ω
Rated Frequency Range		2500-18000 Hz
Sensitivity		91 dB
Part No.	Ord.No.	
S ARV 104-03/4	4413	
S ARV 104-03/8	4414	

ARV 089-00/4 ARV 089-00/8

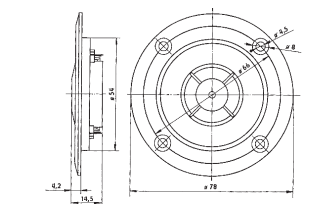
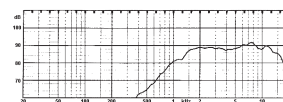
A direct-radiator electrodynamic loudspeaker designed for transmission of tones of the upper part of the audio spectrum in two-band and multiple-band flat loudspeaker systems. The loudspeaker has good directional properties.



Technical Parameters		ARV 089-00/4 / ARV 089-00/8
Diameter		89 mm
Depth		41 mm
Rated Noise Power		10 W
Short Term Maximum Power		-
Impedance		4 Ω / 8 Ω
Rated Frequency Range		1500-16000 Hz
Sensitivity		91 dB
Part No.	Ord.No.	
S ARV 089-00/4	8707	
S ARV 089-00/8	8708	

ARV 078-00/4 ARV 078-00/8

Electrodynamic loudspeaker with fabric dome designed for transmission of tones of the upper part of the audible frequency in multiple-band loudspeaker sets of small dimensions and can be used in such cases when the outer scattered field must be limited.



Technical Parameters		ARV 078-00/4 / ARV 078-00/8
Diameter		78 mm
Depth		14,5 mm
Rated Noise Power		20 W

Short Term Maximum Power	30 W
Impedance	4 Ω / 8 Ω
Rated Frequency Range	2500-18000 Hz
Sensitivity	88 dB

Part No.	Ord.No.
S ARV 078-00/4	48395
S ARV 078-00/8	48396

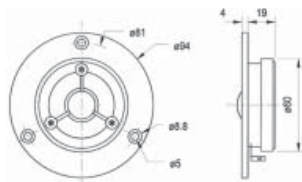
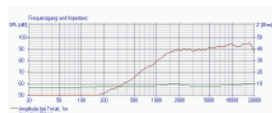
VISATON Tweeters



DT 94/4

DT 94/8

20 mm (0.8") polycarbonate HiFi driver with round shaped front plate for the highrange above 3000 Hz. Balanced frequency response and good omnidirectional sound distribution. High power handling due to ferrofluid-cooled voice-coil.



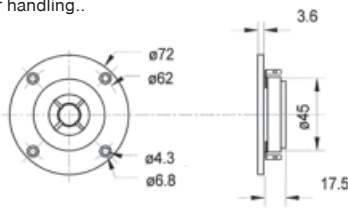
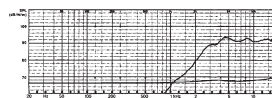
Technical Parameters	DT 94/4 / DT 94/8
Diameter	94 mm
Depth	19 mm
Rated Noise Power	70 W
Short Term Maximum Power	100 W
Impedance	4 Ω / 8 Ω
Resonant Frequency	1900 Hz
Rated Frequency Range	1200-22000 Hz
Sensitivity	90 dB

Part No.	Ord.No.
O DT 94/4	46392
S DT 94/8	46393



DTW 72/8

14 mm (0.6") polycarbonate dome driver for the highrange above 4000 Hz. Balanced frequency response and excellent omnidirectional sound distribution. Due to the strong magnetic drive and the ultra-light dome in conjunction with the ferrofluid-cooled voice-coil good efficiency and high power handling..



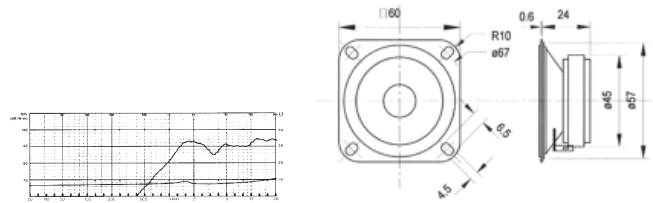
Technical Parameters	DTW 72/8
Diameter	72 mm
Depth	17,5 mm
Rated Noise Power	70 W
Short Term Maximum Power	110 W
Impedance	8 Ω
Resonant Frequency	3000 Hz
Rated Frequency Range	2200-23000 Hz
Sensitivity	91 dB

Part No.	Ord.No.
S DTW 72/8	46394



TW 6 NG/8

Cone tweeter for the high-Frequency Range above 5000 Hz. Balanced frequency response with brilliant treble and high power handling. Due to the sealed rear no separate high-Frequency Range housing construction necessary. Especially suitable as replacement unit for many HiFi speakers.



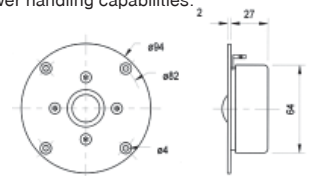
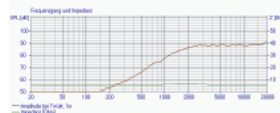
Technical Parameters	TW 6 NG/8
Diameter	60 mm
Depth	27 mm
Rated Noise Power	60 W
Short Term Maximum Power	100 W
Impedance	8 Ω
Resonant Frequency	1500 Hz
Rated Frequency Range	1000-30000 Hz
Sensitivity	91 dB

Part No.	Ord.No.
S TW 6 NG/8	46397



G 20 SC/8

Magnetically shielded 20 mm (0.8") High-end textile dome unit for use at tweeter frequencies of 3,000 Hz and above. The optimised dome shape and damping felt on the pole piece ensures a very balanced frequency response without resonance and excellent omnidirectional sound distribution. The powerful magnet drive and ferro-fluid cooled voice coil guarantee both high efficiency and excellent power handling capabilities.



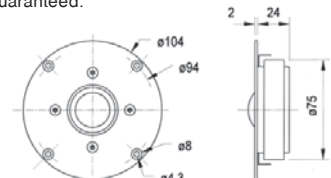
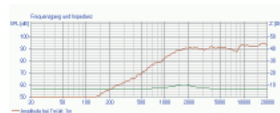
Technical Parameters	G 20 SC/8
Diameter	94 mm
Depth	27 mm
Rated Noise Power	120 W
Short Term Maximum Power	180 W
Impedance	8 Ω
Resonant Frequency	1800 Hz
Rated Frequency Range	1200-30000 Hz
Sensitivity	88 dB

Part No.	Ord.No.
S G 20 SC/8	46391



G 25 FFL/8

25 mm (1") fabric dome driver for the high-Frequency Range above 2000 Hz. Due to the optimised dome shape with double coating in conjunction with the highly damped surround, linear frequency response has been made possible. Due to the powerful magnetic driver and the ferrofluid-cooled voice-coil high efficiency and high power handling can be guaranteed.



Technical Parameters	G 25 FFL/8
Diameter	104 mm
Depth	24 mm
Rated Noise Power	120 W
Short Term Maximum Power	180 W
Impedance	8 Ω
Resonant Frequency	1500 Hz
Rated Frequency Range	1000-30000 Hz
Sensitivity	90 dB

Part No.	Ord.No.
S G 25 FFL/8	46383

Other Tweeters

PT1-1010



piezo

Technical Parameters	PT1-1010
Dimensions	85 x 85 mm
Depth	75 mm
Frequency Range	4-40 KHz
Sensitivity	105 dB

Part No.	Ord.No.
s PT1-1010	47893

PT1-1012



piezo

Technical Parameters	PT1-1012
Dimensions	145 x 70 mm
Depth	54 mm
Frequency Range	3,5-40 KHz
Sensitivity	96 dB

Part No.	Ord.No.
s PT1-1012	52454

PT1-1016



piezo

Technical Parameters	PT1-1016
Dimensions	186 x 80 mm
Depth	105 mm
Frequency Range	1-20 KHz
Sensitivity	110 dB

Part No.	Ord.No.
s PT1-1016	52453

COP-35A



Technical Parameters	COP-35A
Dimensions	D100x70 mm
Depth	50 mm
Power	30 W
Impedance	5,5 Ω
Frequency Range	0,8-18 KHz
Sensitivity	103 dB

Part No.	Ord.No.
s COP-35A	52262

PT25B-1



Technical Parameters	PT25B-1
Dimensions	99x99x80 mm
Depth	72 mm
Power	150 W
Impedance	4 Ω
Frequency Range	3-22 KHz
Sensitivity	96 dB

Part No.	Ord.No.
s PT25B-1	47277

MYLAR QUADRO/8



callote

Technical Parameters	Mylar Quadro/8
Dimensions	61x61 mm
Depth	22 mm
Power	80 W
Impedance	8 Ω
Frequency Range	3-20 KHz
Sensitivity	88 dB

Part No.	Ord.No.
s Mylar Quadro/8	47557

MYLAR RONDO/8



callote

Technical Parameters	Mylar Rondo/8
Dimensions	71 mm
Depth	22 mm
Power	80 W
Impedance	8 Ω
Frequency Range	3-20 KHz
Sensitivity	88 dB

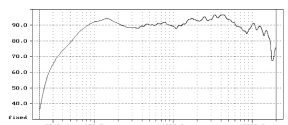
Part No.	Ord.No.
s Mylar Rondo/8	47558

TVM Widerange Speakers

ARZ 6604
ARZ 6608

A direct-radiator electrodynamic loudspeaker with a high-cone for use in products of consumer electronics to transmit the whole band of audible frequencies.






