



BETA53 BETA54

Headworn Vocal Microphones

The Shure subminiature, electret condenser headworn microphones, BETA53 and BETA54, user guide.
Version: 4 (2019-K)

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BETA53 BETA54

Headworn Vocal Microphones

General Description

Shure models BETA53 and BETA54 are subminiature, electret condenser headworn microphones. They provide uncompromised sound quality and reliability with minimal visibility in applications such as broadcast, theater, and touring. Despite their small size, each microphone's condenser element delivers full, clear, and natural reproduction of speech and vocals. The microphone features a durable, low-profile wire frame headband which is fully adjustable for stability and comfort. A plastic carrying case protects the microphone and its accessories.

BETA53 Features

- Omnidirectional polar pattern for minimal handling noise and flexible microphone placement
- Extended, flat frequency response provides accurate speech and vocal reproduction
- Two interchangeable protective caps for response shaping
- Foam windscreens minimize breath noise and "popping"
- Available with an in-line preamp or with a TA4F connector for wireless applications
- Choice of black or tan finish to suit your performance environment

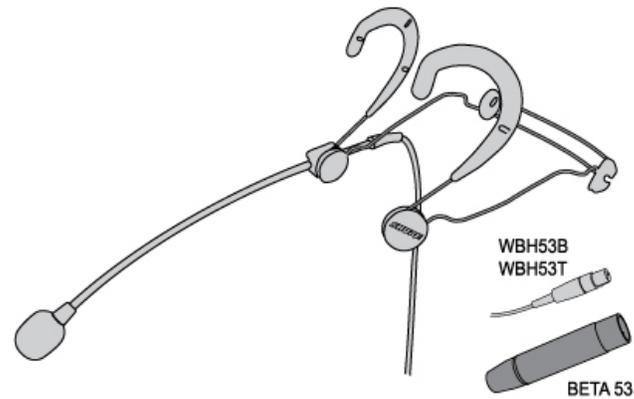
BETA54 Features

- Supercardioid polar pattern provides maximum gain-before-feedback and ambient rejection
- Extended frequency response tailored for vocal performances
- Able to handle extremely high sound pressure levels (SPL)
- Snap-fit foam windscreens stay in place during intensive movement
- Available with an in-line preamp or with a TA4F connector for wireless applications
- Choice of black or tan finish to suit your performance environment

Available Models

Beta53 Models

- Omnidirectional
- For broadcast and stage
- Black finish
- Detachable in-line preamp for wired applications
- Requires phantom power



Wireless Models

These models are for use with Shure wireless microphone systems. TA4F connector attaches to wireless bodypacks (in-line preamp not included).

- WBH53B (black)
- WBH53T (tan)

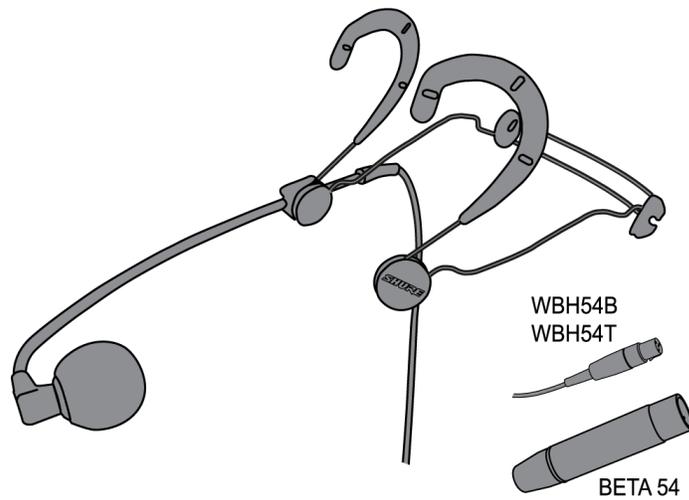
Accessories

All models include:

Microphone and headband	1 each
Foam windscreens	2
Standard protective cap	2
Filtered protective cap	2
Swiveling lapel clip	1
Boom holder	2
Logo pad	1
Plastic carrying case	1

Beta54 Models

- Supercardioid
- For stage and vocal performance
- Black finish
- Detachable in-line preamp for wired applications
- Requires phantom power



Wireless Models

These models are for use with Shure wireless microphone systems. TA4F connector attaches to wireless bodypacks (in-line preamp not included).

