

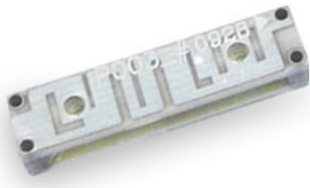


Echo 12

GSM/GPRS & 3G PIFA Antenna

Key Features

- Compact size
- Production ready
- Omni directional



General Description

The Echo12 GSM/GPRS/3G ceramic chip antenna provides a reliable, solderable antenna for today's wireless modules operating on quad band GSM / GPRS frequencies or 3G networks.

With its small size, this chip antenna is suitable for small form factor applications and gives a high gain comparative to its size in the upper frequency band.

Easy to layout and use in production, full documentation is available to provide design layout guidelines including a recommended matching circuit. The PCB antenna comes in a tape and reel package and is reflow solderable.

Additional Considerations

- Reflow solder process only
- Excellent gain at higher frequencies





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Electrical Specifications

Operating Temperature Range:	-35 - +85°C	
Impedance:	50 Ohm	
Peak Gain	GSM850 824-894MHz:	0.67dBi
	GSM900 880-960MHz:	1.56dBi
	DCS 1710-1880MHz:	5.25dBi
	PCS 1850-1990MHz:	5.00dBi
	UMTS 1920-2170MHz:	5.52dBi
VSWR:	3.0	
Operating Frequencies:	824 - 960	1710-2170MHz
Polarization:	Linear	

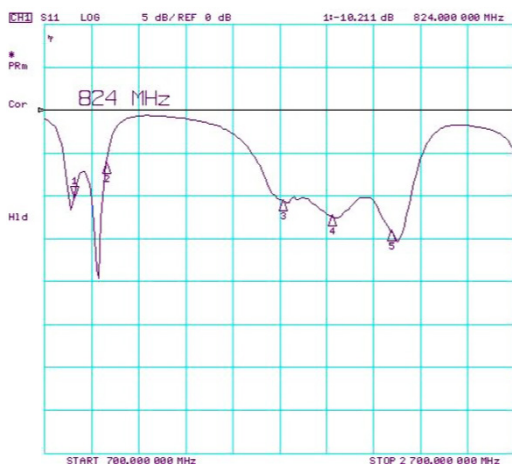
Mechanical Specifications

Dimensions:	24 x 5.5 x 4.4mm
Mounting Method:	Embedded

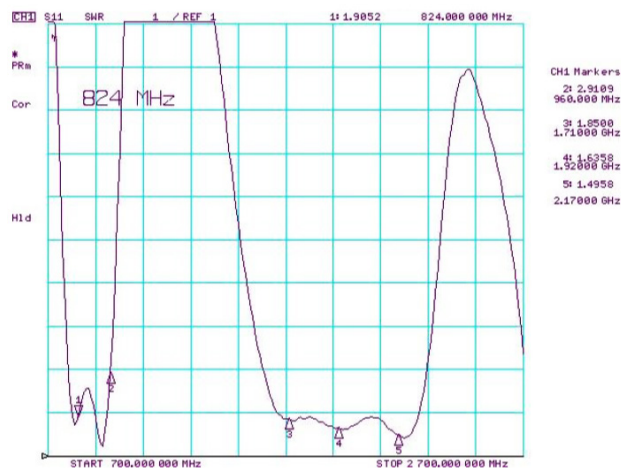
Electrical Characteristic

Antenna matching on the reference test board
Penta Band (GSM 850 & 900, DCS, PCS)

