

Ceramic Chip Antennas

For GPS

ANT Series

Type: **ANT090040CCS1575MA1 (9.0×4.0×1.8mm)**
 ANT098030CGS1575MA1 (9.8×3.0×4.0mm)
 ANT098030CGS1575MB1 (9.8×3.0×4.0mm)

Issue date: **March 2011**

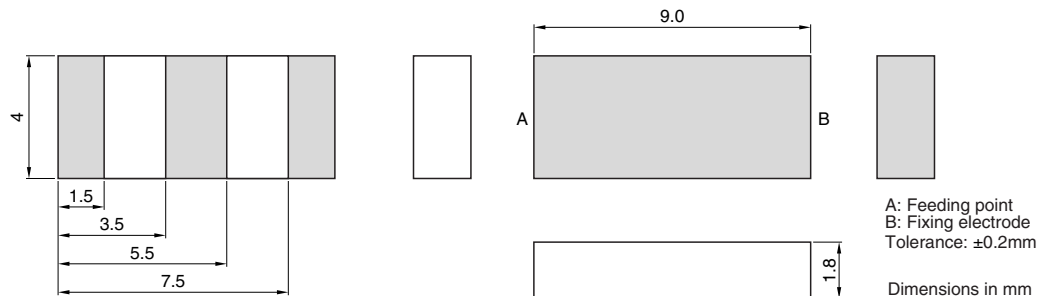
- All specifications are subject to change without notice.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

Ceramic Chip Antennas For GPS

Conformity to RoHS Directive

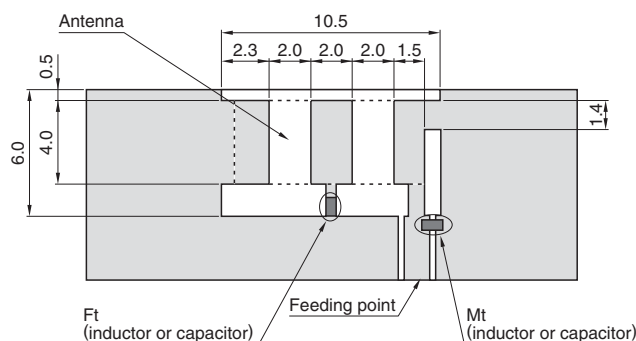
ANT Series ANT090040CCS1575MA1

SHAPES AND DIMENSIONS

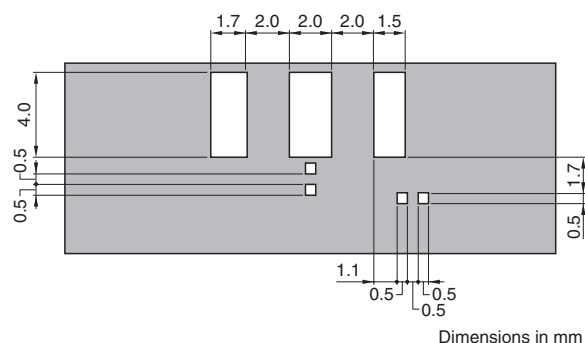


RECOMMENDED PC BOARD PATTERNS

ELECTRODE



SOLDER RESIST



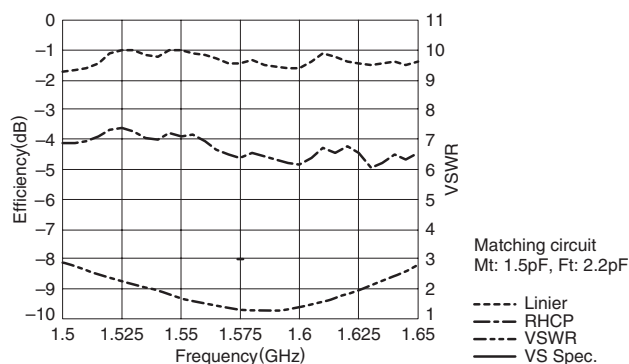
ELECTRICAL CHARACTERISTICS

Center frequency(F_0)	1575MHz
Band width(BW)	$F_0 \pm 1\text{MHz}$
VSWR(at BW)	3max.
Polarization	Linear
Impedance	50Ω
PCB size	$80 \times 37 \times 1.0\text{mm}$
Temperature range	Operating: -40 to $+85^\circ\text{C}$ Storage: -40 to $+85^\circ\text{C}$

• This is typical antenna performance with the standard PCB.