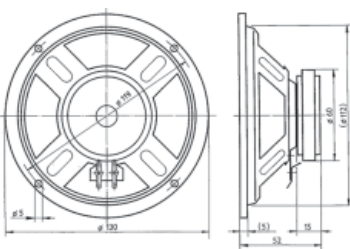
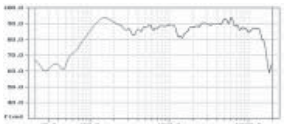
acoustics TVM

Technical Parameters		ARZ 6604 / ARZ 6608
Diameter		200mm
Depth		85mm
Rated Noise Power		30 W
Short Term Maximum Power		90 W
Impedance		4 Ω / 8 Ω
Resonant Frequency		75 Hz
Rated Frequency Range		60-20000 Hz
Sensitivity		91 dB

Part No.	Ord.No.
S ARZ 6604	8722
S ARZ 6608	8723

ARO 464

A direct-radiator electrodynamic loudspeaker with high sensitivity and a wide Frequency Range for use in products of consumer electronics.

acoustics TVM

ARO 568K

A direct-radiator electrodynamic loudspeaker with high sensitivity and a wide Frequency Range for use in products of consumer electronics.




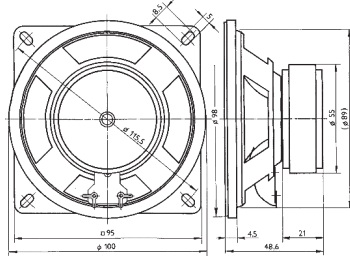
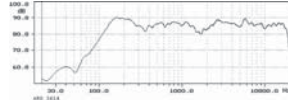


Technical Parameters		
	ARO 464	ARO 568K
Diameter	130mm	165 mm
Depth	52mm	66 mm
Rated Noise Power	10 W	15 W
Short Term Maximum Power	30 W	30 W
Impedance	4 Ω	8 Ω
Resonant Frequency	139 Hz	110 000 Hz
Rated Frequency Range	100-17000 Hz	80-12000 Hz
Sensitivity	90 dB	92 dB

Part No.	Ord.No.
S ARO 464	8718
O ARO 568K	8721

ARO 3614
ARO 3618

A direct-radiator transducer distinguished by its high sensitivity and Frequency Range for use in small working volumes, e. g. loudspeaker sets of small dimension, loudspeaker boxes, etc.

acoustics TVM


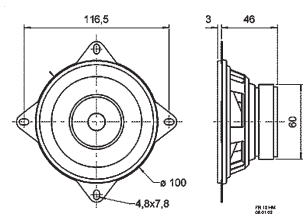
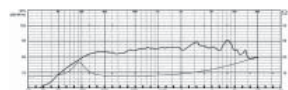
Technical Parameters		ARO 3614 / ARO 3618
Diameter		100mm
Depth		48,6mm
Rated Noise Power		4 W
Short Term Maximum Power		10 W
Impedance		4 Ω / 8 Ω
Resonant Frequency		180 Hz
Rated Frequency Range		150-15000 Hz
Sensitivity		87 dB

Part No.	Ord.No.
S ARO 3614	8716
S ARO 3618	8717

VISATON Widerange Speakers

FR 10 HM/4
FR 10 HM/8

10 cm (4") fullrange speaker with tweeter cone and European standard basket. Simple fitting in vehicles with cut-outs for 10 cm speakers.

VISATON

Technical Parameters		FR 10 HM/4 / FR 10 HM/8
Diameter		100mm
Depth		46 mm
Rated Noise Power		20 W
Short Term Maximum Power		30 W
Impedance		4 Ω / 8 Ω
Resonant Frequency		120 Hz
Rated Frequency Range		95-22000 Hz
Sensitivity		86 dB

Part No.	Ord.No.
S FR 10 HM/4	46332
S FR 10 HM/8	46333

VISATON Widerange Speakers

(continued)

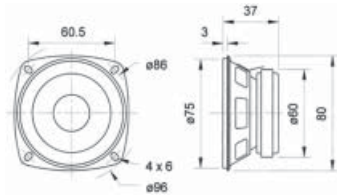
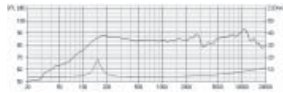


FR 8/4
FR 8/8

8 cm (3.3") fullrange speaker with good bass reproduction, balanced frequency response and high efficiency. Especially suitable as built-in speaker for music reproduction and as driver for 100 V network column speakers.



Industry



Technical Parameters	FR 8/4 / FR 8/8
Diameter	86 mm
Depth	37 mm
Rated Noise Power	10 W
Short Term Maximum Power	15 W
Impedance	4 Ω / 8 Ω
Resonant Frequency	150 Hz
Rated Frequency Range	130-20000 Hz
Sensitivity	86 dB

Part No.	Ord.No.
S FR 8/4	46341
S FR 8/8	46342

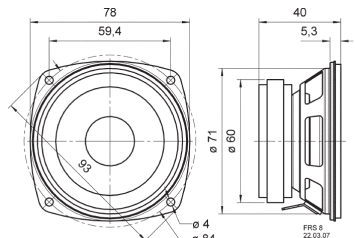
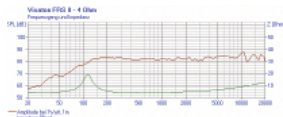


FRS 8/4

8 cm (3.3") HiFi fullrange driver. Linear frequency response between 200 and 20000 Hz. Suitable for surround effect speakers, mini sub/sat systems. Due to the small size very suitable for model construction and as control speaker for electronic devices.



Industry



Technical Parameters	FRS 8/4
Diameter	200 mm
Depth	40 mm
Rated Noise Power	30 W
Short Term Maximum Power	50 W
Impedance	4 Ω
Resonant Frequency	130 Hz
Rated Frequency Range	130-20000 Hz
Sensitivity	82 dB (1W/1m)

Part No.	Ord.No.
O FRS 8/4	46339

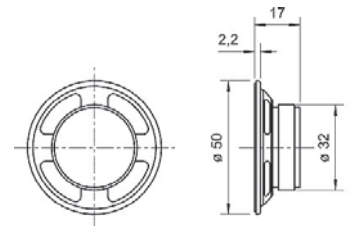
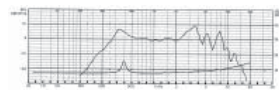


K 50/8

5 cm (2") miniature speaker with plastic diaphragm and metal basket. Thanks to its compact dimensions, suitable for signal output in machines and other equipment where space is at a premium.



Industry



Technical Parameters	K 50/8
Diameter	50 mm
Depth	17 mm
Rated Noise Power	2 W
Short Term Maximum Power	3 W
Impedance	8 Ω
Resonant Frequency	350 Hz
Rated Frequency Range	250-10000 Hz
Sensitivity	83 dB

Part No.	Ord.No.
S K 50/8	46354

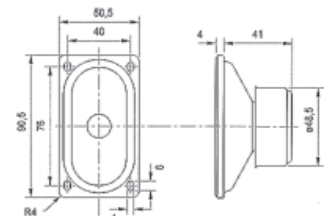
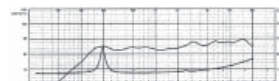


SC 5.9/8

Magnetically shielded oval fullrange driver with good efficiency and balanced frequency response with a clear highrange reproduction. Extremely small size due to a neodymium magnet system. Applicable as built-in speaker in TV's and PC's with very small mounting space.