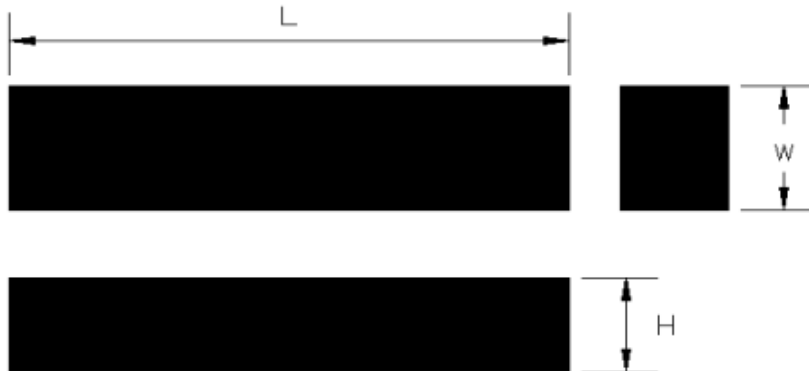
Return Loss



VSWR



Appearance and Dimensions

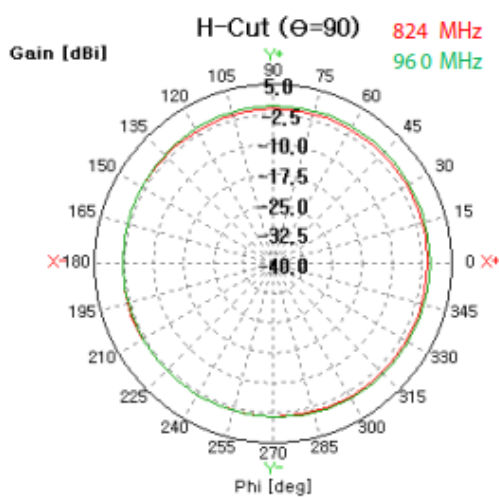


Unit : mm
Tolerance : ±0.15

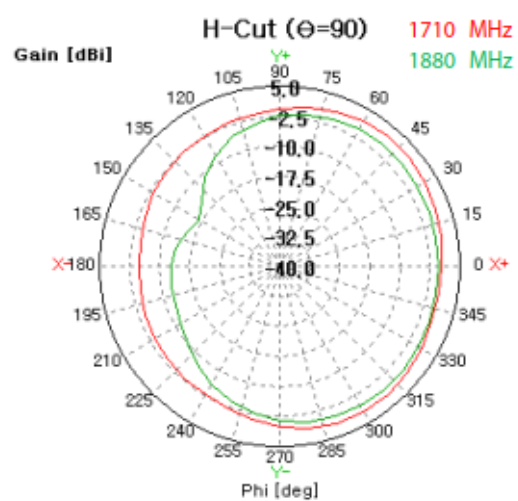
L(Length)	24.0
W(Width)	5.5
H(Height)	4.4