FREQUENCY CHARACTERISTICS

EFFICIENCY AND VSWR



• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

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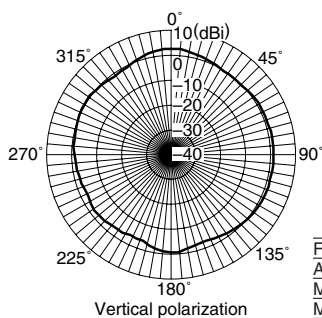
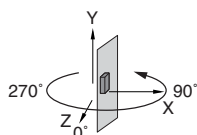
RADIATION PATTERNS
LINIER

Directivity angle

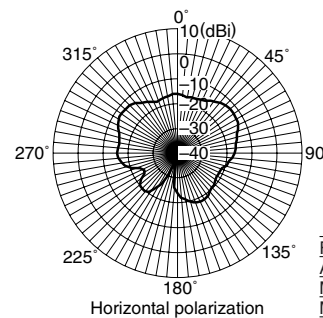
Vertical polarization



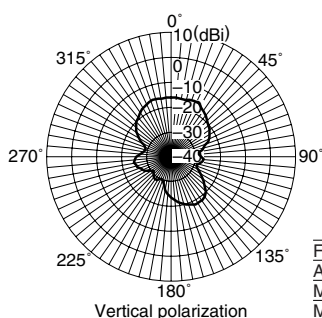
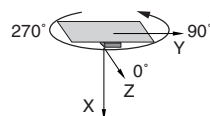
Horizontal polarization



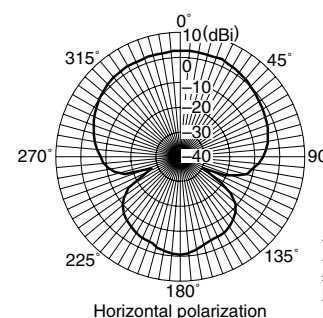
Frequency(GHz)	1.575
Average(dBi)	-0.21
Maximum(dBi)	2.57
Minimum(dBi)	-3.65



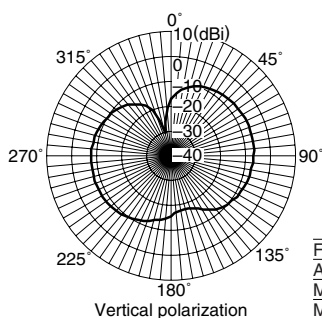
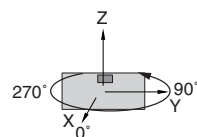
Frequency(GHz)	1.575
Average(dBi)	-16.73
Maximum(dBi)	-12.28
Minimum(dBi)	-36.94



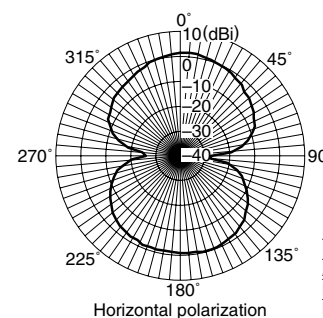
Frequency(GHz)	1.575
Average(dBi)	-20.77
Maximum(dBi)	-15.52
Minimum(dBi)	-31.03



Frequency(GHz)	1.575
Average(dBi)	-1.65
Maximum(dBi)	2.75
Minimum(dBi)	-29.27



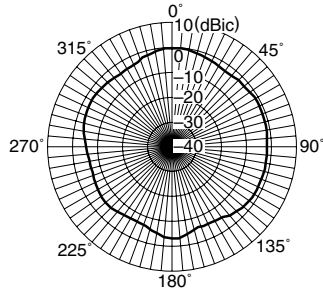
Frequency(GHz)	1.575
Average(dBi)	-9.66
Maximum(dBi)	-6.50
Minimum(dBi)	-30.58



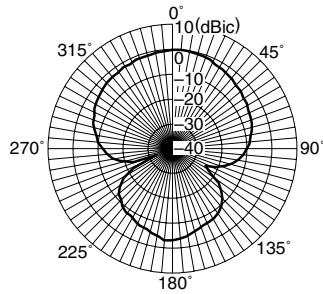
Frequency(GHz)	1.575
Average(dBi)	-3.28
Maximum(dBi)	1.32
Minimum(dBi)	-28.07

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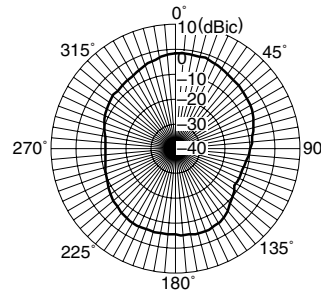
RHCP