Industry



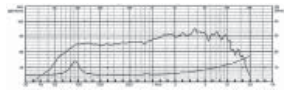
Technical Parameters	SC 5.9/8
Dimensions	90,5x50,5 mm
Depth	41 mm
Rated Noise Power	10 W
Short Term Maximum Power	15 W
Impedance	8 Ω
Resonant Frequency	170 Hz
Rated Frequency Range	130-20000 Hz
Sensitivity	83 dB

Part No.	Ord.No.
S SC 5.9/8	46360

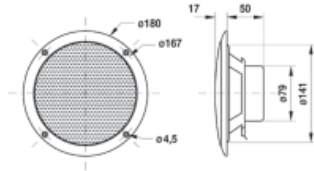
VISATON Widerange Speakers (suitable for industry applications)



Industry



FR16 WP/4
Saltwater resistant 16 cm (6.5") full-range speaker with moulded plastic cone, plastic basket and grille. Absolutely corrosion-resistant and waterproof due to encased magnet and silicon-coated leads. White or black colour

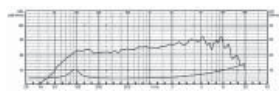


Technical Parameters	FR 16 WP/4
Diameter	180 mm
Depth	50 mm
Rated Noise Power	60 W
Short Term Maximum Power	80 W
Impedance	4 Ω
Resonant Frequency	85 Hz
Rated Frequency Range	60-15000 Hz
Sensitivity	86 dB

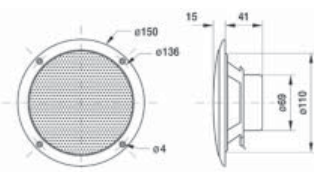
Part No.	Ord.No.
S FR 16 WP/4 WH	46289
O FR 16 WP/4 BK	61441



Industry



FR 13 WP/4
Saltwater resistant 13 cm (5") full-range driver with moulded plastic cone, plastic basket and grille. Absolutely corrosion-resistant and waterproof due to encased magnet and silicon-coated leads. White or black colour

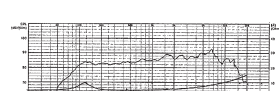


Technical Parameters	FR 13 WP/4
Diameter	150 mm
Depth	41 mm
Rated Noise Power	40 W
Short Term Maximum Power	60 W
Impedance	4 Ω
Resonant Frequency	100 Hz
Rated Frequency Range	70-16000 Hz
Sensitivity	85 dB

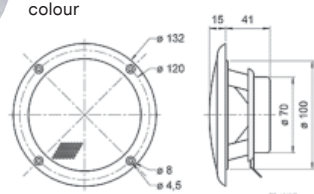
Part No.	Ord.No.
S FR 13 WP/4 WH	46307
O FR 13 WP/4 BK	61440



Industry



FR 10 WP/4
Saltwater resistant 10 cm (4") full-range driver with moulded plastic cone, plastic basket and grille. Absolutely corrosion-resistant and waterproof due to encased magnet and silicon-coated leads. Clear-cut high-range output. White or black colour

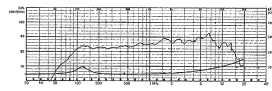


Technical Parameters	FR 10 WP/4
Diameter	132 mm
Depth	41 mm
Rated Noise Power	20 W
Short Term Maximum Power	30 W
Impedance	4 Ω
Resonant Frequency	120 Hz
Rated Frequency Range	80-16000 Hz
Sensitivity	85 dB

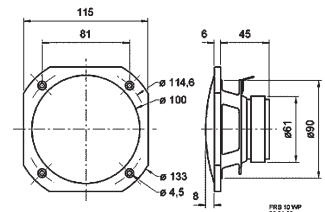
Part No.	Ord.No.
S FR 10 WP/4 WH	46323
O FR 10 WP/4 BK	61439



Industry



FRS 10 WP/4
Saltwater resistant 10 cm (4") full-range driver with glass fibre cone, plastic basket and grille. Long time weather proved and therefore especially suited for out-door sound reinforcement systems, swimming pools, sauna and speaker for boats, ships and open vehicles. Also suitable for model boat applications. 120 °C temperature resistant.



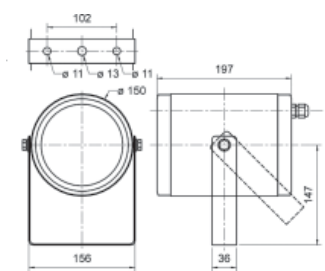
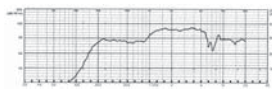
Technical Parameters	FRS 10 WP/4 WH / FRS 10 WP/4 BK
Diameter	115 mm
Depth	45 mm
Rated Noise Power	25 W
Short Term Maximum Power	50 W
Impedance	4 Ω
Resonant Frequency	190 Hz
Rated Frequency Range	190-19000 Hz
Sensitivity	90 dB

Part No.	Ord.No.
O FRS 10 WP/4WH	46318
O FRS 10 WP/4BK	46320

PL13BS/100V



100 V transformer



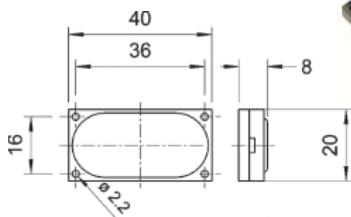
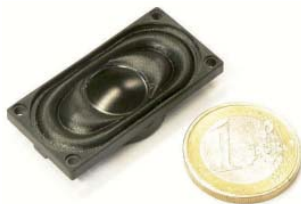
Technical Parameters	PL13BS/100V
Diameter	150 mm
Depth	197 mm
Rated Noise Power	15 W / 7,25 W / 3,75 W
Rated Frequency Range	160-15000 Hz
Sensitivity	96 dB

Part No.	Ord.No.
S PL13BS/100V	61371

Miniature Speakers

K 20.40 8OHM

Rectangular miniature speaker. Thanks to its compact dimensions, suitable for signal output in machines and other equipment where space is at a premium.



Technical Parameters	K 20.40 8OHM
Dimensions	40 x 20 mm
Depth	8 mm
Rated Noise Power	1 W
Short Term Maximum Power	2 W
Impedance	8 Ω
Resonant Frequency	600 Hz
Rated Frequency Range	300-20000 Hz
Sensitivity	76 dB

Part No.	Ord.No.
s K 20.40 8 OHM	61401



Part No.	Diameter x depth	Max. power	Frequency Range	Impedance
LS 45 = BL-45	45 x 18mm	0,2 W	450-4500 Hz	8 Ω
LS 50 F = BL-50	50 x 18mm	0,2 W	450-4500 Hz	8 Ω
LS 57 = BL-57	57 x 19mm	0,2 W	420-5000 Hz	8 Ω
LS 66 = BL-66	66 x 21mm	0,3 W	360-4000 Hz	8 Ω
LS 77 = BL-77	77 x 23mm	0,5 W	260-6000 Hz	8 Ω
LS 92 = BL-92	92 x 25mm	1,0 W	220-8000 Hz	8 Ω

Part No.	Ord.No.
s LS 45 = BL-45	55187
s LS 50 F = BL-50	16714
s LS 57 = BL-57	16715
s LS 77 = BL-77	16718
s LS 92 = BL-92	16719

Hammond Transformers and Inductors

Power



Chokes



Line



Audio



Tube Audio



Guitar Amp



Class 2



Pulse



Instrument



Piezoceramic Speakers



SCS-17-P10 **sonitron**

SCS-17-S
Good sound quality and limited distortion guarantee a clear reproduction of multiple tones, speech and music. These loudspeakers are extremely reliable, have a robust design and can be used in difficult environmental conditions and applications because of resistance of the front to water, humidity, vibrations and dust. The SCS-speaker can be mounted by soldering the SMD pads onto the PCB.

Technical Parameters	SCS-17-P10 / SCS-17-S
Rated Frequency Range	1500-8000 Hz
Sensitivity	2200 Hz - 92 dB, 5000 Hz - 91 dB
Working Voltage	5 - 30 Vpp
Capacitance	20 nF
Impedance @ 1 KHz ±20%	7957 Ω
Pitch	10 mm / SMD
Weight	1,7 g
Dimensions	18,6 x 9,7 mm

Part No.	Ord.No.
S SCS-17-P10	64049
S SCS-17-S	64050



SCS-24-P10 **sonitron**

SCS-24-S
Good sound quality and limited distortion guarantee a clear reproduction of multiple tones, speech and music. These loudspeakers are extremely reliable, have a robust design and can be used in difficult environmental conditions and applications because of resistance of the front to water, humidity, vibrations and dust.

Technical Parameters	SCS-24-P10 / SCS-24-S
Rated Frequency Range	1000-8000 Hz
Sensitivity	800 Hz - 68 dB, 1600 Hz - 95 dB 4000 Hz - 87 dB
Working Voltage	5 - 30 Vpp
Capacitance	37 nF
Impedance @ 1 KHz ±20%	4300 Ω
Pitch	10 mm / SMD
Weight	4 g
Dimensions	25,1 x 9,7 mm

Part No.	Ord.No.
S SCS-24-P10	64051
S SCS-24-S	64052



SCS-32-P10 **sonitron**

SCS-32-S
Good sound quality and limited distortion guarantee a clear reproduction of multiple tones, speech and music. These loudspeakers are extremely reliable, have a robust design and can be used in difficult environmental conditions and applications because of resistance of the front to water, humidity, vibrations and dust.

