

# Product Specifications

## Beta® 181 Ultra-Compact Side-Address Instrument Microphone

### Overview

The Shure Beta 181 is an ultra-compact, small-diaphragm side-address condenser microphone, designed for discrete placement and control in live and studio environments. Featuring interchangeable cardioid, supercardioid, omnidirectional and bidirectional capsule options for superior versatility, the small diaphragm design provides superior audio with consistent, textbook polar responses in a form factor small enough to get close to the source in the tightest conditions.

### Features

- Interchangeable polar pattern capsules attach to a compact XLR preamplifier with integrated XLR connections for the ultimate in low-profile application flexibility (each Beta 181 ships with one polar pattern capsule and one XLR preamplifier)
- Precision-engineered, compact side-address design features innovative locking ring to provide secure connection between capsule and preamplifier
- **Beta 181/C** (cardioid) for drum overhead, piano, acoustic instrument applications, M/S stereo technique (paired with Beta 181/BI)
- **Beta 181/S** (supercardioid) for snare drum, acoustic instrument, close-miking applications
- **Beta 181/O** (omnidirectional) for ambient/room, instrument ensemble applications
- **Beta 181/BI** (bidirectional) for mono drum overhead, dual instrument sound source applications, Blumlein stereo technique (pair of Beta 181/BI)
- Capsules available separately for custom flexibility
- Frequency response tailored for wide dynamic range applications for use in high SPL environments
- Furnished with stand adapter, windscreen and carrying case (carrying case will securely protect up to four polar pattern capsules)



Beta 181/C

### Available Models

<b>BETA 181/C</b>	Ultra-Compact Side-Address Condenser Instrument Microphone with Cardioid Polar Pattern Capsule
<b>BETA 181/S</b>	Ultra-Compact Side-Address Condenser Instrument Microphone with Supercardioid Polar Pattern Capsule
<b>BETA 181/O</b>	Ultra-Compact Side-Address Condenser Instrument Microphone with Omnidirectional Polar Pattern Capsule
<b>BETA 181/BI</b>	Ultra-Compact Side-Address Condenser Instrument Microphone with Bidirectional Polar Pattern Capsule
<b>BETA181/KIT</b>	Ultra-Compact Side-Address Instrument Microphone Kit comes with one (1) each Cardioid, Supercardioid, Omnidirectional and Bidirectional Polar Pattern Capsules

### Specifications

Cartridge Type	Electret Condenser		
Polar Pattern	Cardioid / Supercardioid / Omnidirectional / Bidirectional		
Frequency Response	20 to 20,000 Hz		
Output Impedance	110 Ω		
Maximum SPL <i>(1 kHz at 1% THD, 1kΩ load)</i>	Cardioid:	149.0 dB SPL	
	Supercardioid:	152.0 dB SPL	
	Omnidirectional	154.0 dB SPL	
	Bidirectional	153.5 dB SPL	
Signal-to-Noise Ratio <i>(referenced at 94 dB SPL at 1 kHz; S/N ratio is difference between 94 dB SPL and equivalent SPL of self noise, A-weighted)</i>	Cardioid:	73.5 dB	
	Supercardioid:	72.5 dB	
	Omnidirectional	70.5 dB	
	Bidirectional	71.0 dB	
Dynamic Range <i>(at 1 kHz, 1 kΩ load)</i>	Cardioid:	128.5 dB	
	Supercardioid:	129.5 dB	
	Omnidirectional	130.5 dB	
	Bidirectional	130.5 dB	
Clipping Level <i>(1 kHz at 0.25% THD, 1kΩ load)</i>	7.5 dBV (2.4 V)		
	Cardioid:	20.5 dB	
Self-Noise <i>(equivalent SPL, A-weighted, typical)</i>	Supercardioid:	22.5 dB	
	Omnidirectional	23.5 dB	
	Bidirectional	23.0 dB	
	Common Mode Rejection <i>(20-20,000 Hz)</i>	≥55 dB	
Polarity	Positive pressure on diaphragm produces positive voltage on pin 2 with respect to pin 3		
Power Requirements	11–52 VDC phantom power (IEC-61938), 1.2 mA		
Weight	Net: 145 g (5.1 oz.)		

### Accessories and Replacement Parts

<b>A57F</b>	Stand Adapter	<b>A181C</b>	Zippered Carrying Case
<b>A181WS</b>	Windscreen	<b>RPM181/PRE</b>	Replacement XLR Preamp
<b>RPM181/C</b>	Cardioid Polar Pattern Capsule	<b>RPM181/S</b>	Supercardioid Polar Pattern Capsule
<b>RPM181/O</b>	Omnidirectional Polar Pattern Capsule	<b>RPM181/BI</b>	Bidirectional Polar Pattern capsule