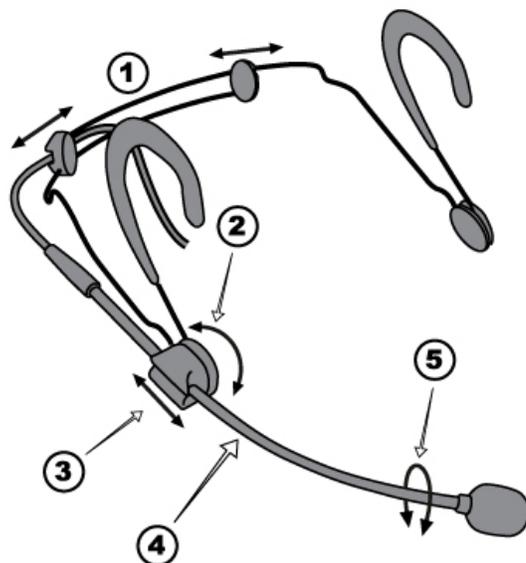
- WBH54B (black)
- WBH54T (tan)

Accessories

All models include:

Microphone and headband	1 each
Snap-fit foam windscreens	2
Standard protective cap	2
Swiveling lapel clip	1
Boom holder	2
Logo pad	1
Plastic carrying case	1

Adjusting the Headband and Microphone



①	Adjust headband width
②	Adjust boom height
③	Adjust boom length
④	Do not attempt to bend the microphone boom!
⑤	"Roll" the boom for subtle adjustments of microphone position

Windscreens

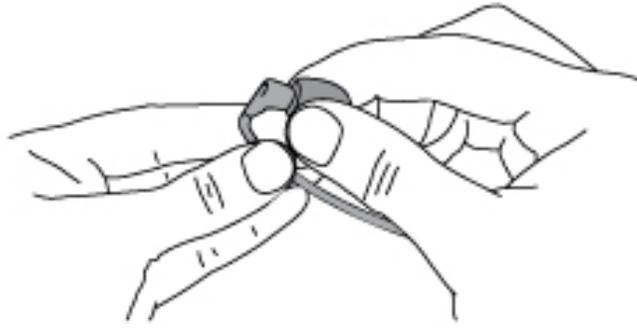
Care and Maintenance

- Foam windscreens may be cleaned with soap and water.
- For the best sound quality, replace damaged or clogged protective caps and windscreens.

Windscreen

Grip the internal frame of the windscreen firmly when connecting or removing. **Do not pull on the foam itself.**

- To connect, push the windscreen until it snaps into place over the cartridge.
- To remove, pull the windscreen directly off of the cartridge.



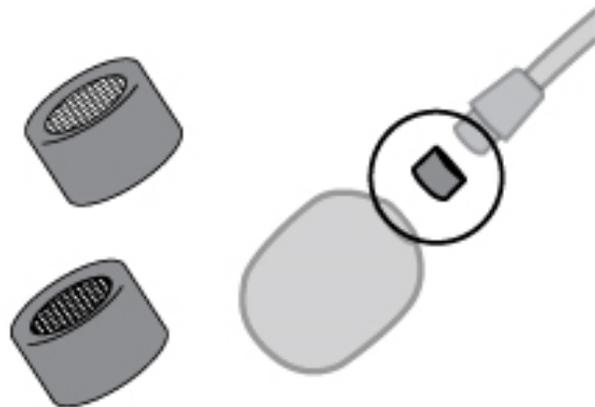
Protective Caps

Standard protective cap:

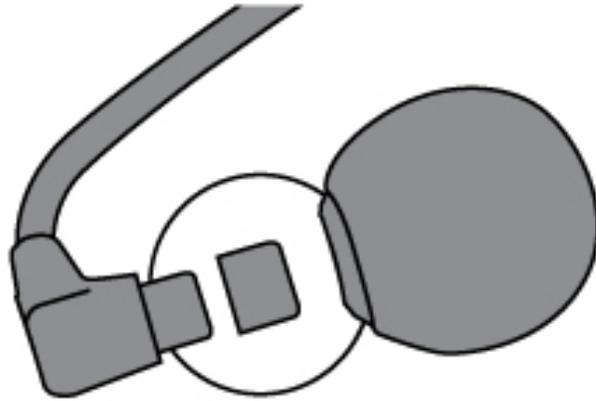
- Gold mesh
- No attenuation

Filtered protective cap:

- Silver mesh
- Attenuates high frequencies



Always use the BETA54 with the standard protective cap only. Using the microphone with no cap, or with the filtered cap, will degrade sound quality and alter the microphone's polar pattern.

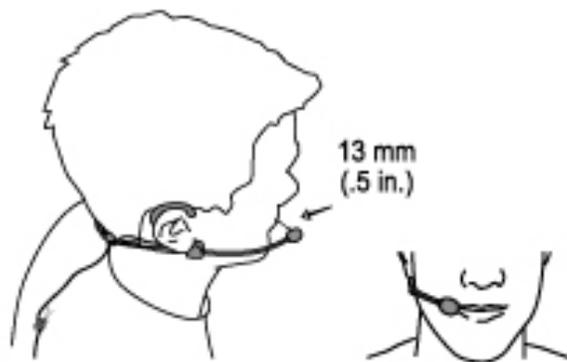


Positioning the Microphone

BETA53/54



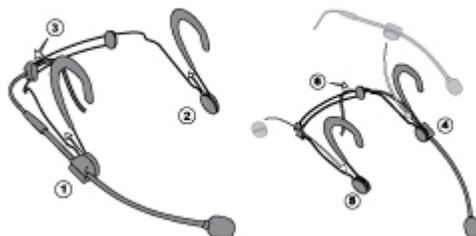
- Position the omnidirectional BETA53 or directional BETA54 microphone near the corner of the mouth
- If necessary, roll the boom to avoid contact with skin and facial hair



Reversing the Boom

The microphone boom may be reinstalled to position it on the left or right side of the head.

- Carefully detach the boom holder ①, logo pad ②, and microphone cable ③ from the headband.
- Reattach the boom holder to the opposite side of the wire frame ④.
- Reattach the logo pad ⑤ and microphone cable ⑥.



Specifications

BETA 53 / WBH53 / RPM627

Type

Electret Condenser

Frequency Response

20 to 20,000 Hz

Polar Pattern

Omnidirectional

Output Impedance (RPM627)

160 Ω

Sensitivity

at 1kHz, open circuit voltage

BETA 53	-54.0 dBV/Pa(3.16 mV) ^[1]
WBH53	-54.0 dBV/Pa(2.0 mV) ^[1]

Maximum SPL

1 kHz at 1% THD ^[2]

BETA 53	139.4 dB
WBH53	150.5 dB

Signal-To-Noise Ratio ^[3]

55.0 dB

Dynamic Range

at 1kHz

BETA 53	96.9 dB
WBH53	108 dB

Self Noise

equivalent SPL, A-weighted, typical

42.5 dB

Power Requirements

BETA 53	11–52 V DC phantom power ^[4] , 2 mA
WBH53	+5 V DC

Polarity

BETA 53	Positive pressure on diaphragm produces positive voltage on pin 2 with respect to pin 3
WBH53	Positive pressure on diaphragm produces positive voltage on pin 3 with respect to pin 1

Weight

BETA 53	135 g(4.75 oz.)
WBH53	35 g(1.25 oz.)