Technical Parameters	SCS-32-P10 / SCS-32-S
Rated Frequency Range	500-8000 Hz
Sensitivity	650 Hz - 85 dB, 2700 Hz - 100 dB 3700 Hz - 88 dB, 7500 Hz - 80dB
Working Voltage	5 - 30 Vpp
Capacitance	66 nF
Impedance @ 1 KHz ±20%	2400 Ω
Pitch	10 mm / SMD
Weight	5,9 g
Dimensions	25,1 x 9,7 mm

Type	Ord.No.
S SCS-32-P10	64053
S SCS-32-S	64054

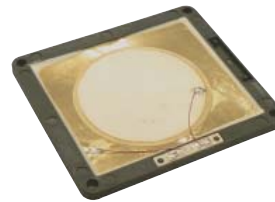


SPS 2200-03 **sonitron**

With a thickness of only 1 mm and dimensions of 20 x 22 mm, this small multifunctional speaker/microphone is ideal for use in GPS, MP3, camera's, mobile phones, etc.

Technical Parameters	SPS 2200-03
Rated Frequency Range	700-20 000 Hz
Sensitivity	85 dB @ 10cm, 24Vpp
Capacitance	70 nF
Working Voltage	1 - 24 Vpp
Impedance @ 1 KHz ±20%	2160 Ω
Weight	0,4 g
Material	PBT

Part No.	Ord.No.
S SPS-2220-03	64043



SPS-3530-03-C1 **sonitron**

SPS-4640-03-C1
SPS-8770-03-C1
SPS-3530-03-C1
SPS-4640-03-C1 are ideal for use in portable electronic devices (PDA, GPS, MP3, etc), notebooks and consumer products.

Dimensions:
39 x 43,5 mm / 43,6 x 50 mm
The SPS-8770-03 is the largest version of our piezo speakers, with a thickness of only 2 mm. This model is extremely suitable for flat devices when high sound output and broad Frequency Range are required.
Dimensions: 70 x 87 mm

Technical Parameters	SPS-3530-03-C1 / SPS-4640-03-C1 / SPS-8770-03-C1
Rated Frequency Range	700-20 000 Hz / 400-20 000 Hz 200-20 000 Hz
Sensitivity	85 dB / 83 dB / 84 dB @ 1m, 60Vpp
Capacitance	220 nF / 225 nF / 580 nF
Working Voltage	5 - 60 Vpp
Impedance @ 1 KHz ±20%	603 Ω / 680 Ω / 266 Ω
Weight	2,4 g / 2,8 g / 7,3 g
Material	PBT

Part No.	Ord.No.
S SPS-3530-03-C1	64044
S SPS-4640-03-C1	64046
S SPS-8770-03-C1	64047



SPS-8770-UW **sonitron**

SPS-8770-UW10
Sonitron successfully developed the first flat piezoceramic speaker for underwater applications (max. 2m, IP68). This speaker is based on a completely new principle of piezoceramics and composite metal/polymer layer.
Dimensions: 90 x 87 x 10 mm

Technical Parameters	SPS-8770-UW / SPS-8770-UW10
Rated Frequency Range	600-20 000 Hz
Sensitivity	90 dB @ 1m
Capacitance	600 nF
Working Voltage	5 - 60 Vpp
Impedance @ 1 KHz ±20%	220 Ω
Weight	60 g
Cable length	UW - 0,45 m / UW10 - 10 m

Part No.	Ord.No.
S SPS-8770-UW	64048
SPS-8770-UW10	66202

VISATON Accessories



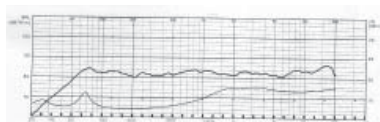
Damping Material
Damping material made of polyester wool with excellent damping properties. Can be handled and fitted easily.
Packing unit: 125 g (2 mats, enough for a volume of up to 20 l).

Part No.	Ord.No.
S DAMPING MATERIAL	46497

Speaker Kits



ALTO II
This 2-way column speaker, ALTO II, designed as a 30 litre vented system, is another suggested application from the Alto series. The driver arrangement has been selected for the lower range octaves benefit from the enlarged cabinet volume and optimum bass frequency to produce powerful, responsive bass.
ALTO II is also well-suited to improving the sound of low-priced compact hi-fi systems.
The ALTO II can be positioned freely anywhere in the room, producing clearly defined spatial sound character.
Kit consist of:
2x W170S, 2x DT94, 2x Crossover (with terminal, cables und plugs), Bass reflex tubes, damping material, screws.



Technical Parameters	ALTO II
Rated Noise Power	60W
Short Term Maximum Power	100W
Impedance	4 Ω
Frequency Range (-10dB)	44 - 22000 Hz
Sensitivity	83 dB (1W/1m)
Crossover frequency	3500Hz

Part No.	Ord.No.
S ALTO II	46501

Speaker Boxes



SB-2000 Trapez-System
Loudspeaker system, suitable for rooms up to 25m².

Technical Parameters	SB-2000
Power	40 W
Impedance	4 Ω
Frequency Range	50 - 20 000 Hz
Sensitivity	92 dB
Dimensions	190 x 265 x 185 mm
Weight	cca. 5kg/pair

Part No.	Ord.No.
S SB-2000 Trapez-System	56673



SUB ROHR 10"/250mm
Passive subwoofer suitable for car audio.

Technical Parameters	SUB ROHR 10"/250mm
Maximum power	300 W
Sensitivity	91 dB
Impedance	4 Ω
Dimensions	345 x L495mm

Part No.	Ord.No.
S SUB ROHR 10"/250mm	46432



WWFX-99
Active 200W 8" subwoofer suitable for car audio.
Accessories:
4x screws + connecting cables

Technical Parameters	WWFX-99
Maximum power	200W
Adjustable crossover	50-250Hz
Terminals	2xCinch / 2x connector (speaker outputs)
Dimensions	255 x 440 mm

Part No.	Ord.No.
S WWFX-99	60505

Amplifiers



ESA-1
Hi-fi amplifier 2x10W. Suitable for PC, TV, or little home audio systems.

Technical Parameters:

- 3x stereo inputs, 1x output for recording,
- headphones output,
- bass, treble correction,
- volume regulator,
- wide stereo effect.



Technical Parameters	ESA-1 black / ESA-1 silver
Maximum power	2 x 10 W / 4 Ω
Frequency Range	20-30 000 Hz
Distortion	< 0.1%
Signal/noise ratio	> 80dB
Input sensitivity	250 mV
Power supply	230VAC, 50/60Hz
Dimensions	180x440x65 mm

Part No.	Ord.No.
S DYNAVOX ESA-1 black	45911
S DYNAVOX ESA-1 grey	54415



ESA-18
Hi-fi amplifier 2x20W. Suitable for PC, TV, or little home audio systems

Technical Parameters:

- 2x stereo inputs, 1x microphone input, 1x output for recording,
- bass, treble correction,
- adjustable wide stereo effect
- stepping volume regulator.



Technical Parameters	ESA-18 black / ESA-18 silver
Maximum power	2 x 20 W / 4 Ω
Frequency Range	20-20 000 Hz
Distortion	< 0.1%

Signal/noise ratio	> 88dB
Input sensitivity	1 kHz max. 750 mV
Power supply	230 VAC, 50/60 Hz
Dimensions	220x180x50mm

Part No.	Ord.No.
S DYNAVOX ESA-18 black	54167
O DYNAVOX ESA-18 silver	52409



Dream Sound
Set consist of audio amplifier ESA-1 and pair of speakers.
Power supply 230V/50Hz
Versions in black or silver colour.
Speaker dimensions:
130 x 95 x 100mm

Part No.	Ord.No.
S DYNAVOX DREAM SOUND black	63034
O DYNAVOX DREAM SOUND silver	63035



Dream Sound 2
Set consist of audio amplifier ESA-18 and pair of speakers.
Power supply 230V/50Hz
Versions in black or silver colour.
Speaker dimensions:
170 x 150 x 230 mm

Part No.	Ord.No.
S DYNAVOX DREAM SOUND 2 black	63240
O DYNAVOX DREAM SOUND 2 silver	63241



VR-70E
Tube amplifier with great price-performance ratio. Comparable to more expensive amplifiers
Power Amplifier: 4xEL34
Pre-Amplifier: 2x 6F2

Technical Parameters	VR-70E
Power	2x40W
Distortion	< 1%
Signal/Noise	> 90 dB
Frequency Range	20 - 40 000 Hz +/- 1.5 dB
Supply Voltage	230 VAC, 50/60 Hz
Dimensions	400x190x230mm
Weight	16 kg

Part No.	Ord.No.
O VR-70E	52263

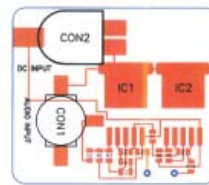


VR-20
Tube amplifier with great price-performance ratio.
Power Amplifier: 4x6P6P
Pre-Amplifier: 2x 6F2

Technical Parameters	VR-20
Power	2x10W
Distortion	< 1%
Signal/Noise	> 90 dB
Frequency Range	20 - 60 000 Hz +/- 1.5 dB
Supply Voltage	230 VAC, 50/60 Hz
Dimensions	305x250x180mm
Weight	9.2 kg