Radiation Patterns

GSM850 & GSM900 - H Plane



DCS (GSM 1800)- H Plane

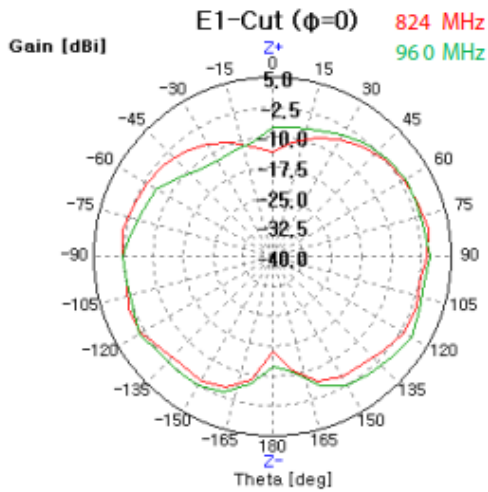




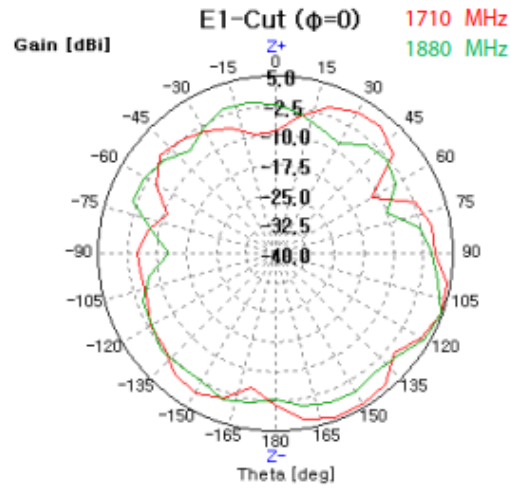
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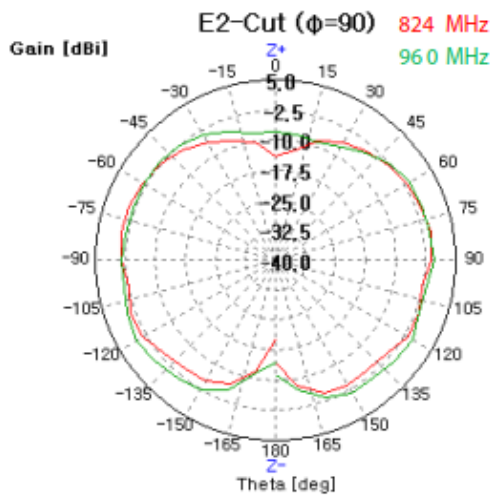
GSM850 & GSM900 - E1 Plane



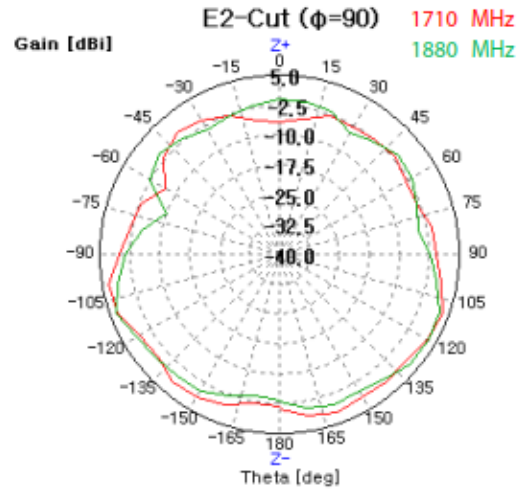
DCS (GSM 1800) - E1 Plane



GSM850 & GSM900 - E2 Plane



DCS (GSM 1800) - E2 Plane

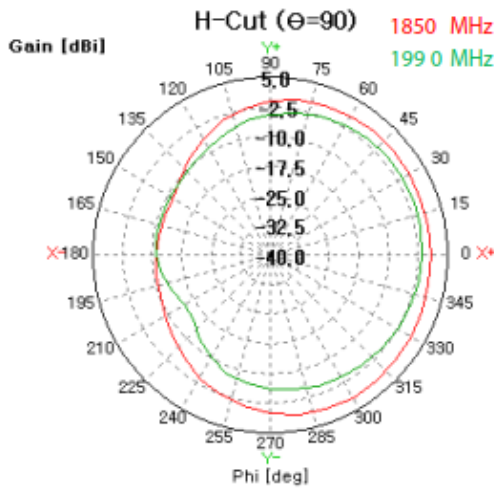




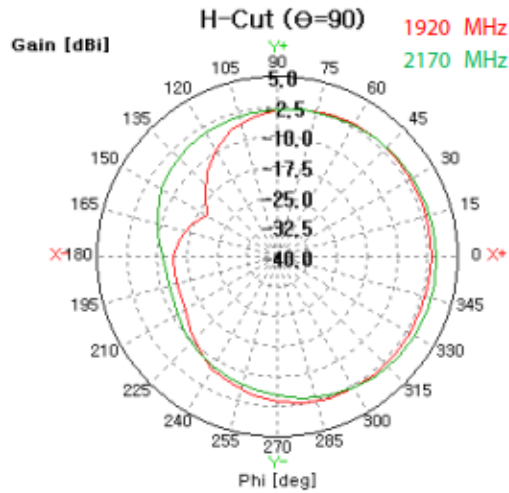
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GSM/GPRS & 3G PIFA Antenna