Cable

1.5Meters (5Feet)

^[1]1 Pa=94 dB SPL

^[2]THD of microphone preamplifier when applied input signal level is equivalent to cartridge output at specified SPL

^[3]S/N ratio is the difference between 94 dB SPL and equivalent SPL of self-noise, A-weighted

BETA 54 / WBH54 / RPM627

Type

Electret Condenser

Frequency Response

50 to 20,000 Hz

Polar Pattern

Supercardioid

Output Impedance (RPM627)

160 Ω

Sensitivity

at 1kHz, open circuit voltage

BETA 54	-56.0 dBV/Pa(2.51 mV) ^[1]
----------------	--------------------------------------

WBH54-56.0 dBV/Pa(1.58 mV)^[1]**Maximum SPL***1 kHz at 1% THD ^[2]*

BETA 54	141.4 dB
WBH54	152.5 dB

Signal-To-Noise Ratio ^[3]

55.0 dB

Dynamic Range*at 1kHz*

BETA 54	98.3 dB
WBH54	109.4 dB

Self Noise*equivalent SPL, A-weighted, typical*

43.1 dB

Power Requirements

BETA 54	11–52 V DC phantom power ^[4] , 2 mA
WBH54	+5 V DC

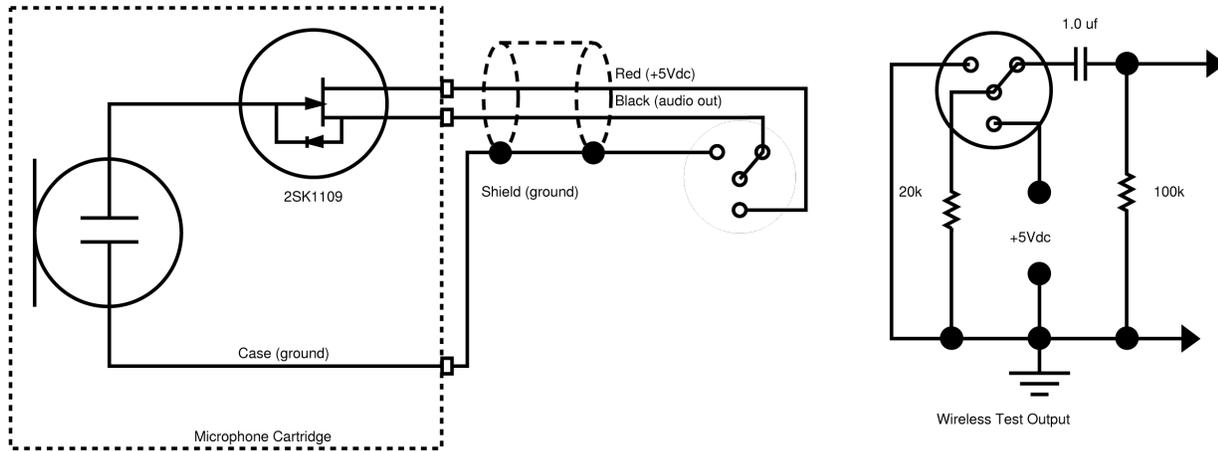
Polarity

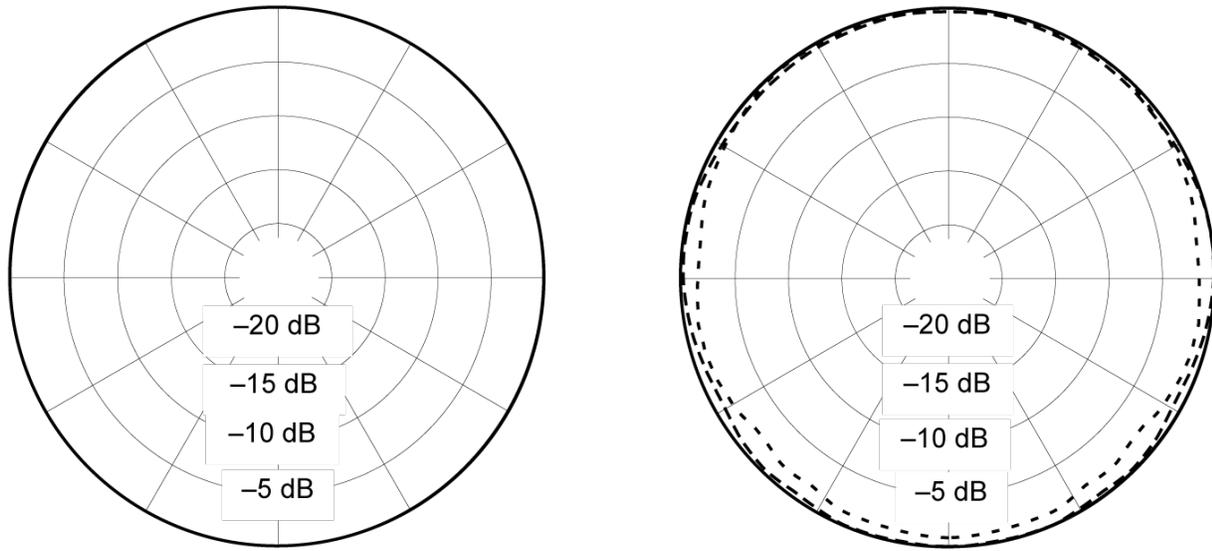
BETA 54	Positive pressure on diaphragm produces positive voltage on pin 2 with respect to pin 3
WBH54	Positive pressure on diaphragm produces positive voltage on pin 3 with respect to pin 1

Weight

BETA 54	135 g(4.75 oz.)
WBH54	35 g(1.25 oz.)

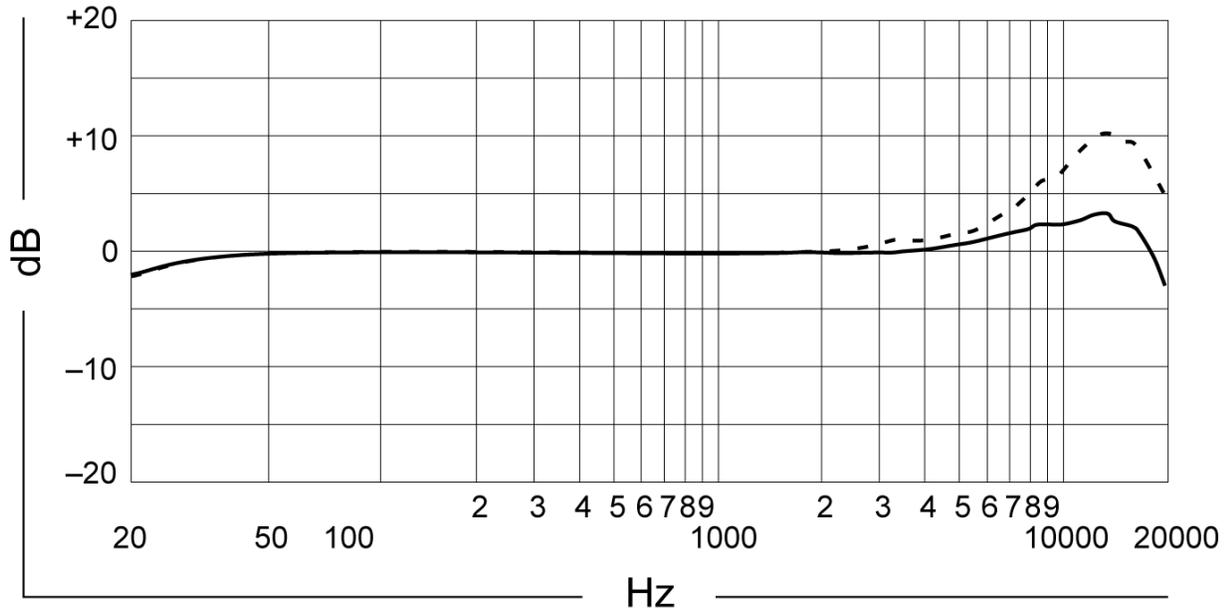
^[1]1 Pa=94 dB SPL^[2]THD of microphone preamplifier when applied input signal level is equivalent to cartridge output at specified SPL^[3]S/N ratio is the difference between 94 dB SPL and equivalent SPL of self-noise, A-weighted