Part No.	Ord.No.
O VR-20	75359

NEW!



sonitron

PAA-350-70-4639

Low voltage amplifier for all types of SONITRON piezoceramic speakers Modul is based on Burr Brown's audio amplifier OPA544. It works in a wide range of voltage and current. Bridge connection of two amplifiers allows to have output voltage up to 120Vpp. As an input signal use any audio device with output 1Vrms

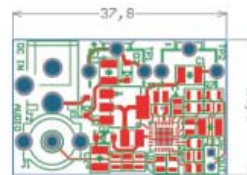
Technical Parameters	PAA-350-70-4639
Power Supply	20 - 70 VDC
Input Sensitivity	1Vrms
Average Current Consumption	12mA
Output	max. 120 VPP

Part No.	Ord.No.
S PAA-350-70-4639	65419

sonitron

PAA-LM4960SQ-01

Low voltage amplifier for all types of SONITRON piezoceramic speakers Modul consists of integrated step-up converter, amplifier and protection against short circuit and reversing of polarity
Compact dimension: 38x24mm
Direct supply with 9V battery or adapter.
Input connector: RCA
Output connector: pin header

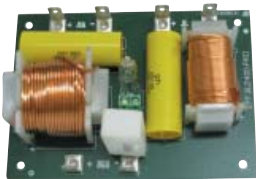


Technical Parameters	PAA-350-70-4639
Power supply	7 - 20 VDC
Distortion	< 1%
Max. load capacity	800 nF + 20Ω
Input sensitivity	600 mVPP
Average Current Consumption	45mA
Output	max. 24 VPP

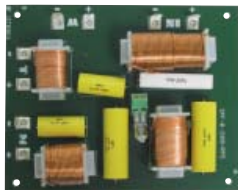
Part No.	Ord.No.
S PAA-LM4960SQ-01	65418

Speaker Crossovers

SPF-8-2400



SPF-8-3400

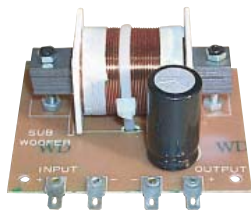


Technical Parameters		SPF-8-2400 / SPF-8-3400
Number of Bands		2 / 3
Slope Steepness		12 dB
Crossover Frequency		2000 Hz / 1200-6000 Hz
Impedance		8 Ω
Speaker Power		400 W
Dimensions		114x82 mm / 158x125mm
Height		35 mm / 30mm
Part No.	Ord.No.	
S SPF-8-2400	1804	
S SPF-8-3400	1805	

BC-3227



CR-201



for subwoofer

Technical Parameters		BC-3227 / CR-201
Number of Bands		3 / -
Slope Steepness		18 dB / 12 dB
Crossover Frequency		1000-3000 Hz / 120 Hz
Impedance		4 - 8 Ω / 4 - 8 Ω
Speaker Power		700 W / 100-200W
Dimensions		216x171 mm / 90x70mm
Height		42 mm / 40mm
Part No.	Ord.No.	
S BC-3227	52449	
S CR-201	47361	

RP-4-250



RP-4-350



RP-4-550



for subwoofer

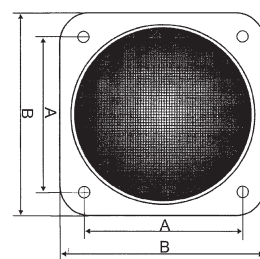
Technical Parameters		RP-4-250 / RP-4-350 / RP-4-550
Number of Bands		2-3 / 3 / 5
Slope Steepness		12 dB / 6 dB / 6 dB
Crossover Frequency		150 Hz/6000 - 9000 Hz /480-3000-4800-6500 Hz
Impedance		4 Ω / 4 Ω / 4 Ω
Speaker Power		50 W / 50 W / 50 W
Dimensions		110x38x67 mm / 110x38x67 mm /110x38x67 mm
Height		-
Part No.	Ord.No.	
S RP-4-350	56406	
S RP-4-550	56407	
S RP-4-250	56409	

Loudspeaker Grilles

SG-xx Series



Part No.	Ord.No.	Description
S SG-5	53540	126mm metallic
S SG-6	53541	160mm metallic
O SG-06	55625	165mm metallic
S SG-8	53276	200mm metallic
S SG-10	53542	250mm metallic
S SG-12	53543	300mm metallic
S SG-15	53544	380mm metallic
S SG-18	53545	450mm metallic



RKxx

- metallic grille
- plastic frame
- black color



Part No.	Ord.No.	Dimensions A/B
S RK 10	6474	88x88mm / 112x112mm
S RK 12	6475	105x105mm / 136x136mm
S RK 16	6476	131x131mm / 168x168mm
S RK 20	6477	166x166mm / 212x212mm
S RK 25	6478	199x199mm / 243x243mm



SG-PR4

Set consist of 4 terminals and screws

Part No.	Ord.No.
S SG-PR4	53275

Accessories

RK 40 K



Part No.	Description
RK 40 K	Guard Angle, Steel 1mm for Speaker Boxes, length 40mm
RK 82 P	Guard Angle, Plastic for Speaker Boxes, edge 45mm, length 82mm

Part No.	Ord.No.
S RK 40 K	53554
S RK 82 P	53052

RK 82 P



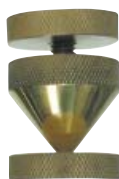
GN 4015



Part No.	Description
GN 4015	4pcs loudspeaker legs, gums, diameter 40mm, height 15mm
HD 919	4pcs loudspeaker legs, brass, max. weight capacity 60kg/set, diameter 25mm, adjustable height 40-55mm

Part No.	Ord.No.
S GN 4015	45909
S HD 919	52330

HD 919



MA-03



Part No.	Description
MA-03	Reprobox flange for stand mounting, diameter 35,5mm, length 100mm
MH-4	Loudspeaker handle, steel (2mm), Dimensions 160x107mm, Mounting hole 132x80mm

Part No.	Ord.No.
S MA-03	52097
S MH-4	52145

MH-4



TOP HANDLE



Part No.	Description
TOP HANDLE	Loudspeaker handle, steel strap in plastic, dimensions 23x250mm

Part No.	Ord.No.
S TOP HANDLE	53053

HSB003



Part No.	Description
HSB003	Loudspeaker handle, plastic, mounting hole 100x55mm

Part No.	Ord.No.
S HSB003	54479

SKFK 043

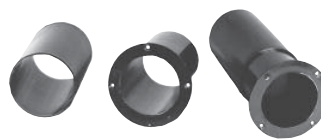


Part No.	Description
SKFK 043	Handle for carrying speaker boxes, dimensions 220x160mm, mounting hole 170x115mm, depth 55mm

Part No.	Ord.No.
S SKFK 043	46398

Bass Reflex Tubes

BR 13.25



Part No.	Description
BR 13.25	Bass reflex tube, adjustable between 130 and 250 mm, black plastic, mounting holes 82,5 x 82,5 mm, diameter 72 mm

Part No.	Ord.No.
S BR 13.25	46490



AIRPORT2
AIRPORT3
AIRPORT3
Plastic, easy mounting without screws

Part No.	Description
AIRPORT2 BASSREFLEX	Basreflex D52x53mm
AIRPORT3 BASSREFLEX	Basreflex D78x120mm
AIRPORT4 BASSREFLEX	Basreflex D102x115mm

Part No.	Ord.No.
S AIRPORT2 BASSREFLEX	47571
S AIRPORT3 BASSREFLEX	45910
S AIRPORT4 BASSREFLEX	47615

Headphones



WH-41
Stereo headphones

Technical Parameters:
Impedance: 32 Ohm
Sensitivity: 99dB
Frequency Range: 100-18.000 Hz
Cable length: 1,2 m
Cable terminal: Jack 3,5mm
Weight: 50g

Part No.	Ord.No.
S ST5S = CBS278	4131



WH-41
Stereo headphones with microphone and volume regulator.

Technical Parameters:
Microphone: 6x5/58 ± 2dB
Impedance: 32 Ohm
Sensitivity: 105dB at 1 KHz
Frequency Range: 100-18.000 Hz
Cable length: 2-3 m
Weight: 200g without cable

volume regulator

Part No.	Ord.No.
S WH-41	61333



WH-880
Stereo headphones with microphone, volume regulator and bass vibration.

Technical Parameters:
Microphone: 6x5/58 ± 2dB
Impedance: 32 Ohm at 1KHz
Sensitivity: 102dB/mW
Power: 500mW
Frequency Range: 5-28.000 Hz
Cable length: 2,5 m
Connection cables:
2x Jack M 3,5mm (microphone-pink, headphones-green), USB power supply cable
Operating voltage vibrating unit: alkaline battery 2x AAA 1,5V = 3VDC
Battery lifetime at working vibration unit: 30 hours
Weight: 250g with battery and cable

Part No.	Ord.No.
O WH-880	61334



SUN-20034
5.1 surround headphones with microphone.