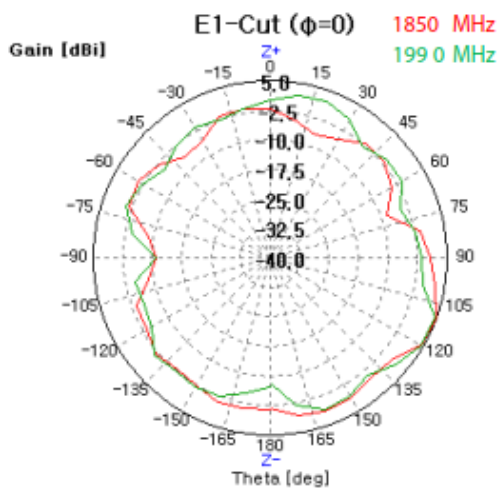
PCS (GSM 1900) - H Plane



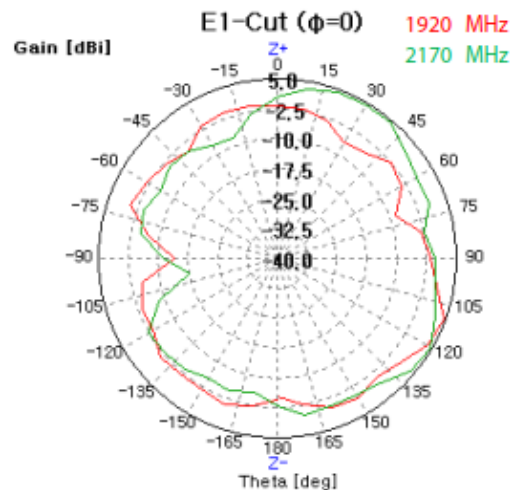
UMTS - H Plane



PCS (GSM 1900) - E1 Plane

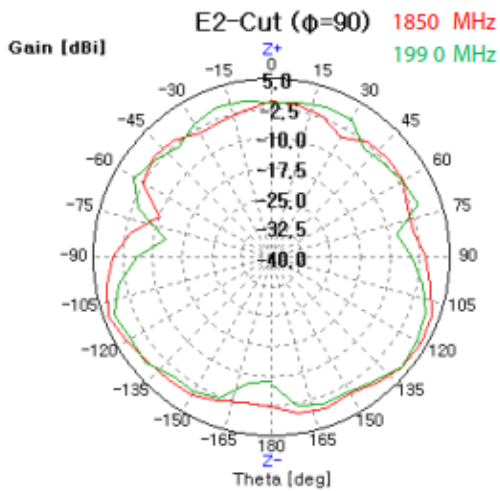


UMTS - E1 Plane

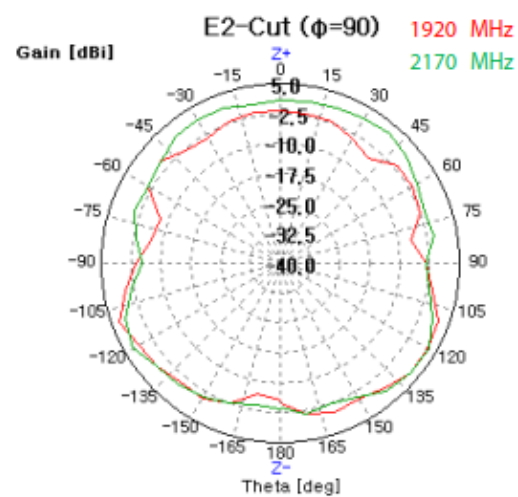




PCS (GSM 1900) - E2 Plane



UMTS - E2 Plane



Ordering Details

Part Number	Description
ECHO12/X/X/S/S/3	GSM/GPRS & 3G PIFA Antenna