

Cellular Ceramic Antennas



Low-profile ceramic cellular antenna offer more compact, light weight advantages and easy installation in a broad range of wireless data and industrial applications



698 MHz to 2.7 GHz
Ceramic Antennas, SMT,
Low-profile 3.00mm
(Series 206760)

Features and Advantages

Product and Technical Differences						
Attribute	790 MHz to 2.7 GHz Ceramic Cellular Antenna (Series 204774)	698 MHz to 2.7 GHz Cellular Antenna (Series 146200)	698 MHz to 2.7 GHz Cellular Antenna, Low-profile, 3mm (Series 206760)	698 MHz to 960 MHz Ceramic Antenna (206649)	600 MHz to 4000 MHz Ceramic Antenna (208485)	
Operating Frequencies	790 to 960 MHz and 1.7 to 2.7 GHz	698 to 960 MHz and 1.7 to 2.7 GHz	698 to 960 MHz and 1.7 to 2.7 GHz	698 to 869, 791 to 862, 824 to 960 and 698 to 960 MHz	617 to 894, 1710 to 2690 and 3300 to 3800 MHz	
Material	Ceramic					
Mounting	SMT					
Dimension (mm)	33.00 by 6.00 by 3.00	40.00 by 5.00 by 5.00	38.00 by 8.00 by 3.00	20.00 by 10.00 by 1.20	38.00 by 8.00 by 3.00	
Ground-plane Independence	No					
Average Total Radiation Efficiency	>50% (790 to 960 MHz)	146200-0011	146200-0001	>60% (698 to 960 MHz)	>50% (698 to 869 and 791 to 862MHz)	>65% (1710 to 2690 and 3300 to 3800 MHz)
	>70% (1.7 to 2.7 GHz)	>45 (698 to 960 MHz)	>40 (698 to 960 MHz)	>70% (1.7 to 2.7 GHz)	>55% (824 to 960 and 698 to 960 MHz)	>70% (617 to 894 MHz)
		>60 (1.7 to 2.7 GHz)	>60 (1.7 to 2.7 GHz)			
Clearance size (mm)	60.0 by 9.0	60.0 by 10.0	48.0 by 13.0	20.00 by 5.00 (698 to 869MHz) 0 (791 to 862 and 824 to 960 MHz) 20.00 by 10.00 (698 to 960 MHz)	60.00 by 29.00	
Key Advantages	Wider frequency range, higher Peak Gain (>3.7 dBi) and Total Radiation Efficiency (>70%) in 1.7 to 2.7 GHz range	Use of indirect (or coupled)-feed PCB design to reduce impedance detuning for talk and data modes results in better reception and radiation performance. Unique radiator patterns on the antenna enable wide impedance bandwidth compared with traditional antennas.	High Peak Gain of 4.4 dBi and >70% Radiation Efficiency gives this antenna excellent performance in the 1.7 to 2.7 GHz range	Designed for low-power applications. SMD Mounting RoHS Compliant	Wide frequency range with high efficiency up to 70% Low-profile ceramic body RoHS Compliant	

Applications

Telecommunications/Networking

- MIMO routers
- VPN routers
- Wireless LAN systems

Wireless Infrastructure

- Wireless embedded systems
- Wireless radio communication equipment
- MIMO satellite communications (SatCom) systems



MIMO's multipath reflection in urban cities is suited for Infrastructure / Networking applications



MIMO Satellite Communications Systems for Wireless Infrastructure Constructions

Specifications (790 MHz to 2.7 GHz Cellular Ceramic Antenna, Series 204774)

REFERENCE INFORMATION

Packaging: Tape on reel
Reference Platform: 130 by 60 by 0.8mm PCB
Designed In: Millimeters
RoHS: Yes
Halogen Free: Yes
Ground clearance: 10.00 by 3.00mm around the perimeter of the antenna footprint

ELECTRICAL

Voltage (Watt): 2
Return Loss (dB): <-6
Average Total Radiation Efficiency(%): >50% (790 to 960 MHz); >70% (1.70 to 2.70 GHz)
Peak Gain (dBi): 0.6 (790 to 960 MHz) : 4.8 (1.70 to 2.70 GHz)
Polarization: Linear
Input Impedance (Ohms): 50

MECHANICAL

Shear Force: 20N min.