Technical Parameters:
Cable length: 210cm
Cable terminals: 4 x Jack 3,5mm
Sensitivity:
- microphone: -58dB
- front and rear speakers: 97 +/-3dB
- central speakers: 97 +/-3dB
- woofer : 121 +/-3dB
Power / impedance
- front and rear speakers 150mW / 32 Ω
- central speakers: 100mW / 160 Ω
- woofer: 100mW / 240 Ω
Speakers Frequency Range: 20Hz-20kHz

Part No.	Ord.No.
S SUN-20034	61355

FM Transmitters

Wireless FM Stereo Transmitter



FM Transmitter
Gives you the opportunity to send music from the MP3 Player, Walkman or portable CD Player, etc. to your Car-Radio.

- 199 channels
- lighted LCD-Display which shows the current channel
- battery not included in delivery!

Technical Parameters	FM Transmitter 1
Dimensions	87x23x22mm
Weight	30g
Frequency Range	88,1 MHz - 107,9 MHz
Display	LCD, backlight
Power supply	1,5V (AAA) or 12-16 VDC V DC cable
Audio input level	100mV - 5V / 100Hz - 15kHz
Output range	max.10m

Part No.	Ord.No.
S FM Transmitter 1	59388

FM1G-23 FM Transmitter with MP3 Player



- unique appearance with fold function, so convenient hinge feature to fit any car
- patent product, support HI-FI music
- adopted frequency phase lock loop technology and 3D sound coding technology
- supports SD/ MMC card, MP3, movable hard disk directly
- read MP3/ WMA files from the USB device and transmits music over car FM tuner
- clear LCD displays the name of songs, frequency display and work state
- audio input/output, earplug
- remember the last frequency and music, track and recall them when restarting
- 15 preset channels within 87.7~99.1 and 106.7~107.9 MHz
- car cigarette lighter power supply (12v DC)

Part No.	Ord.No.
S FM 1G-23	70678

BTFM-01 FM Transmitter with MP3 Player and Bluetooth



- car MP3 player with FM transmitter and bluetooth handsfree,
- caller ID showing, bluetooth hands-free, bluetooth stereo talking,
- power supply DC 12V/24V;206FM channels,
- blue LCD screen display,
- support USB flash disk 2.0,SD/ MMC card,
- with auxiliary input for extra audio device,
- supports MP3/WMA music format; five EQ modes,
- 21-key remote control,
- frequency and track memory,
- song selected directly.

Part No.	Ord.No.
S BTFM -01	69473

Car Speakers

Car speakers coaxial

RK085-1/4



RK085-2/4



Technical Parameters	RK085-1/4	RK085-2/4
Diameter	3,5" / 85mm	3,5" / 85 mm
Depth	35 mm	35 mm
Power	50 W	50 W
Impedance	4 Ω	4 Ω
Frequency Range	80-20000 Hz	80-20000 Hz
Sensitivity	89 dB	89 dB
Magnet	10 Oz	10 Oz
Color	blue	red

Part No.	Ord.No.
S RK085-1/4	47572
S RK085-2/4	51334

Price for 1 pair.

RK104-1/4



RK104-2/4



Technical Parameters	RK104-1/4	RK104-2/4
Diameter	4" / 100mm	4" / 100mm
Depth	50 mm	50 mm
Power	60 W	60 W
Impedance	4 Ω	4 Ω
Frequency Range	80-20000 Hz	80-20000 Hz
Sensitivity	90 dB	90 dB
Magnet	10 Oz	10 Oz
Color	blue	red

Part No.	Ord.No.
S RK104-1/4	47599
S RK104-2/4	47606

Price for 1 pair.

RK130-1/4



RK130-2/4



Technical Parameters	RK130-1/4	RK130-2/4
Diameter	5" / 130 mm	5" / 130 mm
Depth	50 mm	50 mm
Power	80 W	80 W
Impedance	4 Ω	4 Ω
Frequency Range	80-20000 Hz	80-20000 Hz
Sensitivity	90 dB	90 dB
Magnet	10 Oz	10 Oz
Color	blue	red

Part No.	Ord.No.
S RK130-1/4	47603
S RK130-2/4	48077

Price for 1 pair.

RK165-1/4



RK165-2/4



Technical Parameters	RK165-1/4	RK165-2/4
Diameter	6,5" / 165mm	6,5" / 165 mm
Depth	50 mm	50 mm
Power	80 W	80 W
Impedance	4 Ω	4 Ω
Frequency Range	70-20000 Hz	70-20000 Hz
Sensitivity	90 dB	90 dB
Magnet	10 Oz	10 Oz
Color	blue	red

Part No.	Ord.No.
S RK165-1/4	47602
S RK165-2/4	47605

Price for 1 pair.

RK915-1/4



RK4X6-2/4



Technical Parameters	RK915-1/4	RK4X6-2/4
Diameter	4x6"/100x150mm	4x6"/100x150 mm
Depth	45 mm	45 mm
Power	60 W	60 W
Impedance	4 Ω	4 Ω
Frequency Range	80-20000 Hz	80-20000 Hz
Sensitivity	88 dB	88 dB
Magnet	6 Oz	6 Oz
Color	blue	red

Part No.	Ord.No.
S RK915-1/4	45905
S RK4X6-2/4	47607

Price for 1 pair.

RK693-1/4



RK693-2/4



Technical Parameters	RK693-1/4	RK693-2/4
Diameter	6x9"/150x230 mm	6x9"/150x230 mm
Depth	80 mm	80 mm
Power	200 W	200 W
Impedance	4 Ω	4 Ω
Frequency Range	60-22000 Hz	60-22000 Hz
Sensitivity	91 dB	91 dB
Magnet	20 Oz	20 Oz
Color	blue	red

Part No.	Ord.No.
S RK693-1/4	47604
S RK693-2/4	47608

Price for 1 pair.

Car Speakers (continued)

RK200-1/4



RK200-2/4



ROCKWOOD®

Technical Parameters	RK200-1/4	RK200-2/4
Diameter	8" / 200mm	8" / 210mm
Depth	80 mm	94 mm
Power	150 W	200 W
Impedance	4 Ω	4 Ω
Frequency Range	60-22000 Hz	35-3000 Hz
Sensitivity	92 dB	86 dB
Magnet / Weight	20 Oz	836g
Color	blue	red

Part No.	Ord.No.
S RK200-1/4	47951
S RK200-2/4	47609

Subwoofers

RK250-2/4



ROCKWOOD®

Technical Parameters	RK250-2/4
Diameter	10" / 260mm
Depth	112mm
Power	300 W
Impedance	4 Ω
Frequency Range	30-2000 Hz
Sensitivity	87 dB
Weight	1090g

Part No.	Ord.No.
S RK250-2/4	47855

Price for 1pcs.

RK300-2/4



ROCKWOOD®

Technical Parameters	RK300-2/4
Diameter	12" / 316mm
Depth	136 mm
Power	400 W
Impedance	4 Ω
Frequency Range	25-2000 Hz
Sensitivity	89 dB
Weight	1320g

Part No.	Ord.No.
S RK300-2/4	47856

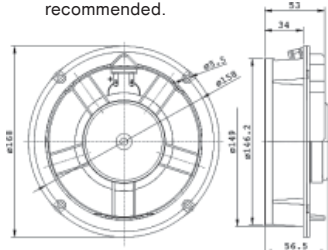
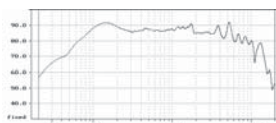
Price for 1pcs.



acoustic's TVM

ARX 168-10/4

Woofer designed for use in two-way car sound systems. The loudspeaker chassis consists of a plastic basket, the paper cone rests on a polyurethan suspension. For optimum playback quality a combination with the ARV-040-03/4 tweeter is recommended.



Technical Parameters	ARX 168-10/4
Diameter	168 mm
Depth	57 mm
Rated Noise Power	40 W
Short Term Maximum Power	80 W
Impedance	4 Ω
Resonant Frequency	88 Hz
Rated Frequency Range	60-5000 Hz
Sensitivity	87 dB

Part No.	Ord.No.
S ARX 168-10/4	44235

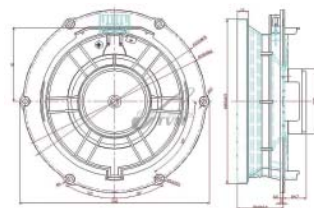
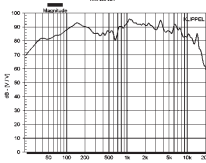
NEW!



acoustic's TVM

ARX 200-00/4

Woofer designed for use in two-way car sound systems. The loudspeaker chassis consists of a plastic basket, the paper cone rests on a polyurethan suspension. For optimum playback quality a combination with the ARV-040-03/4 tweeter is recommended.