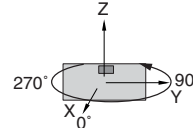
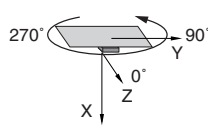
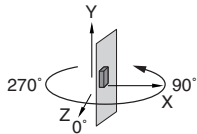
Frequency(GHz)	1.575
Average(dBic)	-3.08
Maximum(dBic)	-0.41
Minimum(dBic)	-6.95



Frequency(GHz)	1.575
Average(dBic)	-5.04
Maximum(dBic)	-0.35
Minimum(dBic)	-33.38



Frequency(GHz)	1.575
Average(dBic)	-5.89
Maximum(dBic)	-1.38
Minimum(dBic)	-12.08



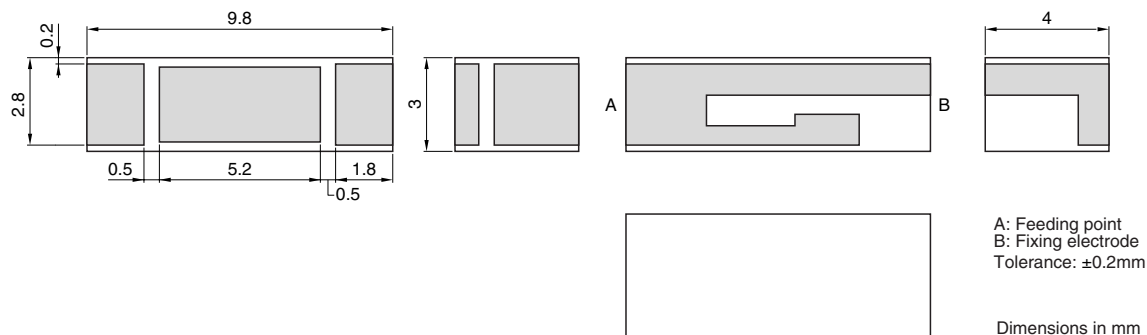
- Tested antenna has been soldered.

Ceramic Chip Antennas For GPS

Conformity to RoHS Directive

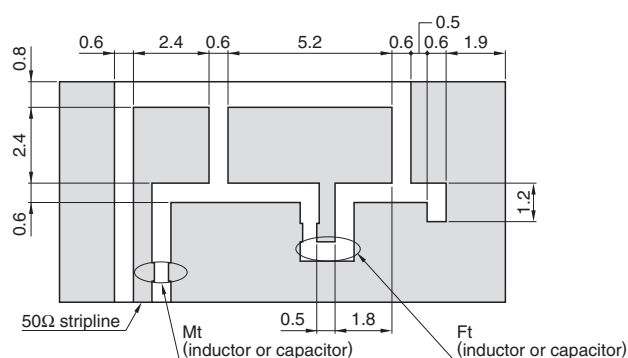
ANT Series ANT098030CGS1575MA1

SHAPES AND DIMENSIONS

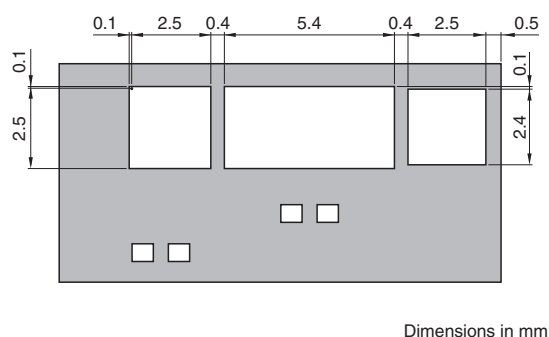


RECOMMENDED PC BOARD PATTERNS

ELECTRODE



SOLDER RESIST



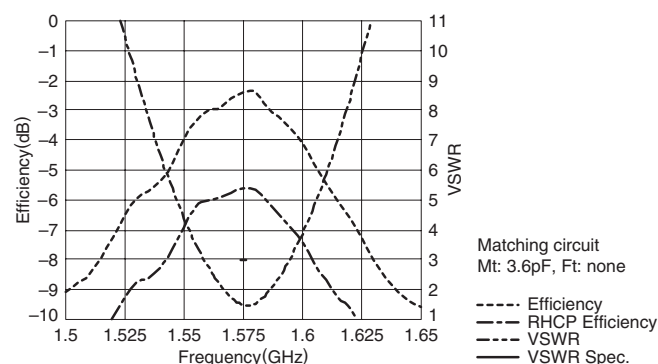
ELECTRICAL CHARACTERISTICS

Center frequency(F_0)	1575MHz
Band width(BW)	$F_0 \pm 1$ MHz
VSWR(at BW)	3max.
Impedance	50 Ω
PCB size	80 \times 37 \times 1.0mm
Temperature range	Operating -40 to +85 $^{\circ}$ C Storage -40 to +85 $^{\circ}$ C

• This is typical antenna performance with the standard PCB.