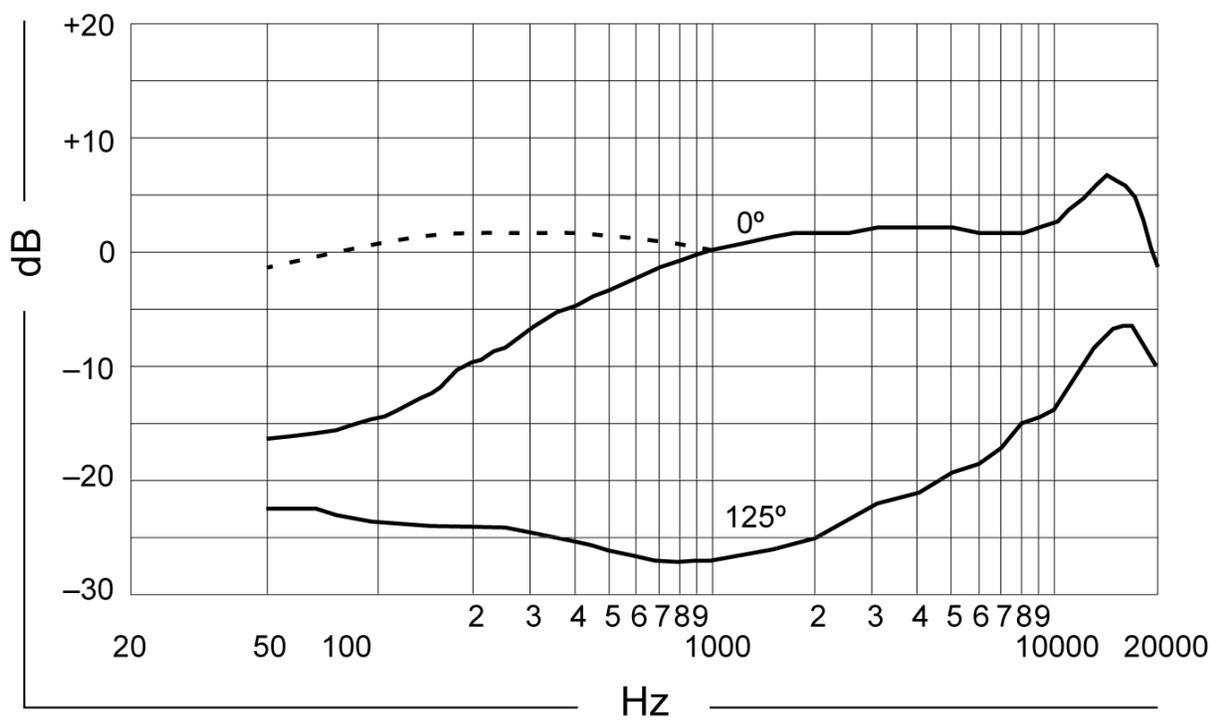
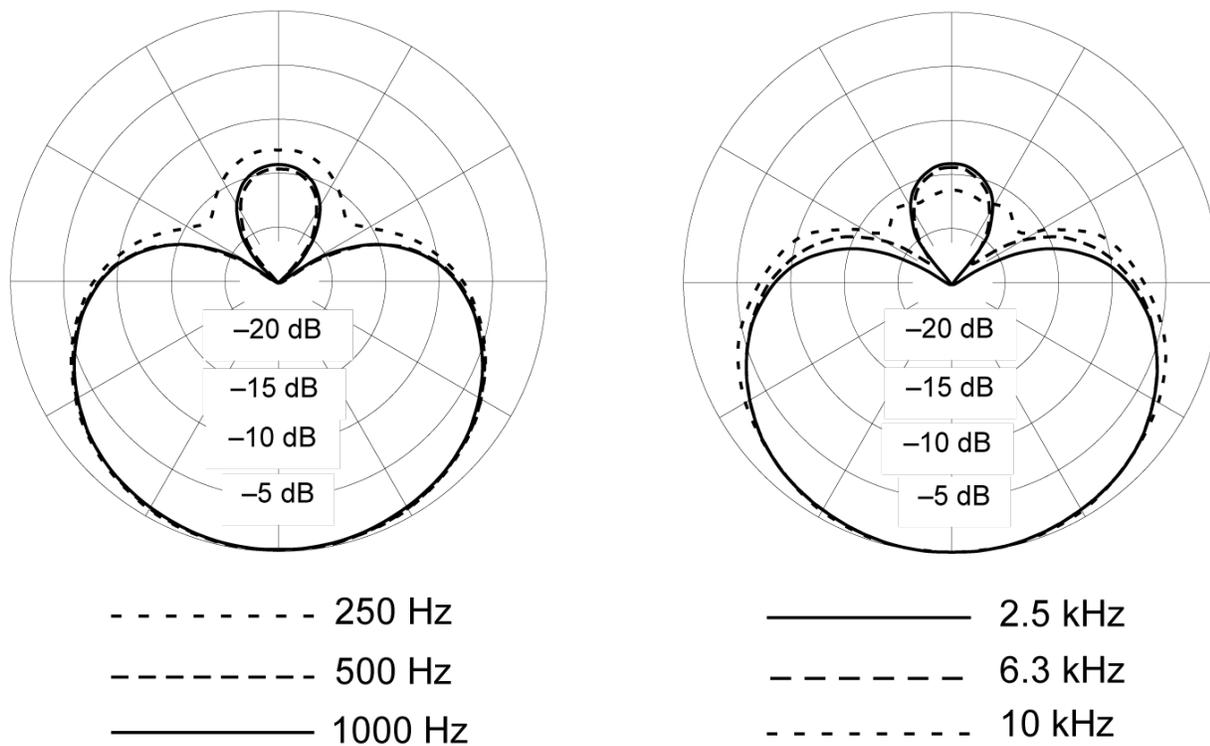
- - - - - 250 Hz
 - - - - - 500 Hz
 _____ 1000 Hz

