

BETA 87C® CARDIOID CONDENSER MICROPHONE



OVERVIEW

The Shure BETA 87C is a high output condenser microphone that provides touring professionals with studio-quality sound. Vocalists who use in-ear monitor systems such as the Shure PSM® Personal Monitor System will appreciate how effectively the BETA 87C rejects ambient sound from the rear of the microphone.

The BETA 87C maintains its cardioid pattern throughout its frequency range, ensuring maximum isolation from other sound sources and high gain before feedback. Its warm, natural sound is the result of an exceptionally smooth frequency response that includes a slight presence rise. A controlled low-frequency roll-off compensates for proximity effect and prevents the “boomy” sound often associated with close-up use.

FEATURES

- Smooth, wide frequency response with slight presence rise
- Cardioid polar pattern for maximum isolation
- Minimal off-axis tone coloration
- Superior gain before feedback.
- Low-frequency roll-off compensates for proximity effect
- Wide dynamic range (117 dB)

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The BETA 87C is an excellent choice for professional studio recording, yet it is built to withstand the rigors of touring. It maintains its performance characteristics even at sound pressure levels as high as 139 dB SPL. Plus, the cartridge is protected by a proven shock mount system. A hardened steel mesh grille with a built-in pop filter provides added protection.

- Low distortion characteristics
- Very low susceptibility to RFI and electromagnetic hum
- Advanced cartridge shock-mount system absorbs mechanical shocks and reduces handling noise
- Built-in pop filter reduces wind and breath sounds
- Shure ruggedness and reliability for years of trouble-free performance

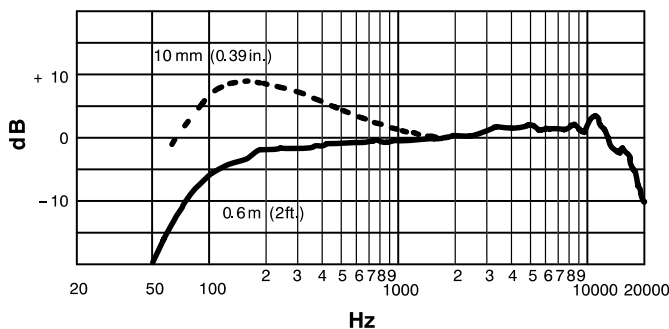
SPECIFICATIONS

Transducer Type

Condenser (electret bias)

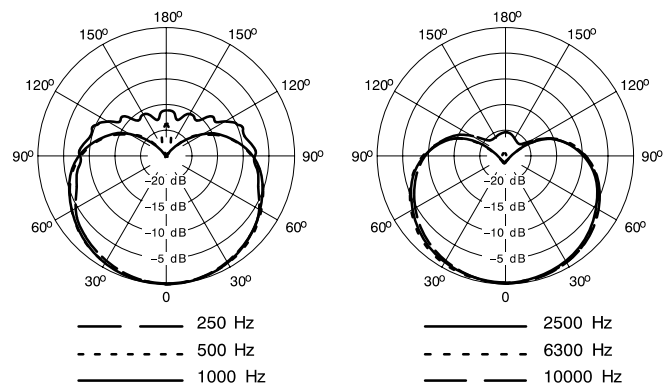
Frequency Response

50 to 20,000 Hz



TYPICAL FREQUENCY RESPONSE

Polar Pattern cardioid



TYPICAL POLAR PATTERN

Output Impedance

Rated at 150 ohms (100 ohms actual $\pm 20\%$)
 Recommended minimum load impedance: 800 ohms

Sensitivity (at 1,000 Hz)

Open Circuit Voltage -51 dBV/Pa (2 mV)
 (1 Pa = 94 dB SPL)

Output Clipping Level

1000 ohm Load at 1,000 Hz -6 dBV (0.5 V)

Maximum SPL

139 dB at 1,000 Hz (0.25% THD, 1000 ohm load)

Self-Noise

22 dB typical, A-weighted
 24 dB typical, weighted per DIN 45 405
 (equivalent sound pressure level; measured with true rms voltmeter)

Dynamic Range

117 dB (maximum SPL to A-weighted noise level)

Hum Sensitivity

-5 dB equivalent SPL, maximum, in a 1 mOe field (60 Hz)

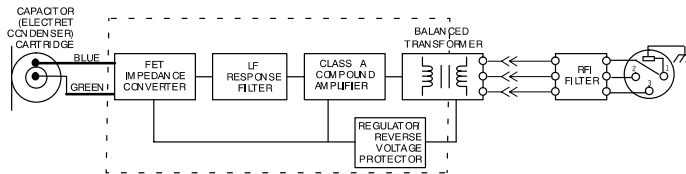
Signal-to-Noise Ratio

72 dB at 94 dB SPL (IEC 651)*

*S/N ratio is difference between 94 dB SPL and equivalent SPL of self-noise A-weighted.

Polarity

Positive pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of the output connector. See Figure 4.



BETA 87C BLOCK DIAGRAM

FURNISHED ACCESSORIES

Swivel Adapter A25D

REPLACEMENT PARTS

Grille RK312

OPTIONAL ACCESSORIES

Phantom Power Supply PS1A
 Isolation Mount A53M, A53HM

Power

Phantom Supply Requirement 11 to 52 Vdc, positive
 at both pins 2 and 3

Current Drain 1.0 to 1.2 mA

Connector

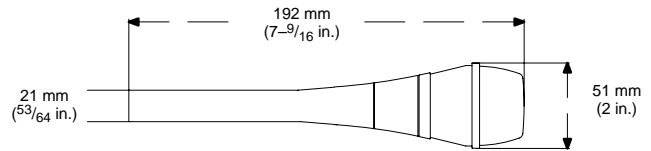
Three-pin (XLR) professional audio

Case

Aluminum construction with painted blue metallic finish, and hardened steel grille with nickel satin chrome plating

Dimensions

See Figure 5



OVERALL DIMENSIONS

Net Weight

Net: 207 grams (7.6 oz)
 Packaged: 565 grams (1.24 lbs)

Environmental Conditions

Operating: -18° to 60° C (0° to 135° F) (relative humidity <90%)

Storage: -29° to 74° C (-20° to 165° F) (relative humidity <80%)

Carrying/Storage Bag 26A13

Replacement Amplifier Assembly 90KF2600

Windscreen A85WS
 7.6 m (25 ft.) Cable C25F