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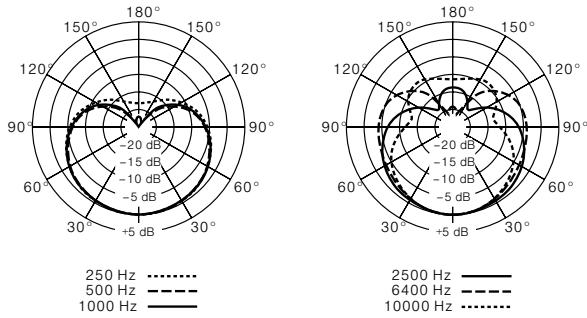
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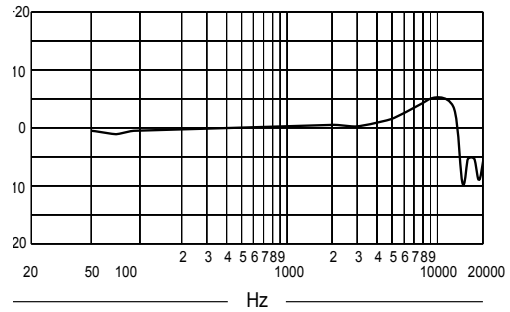
# Product Specifications (BETA®181, Continued)

## Beta 181/C (Cardioid)

Polar Pattern

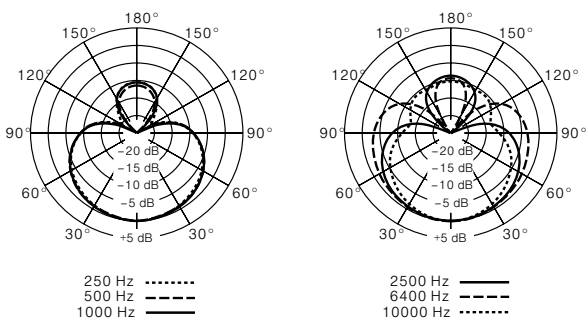


Frequency Response

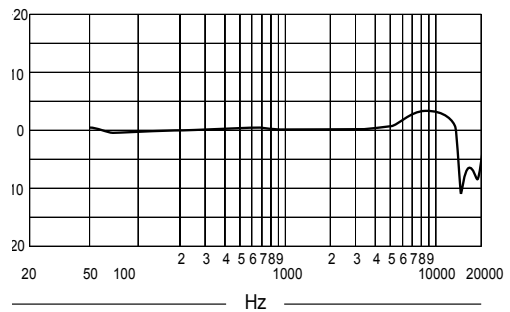


## Beta 181/S (Supercardioid)

Polar Pattern

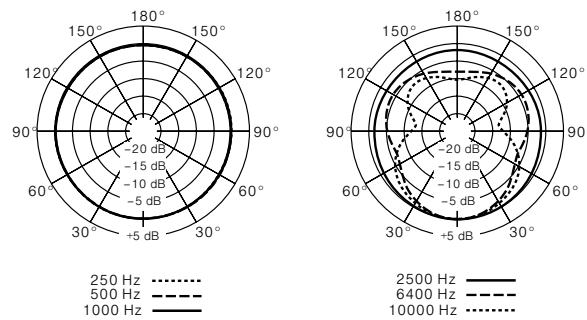


Frequency Response

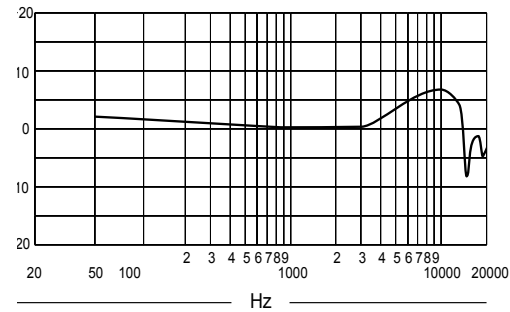


## Beta 181/O (Omnidirectional)

Polar Pattern

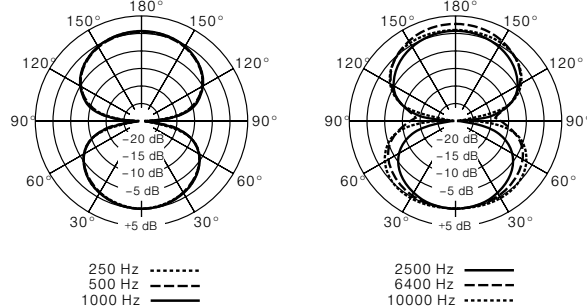


Frequency Response

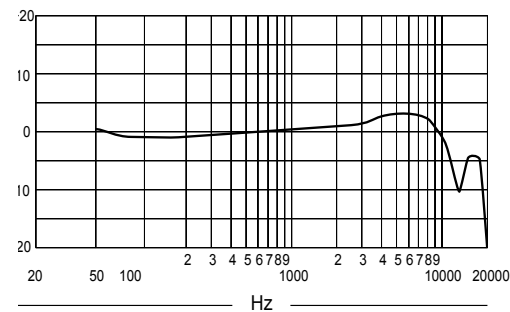


## Beta 181/BI (Bidirectional)

Polar Pattern



Frequency Response



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