_____ 2.5 kHz
 - - - - - 6.3 kHz
 - - - - - 10 kHz



Standard Protective Cap - - - - -
 Filtered Protective Cap _____

BETA53 Typical Polar Pattern and Frequency Response



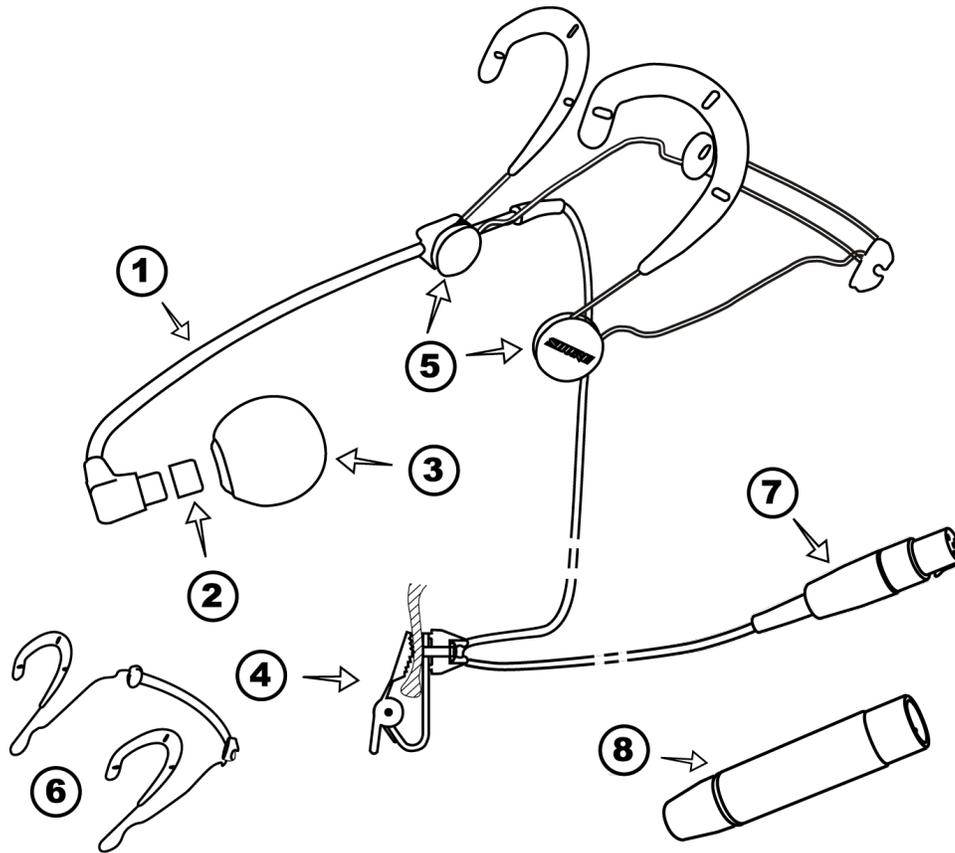
15 mm (.6 in) - - - - -
 606 mm (2 ft) _____