PHYSICAL

Housing: Ceramic
Plating: Silver 4-11 microns
Operating Temperature: -40 to +125°C

Specifications (698 MHz to 2.7 GHz Cellular Ceramic Antennas, Series 146200)

REFERENCE INFORMATION

Packaging: Tape on reel
Reference Platform: 130.00 by 60.00 by 1.00mm
Designed In: Millimeters
RoHS: Yes
Halogen Free: Yes
Ground clearance: 10.00 by 5.00mm around the perimeter of the antenna footprint
SMT compatible: Yes

ELECTRICAL

Voltage (Watt): 2
Return Loss (dB): <-5
Average Total Radiation Efficiency(%): >45 (824 to 960 MHz); >60 (1.7 to 2.7 GHz) for 146200-0011; >40 (824 to 960 MHz); >60 (1.7 to 2.7 GHz) for 146200-0001
Peak Gain (dBi): 0.2 (698 to 960 MHz) and 3.8 (1.7 to 2.7 GHz) for 146200-00010.5 (698 to 960 MHz) and 3.7 (1.7 to 2.7 GHz) for 146200-0011
Polarization: Linear
Input Impedance (Ohms): 50

MECHANICAL

Shear Force: 50N min.

PHYSICAL

Housing: Ceramic
Plating: Silver 6-11 microns
Operating Temperature: -40 to +85°C

Specifications (698 MHz to 2.7 GHz Cellular Ceramic Antenna, Series 206760)

REFERENCE INFORMATION

Packaging: Tape on reel
Reference Platform: Refer to Application Specifications
Designed In: Millimeters
RoHS: Yes
Halogen Free: Yes
Ground clearance: 10.00 by 5.00mm around the perimeter of the antenna footprint

ELECTRICAL

Voltage (Watt): 2
Return Loss (dB): <-5
Average Total Radiation Efficiency(%): >60% (698 to 960 MHz); >70% (1.70 to 2.70 GHz)
Peak Gain (dBi): 1.3 (698 to 960 MHz) : 4.4 (1.70 to 2.70 GHz)
Polarization: Linear
Input Impedance (Ohms): 50

MECHANICAL

Shear Force: 50N min.

PHYSICAL

Housing: Ceramic
Plating: Silver 4-10 microns
Operating Temperature: -40 to +125°C

Specifications (698 to 869 / 791 to 862 / 824 to 960 / 698 to 960 MHz Ceramic Antenna, Series 206649)

REFERENCE INFORMATION

Packaging: Tape on reel
Reference Platform: Refer to application
Designed In: Millimeters
RoHS: Yes
Halogen Free: Yes
Ground Clearance: Refer to application

ELECTRICAL

Voltage (Watt): 2
Return Loss - S11(dB): <Refer to application
Average Total Radiation Efficiency(%): Refer to application
Peak Gain (dBi): Refer to application
Polarization: Linear
Input Impedance (Ohms): 50

MECHANICAL

Shear Force (min.): 30.0N

PHYSICAL

Housing: Ceramic
Plating: Silver 4-10 microns
Operating Temperature: -40 to +125°C

Specifications (617 to 894 / 1710 to 2690 / 3300 to 3800 MHz Ceramic Antenna, Series 208485)

REFERENCE INFORMATION

Packaging: Tape on reel
Reference Platform: 160.00 by 60.00 by 0.80mm
Designed In: Millimeters
RoHS: Yes
Halogen Free: Yes
Ground Clearance: Refer to application

ELECTRICAL

Voltage (Watt): 2
Return Loss - S11(dB): <Refer to application
Average Total Radiation Efficiency(%): Refer to application
Peak Gain (dBi): Refer to application
Polarization: Linear
Input Impedance (Ohms): 50

MECHANICAL

Shear Force (min.): 50.0N

PHYSICAL

Housing: Ceramic
Plating: Silver 4-10 microns
Operating Temperature: -40 to +125°C

Cellular Ceramic Antennas



Ordering Information

Series No.	Description	Frequency Bands	Dimension(mm)
204774	790 to 2700 MHz Cellular Ceramic Antenna	790 to 960 MHz and 1.7 to 2.7 GHz	33.00(L) by 6.00(W) by 3.00(H)
146200	698 MHz to 2.7 GHz Cellular Ceramic Antennas	698 to 960; 1.7 to 2.70 GHz	40.00(L) by 5.00(W) by 5.00(H)
206760	698 MHz to 2.7 GHz Cellular Ceramic Antennas, Low-profile, 3mm	698 to 960; 1.7 to 2.70 GHz	38.00(L) by 8.00(W) by 3.00(H)
206649	698 to 960MHz Ceramic Antenna	698 to 869, 791 to 862, 824 to 960 and 698 to 960 MHz	20.00(L) by 10.00(W) by 1.20(H)
208485	600 to 4000MHz Ceramic Antenna	617 to 894, 1710 to 2690 and 3300 to 3800 MHz	38.00 (L) by 8.00 (W) by 3.00 (H)

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