FREQUENCY CHARACTERISTICS

EFFICIENCY AND VSWR



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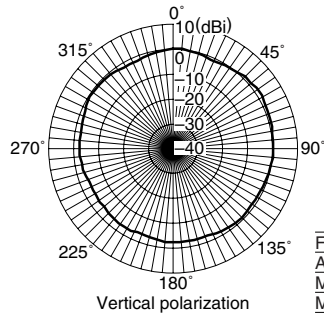
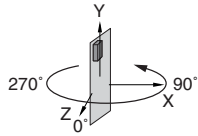
RADIATION PATTERNS
LINIER

Directivity angle

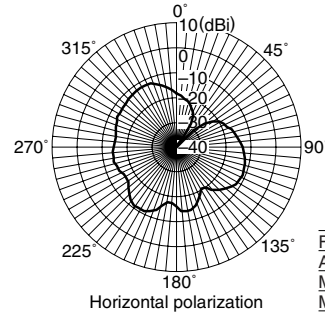
Vertical polarization



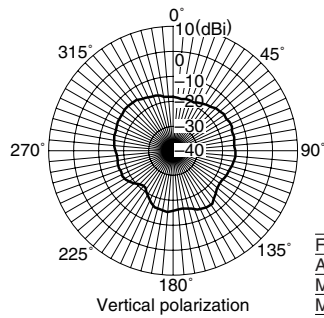
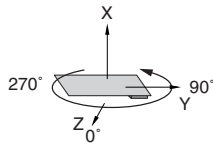
Horizontal polarization



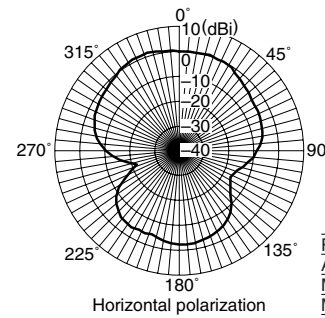
Frequency(GHz)	1.575
Average(dBi)	-1.20
Maximum(dBi)	1.39
Minimum(dBi)	-3.92



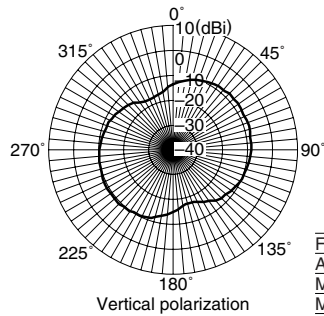
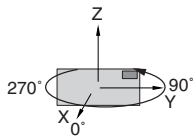
Frequency(GHz)	1.575
Average(dBi)	-14.71
Maximum(dBi)	-11.01
Minimum(dBi)	-43.02



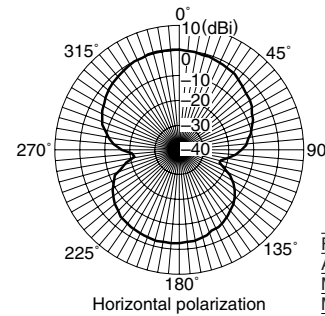
Frequency(GHz)	1.575
Average(dBi)	-16.22
Maximum(dBi)	-13.69
Minimum(dBi)	-21.62



Frequency(GHz)	1.575
Average(dBi)	-3.35
Maximum(dBi)	1.19
Minimum(dBi)	-21.96



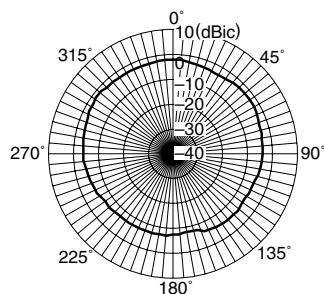
Frequency(GHz)	1.575
Average(dBi)	-10.91
Maximum(dBi)	-8.02
Minimum(dBi)	-17.84