BETA54 Typical Polar Pattern and Frequency Response

Accessories

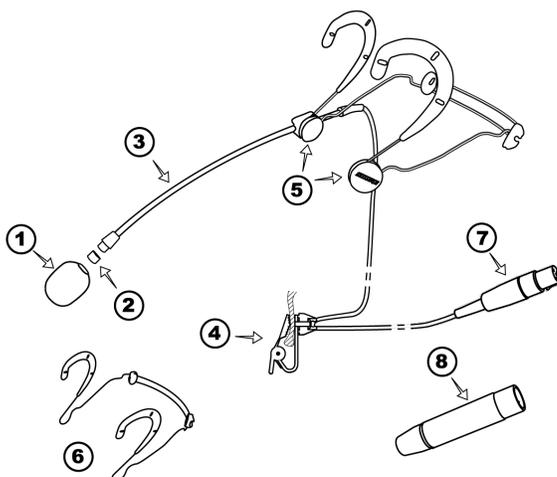
Replacement Parts

BETA54



	Component	Black	Tan
1	Microphone/Boom Assembly with TA4F Connector (1 piece)	RPM646	RPM648
2	Standard Protective Cap (gold mesh) (5 pieces)	RPM208	RPM212
3	Snap-fit Foam Windscreen (4 pieces)	RPM316	RPM318
4	Swiveling Lapel Clip (5 pieces)	RPM510	RPM512
5	Boom Holder and Logo Pad (2 each)	RPM570	RPM580
6	Headband (1 piece, with boom holder and logo pad)	RPM550	RPM560
7	4-Pin Mini Connector (TA4F) (1 piece)	WA333	
8	In-Line Preamp (1 piece)	RPM627	

BETA53



	Component	Black	Tan
1	Foam Windscreen (5 pieces)	RPM304	RPM306
2	Standard Protective Cap (gold mesh) (5 pieces)	RPM208	RPM212
	Filtered Protective Cap* (silver mesh) (5 pieces)	RPM220	RPM214
3	Microphone/Boom Assembly with TA4F Connector (1 piece)	RPM132	RPM134
4	Swiveling Lapel Clip (5 pieces)	RPM510	RPM512
5	Boom Holder and Logo Pad (2 each)	RPM570	RPM580
6	Headband (1 piece, with boom holder and logo pad)	RPM550	RPM560
7	4-Pin Mini Connector (TA4F) (1 piece)	WA333	
8	In-Line Preamp (1 piece)	RPM627	

Certifications

This product meets the Essential Requirements of all relevant European directives and is eligible for CE marking.

The CE Declaration of Conformity can be obtained from: www.shure.com/europe/compliance

Authorized European representative:

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Department: EMEA Approval

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