Technical Parameters	ARX 200-00/4
Diameter	200 mm
Depth	75,1 mm
Rated Noise Power	40 W
Short Term Maximum Power	60 W
Impedance	4 Ω
Resonant Frequency	40 Hz
Rated Frequency Range	60-6000 Hz
Sensitivity	-

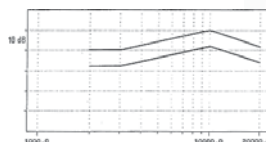
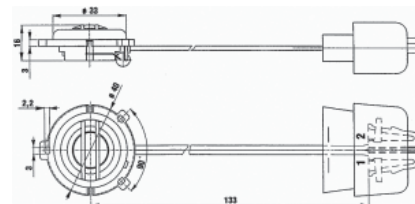
Part No.	Ord.No.
S ARX200-00/4	73744



acoustic's TVM

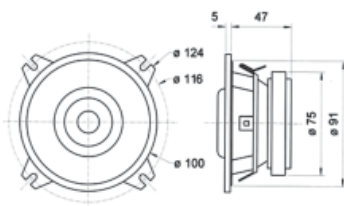
ARV 040-03/4

A indirect-radiator electrodynamic loudspeaker designed for transmission of tones of the upper part of the audible frequency for sound-tracking of interior of cars.



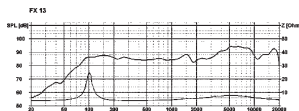
Technical Parameters	ARV 040-03/4
Diameter	40mm
Depth	16mm
Rated Noise Power	5 W
Short Term Maximum Power	12 W
Impedance	4 Ω
Resonant Frequency	-
Rated Frequency Range	2000-20000 Hz
Sensitivity	84 dB

Part No.	Ord.No.
S ARV 040-03/4	44234

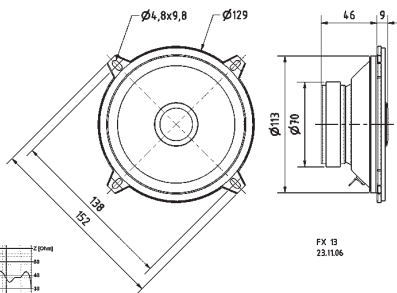


Technical Parameters	DX 10/4
Diameter	100mm
Depth	47mm
Rated Noise Power	50 W
Short Term Maximum Power	70 W
Impedance	4 Ω
Resonant Frequency	110 Hz
Rated Frequency Range	80-20000 Hz
Sensitivity	88 dB

Part No.	Ord.No.
S DX 10/4	46335



DX 10/4
 10 cm (4") 2-way coaxial loudspeakers with 10 cm polypropylene cone and polycarbonate dome tweeter. Integrated crossover (capacitor) for the tweeter. Very balanced sound. Straightforward installation in vehicles with 10 cm cutouts. Door and rear tray installation possible using mounting ring and grille. Packed in pairs, mounting accessories and protective grilles are included.

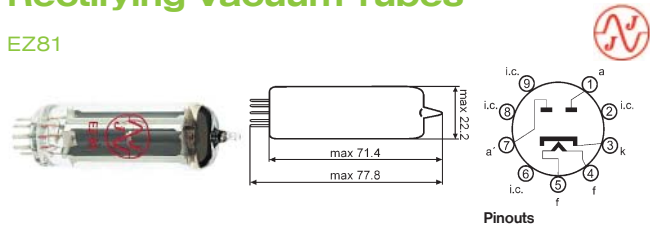


Technical Parameters	FX 13 4 OHM
Diameter	129mm
Depth	55mm
Rated Noise Power	30 W
Short Term Maximum Power	50 W
Impedance	4 Ω
Resonant Frequency	100 Hz
Rated Frequency Range	60-20000 Hz
Sensitivity	85 dB

Part No.	Ord.No.
O FX 13 4 OHM	61402

Rectifying Vacuum Tubes

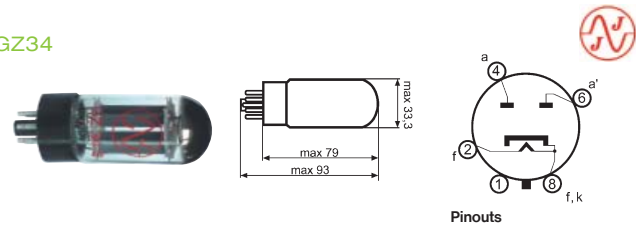
EZ81



Technical Parameters	EZ81
Type of Vacuum Tube	Double anode rectifying tube
Voltage Uf	6,3 V
Current If	1 A
Number of Pins	9
Socket	NOVAL

Part No.	Ord.No.
O EZ81	70653

GZ34

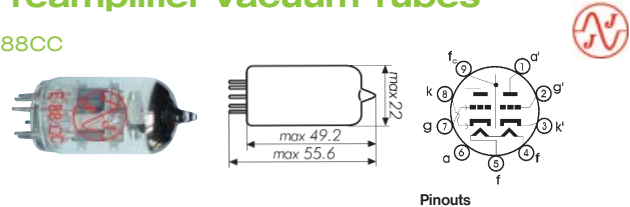


Technical Parameters	GZ34
Type of Vacuum Tube	Double anode rectifying tube
Voltage Uf	5 V
Current If	1,9 A
Number of Pins	5
Socket	OCTAL

Part No.	Ord.No.
S GZ34	70654

Preamplifier Vacuum Tubes

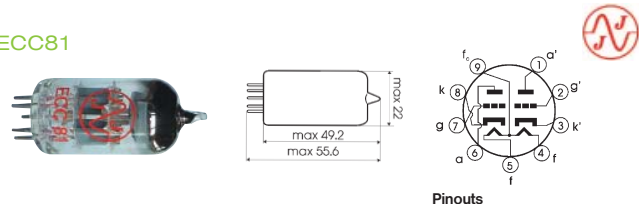
E88CC



Technical Parameters	E88CC
Type of Vacuum Tube	R. F. double triode
Voltage Ua	max. 220 V
Power PaR	1,5 W
Number of Pins	9
Socket	NOVAL

Part No.	Ord.No.
O E88CC	67002

ECC81

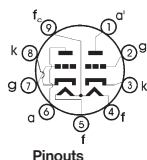
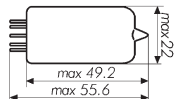


Technical Parameters	ECC81
Type of Vacuum Tube	A. F. double triode
Voltage Ua	max. 300 V
Power Wa	2,5 W
Number of Pins	9
Socket	NOVAL

Part No.	Ord.No.
S ECC81	66997

Preamplifier Vacuum Tubes (continued)

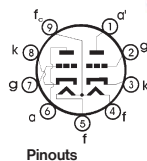
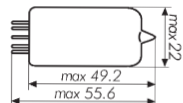
ECC82



Pinouts

Technical Parameters		ECC82
Type of Vacum Tube		R. F. double triode
Voltage U_a		max. 300 V
Power W_a		2,75 W
Number of Pins		9
Socket		NOVAL
Part No.	Ord.No.	
s ECC82	66998	

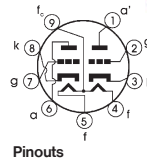
ECC83S



Pinouts

Technical Parameters		ECC83S
Type of Vacum Tube		R. F. double triode
Voltage U_a		max. 300 V
Power W_a		1 W
Number of Pins		9
Socket		NOVAL
Part No.	Ord.No.	
s ECC83S	66999	

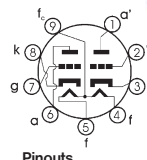
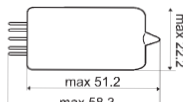
ECC832



Pinouts

Technical Parameters		ECC832
Type of Vacum Tube		Combinated double triode for special purposes, 1 system of ECC82, 1 system of ECC83
Voltage U_a		max. 250 V
Number of Pins		9
Socket		NOVAL
Part No.	Ord.No.	
o ECC832	67001	

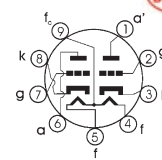
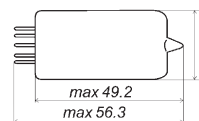
ECC802S



Pinouts

Technical Parameters		ECC802S
Type of Vacum Tube		A. F. twin triode with separate cathodes, non microphonic
Voltage U_a		max. 330 V
Power W_a		3 W
Number of Pins		9
Socket		NOVAL
Part No.	Ord.No.	
o ECC802S	70651	

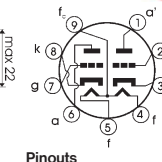
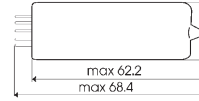
ECC803S



Pinouts

Technical Parameters		ECC803S
Type of Vacum Tube		A. F. twin triode with separate cathodes, non microphonic
Voltage U_a		max. 330 V
Power W_a		1,2 W
Number of Pins		9
Socket		NOVAL
Part No.	Ord.No.	
o ECC803S	67000	

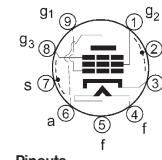
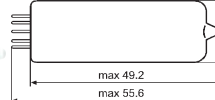
ECC99



Pinouts

Technical Parameters		ECC99
Type of Vacum Tube		R. F. double triode
Voltage U_a		max. 400 V
Power W_a		5 W
Number of Pins		9
Socket		NOVAL
Part No.	Ord.No.	
o ECC99	67003	

EF806S



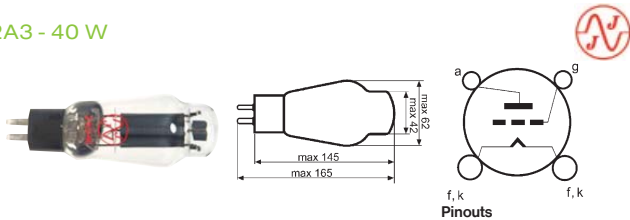
Pinouts

Technical Parameters		EF806S
Type of Vacum Tube		Pentode intended for use as A. F. amplifier
Voltage U_a		max. 300 V
Power W_a		1W
Number of Pins		9
Socket		NOVAL
Part No.	Ord.No.	
o EF806S	70652	



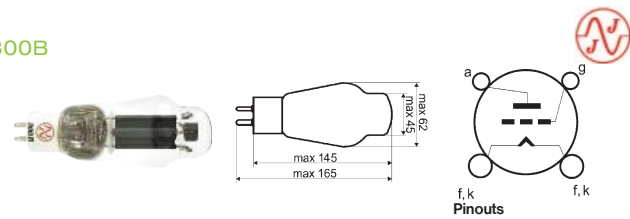
Power Vacuum Tubes

2A3 - 40 W



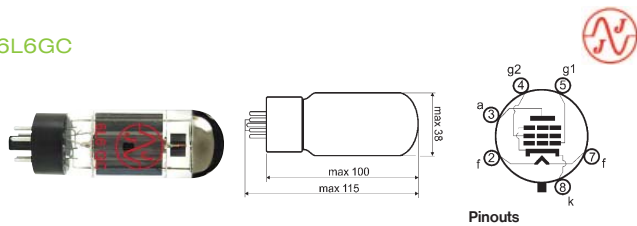
Technical Parameters		2A3 - 40 W
Type of Vacuum Tube	A. F. triode	
Voltage Ua	max. 450 V	
Power Wa	40 W	
Number of Pins	4	
Socket	4-PIN CERAMIC	
Part No.	Ord.No.	
o 2A3 - 40 W	67015	

300B



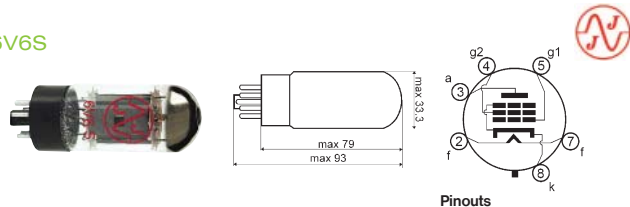
Technical Parameters		300B
Type of Vacuum Tube	R. F. triode	
Voltage Ua	max. 450 V	
Power Wa	40 W	
Number of Pins	4	
Socket	4-PIN CERAMIC	
Part No.	Ord.No.	
o 300B	67014	

6L6GC



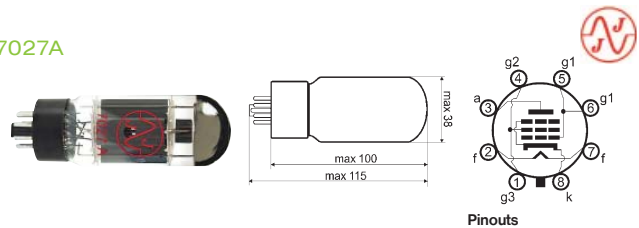
Technical Parameters		6L6GC
Type of Vacuum Tube	A. F. beam pentode	
Voltage Ua	max. 500 V	
Power Wa	30 W	
Number of Pins	6	
Socket	OCTAL	
Part No.	Ord.No.	
s 6L6GC	67010	

6V6S



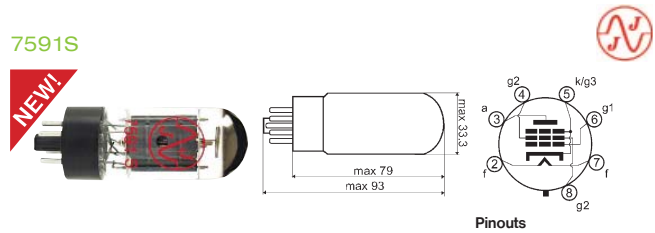
Technical Parameters		6V6S
Type of Vacuum Tube	A. F. beam pentode	
Voltage Ua	max. 500 V	
Power Wa	14 W	
Number of Pins	6	
Socket	OCTAL	
Part No.	Ord.No.	
s 6V6S	67009	

7027A



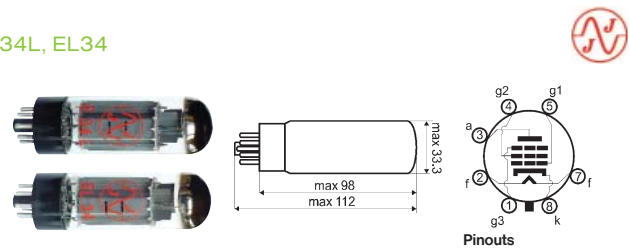
Technical Parameters		7027A
Type of Vacuum Tube	A. F. beam pentode	
Voltage Ua	max. 500 V	
Power Wa	30 W	
Number of Pins	8	
Socket	OCTAL	
Part No.	Ord.No.	
o 7027A	67011	

7591S



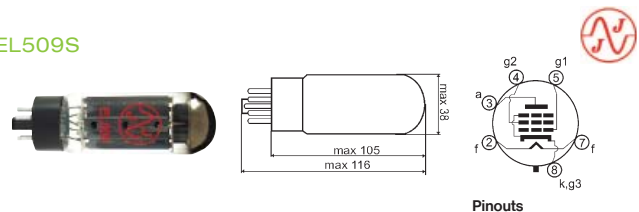
Technical Parameters		7591S
Type of Vacuum Tube	Power Pentode	
Voltage Ua	max. 550 V	
Power Wa	19 W	
Number of Pins	7	
Socket	8-PIN OCTAL	
Part No.	Ord.No.	
o 7591S	67005	

E34L, EL34



Technical Parameters		E34L / EL34
Type of Vacuum Tube	A. F. output pentode	
Voltage Ua	max. 800 V	
Power Wa	25 W	
Voltage Ug1	-13,5 V; -16,5 V / -10 V; -13,5 V	
Number of Pins	7	
Socket	OCTAL	
Part No.	Ord.No.	
s E34L	67007	
s EL34	67006	

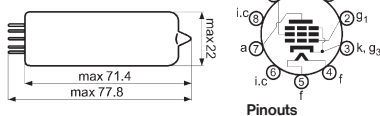
EL509S



Technical Parameters		EL509S
Type of Vacuum Tube	Output power beam pentode	
Voltage Ua	max. 700 V	
Power Wg2/Wa+g2	9/42 W	
Number of Pins	6	
Socket	OCTAL	
Part No.	Ord.No.	
o EL509S	67012	

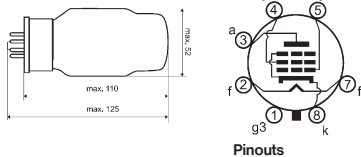
Power Vacuum Tubes (continued)

EL84



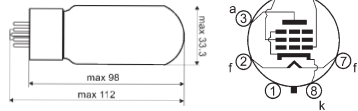
Technical Parameters		EL84
Type of Vacuum Tube		R. F. output pentode
Voltage U_a		max. 300 V
Power W_a		12 W
Number of Pins		9
Socket		NOVAL
Part No.	Ord.No.	
S EL84	67004	

KT66, KT88



Technical Parameters		KT66 / KT88
Type of Vacuum Tube		A. F. beam pentode
Voltage U_a		max. 550 V / max. 800 V
Power W_a (KT88 W_a+g_2)		25 W / 42 W
Number of Pins		7
Socket		OCTAL
Part No.	Ord.No.	
O KT66	67271	
S KT88	67013	

KT77



Technical Parameters		KT77
Type of Vacuum Tube		A.F. beam pentode
Voltage U_a		max. 800 V
Power W_a		25 W
Number of Pins		7
Socket		OCTAL
Part No.	Ord.No.	
O KT77	67008	

Sockets for Vacuum Tubes

4 pins, panel mounting



9 pins, panel mounting



8 pins, PCB mounting



9 pins, PCB mounting



Part No.	Ord.No.	Num. of pins	Mounting
O Socket 4-Pin Chasis	70657	4	panel
S Socket 8-Pin Chasis	70655	8	panel
S Socket 9-Pin Chasis	70656	9	panel
S Socket 9-Pin PCB	70658	9	PCB

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