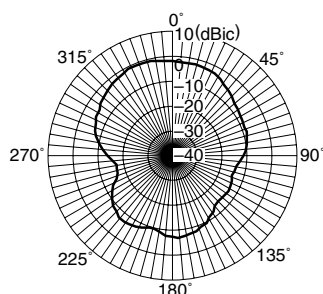
Frequency(GHz)	1.575
Average(dBi)	-4.13
Maximum(dBi)	0.28
Minimum(dBi)	-22.83

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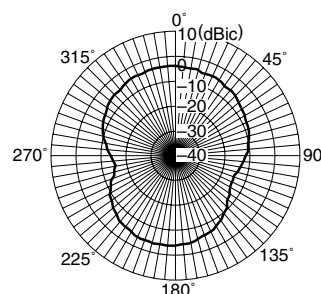
RHCP



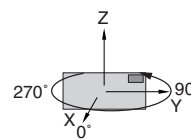
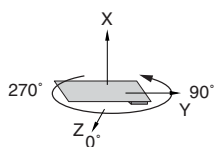
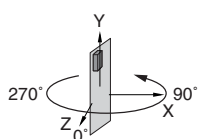
Frequency(GHz)	1.575
Average(dBic)	-4.06
Maximum(dBic)	-1.83
Minimum(dBic)	-8.02



Frequency(GHz)	1.575
Average(dBic)	-6.17
Maximum(dBic)	-0.88
Minimum(dBic)	-17.29



Frequency(GHz)	1.575
Average(dBic)	-6.66
Maximum(dBic)	-3.70
Minimum(dBic)	-15.52



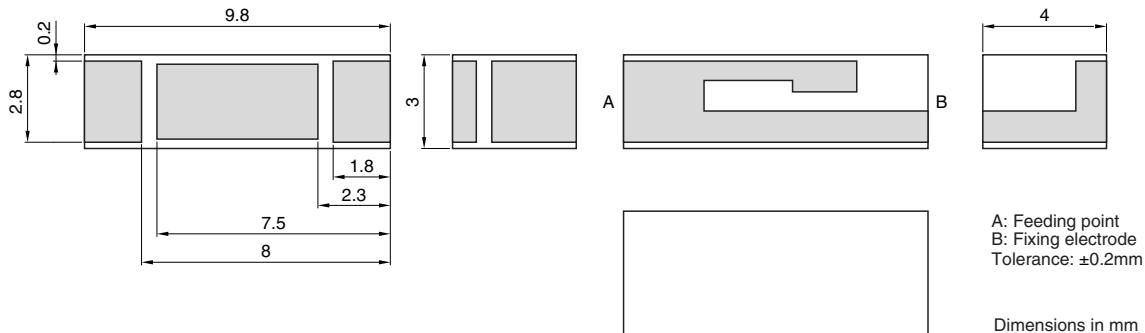
- Tested antenna has been soldered.

Ceramic Chip Antennas For GPS

Conformity to RoHS Directive

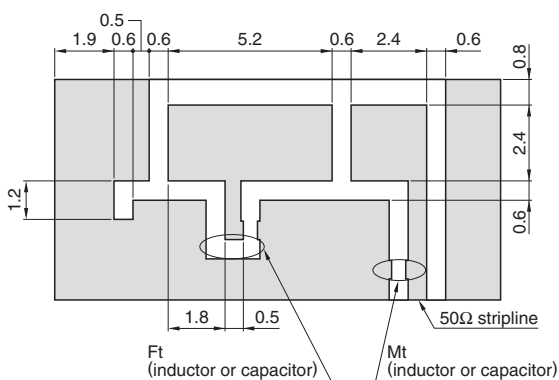
ANT Series ANT098030CGS1575MB1

SHAPES AND DIMENSIONS

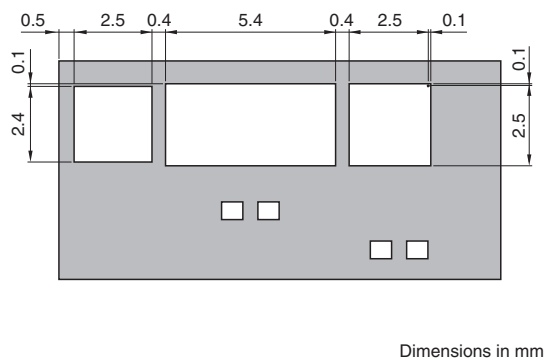


RECOMMENDED PC BOARD PATTERNS

ELECTRODE



SOLDER RESIST



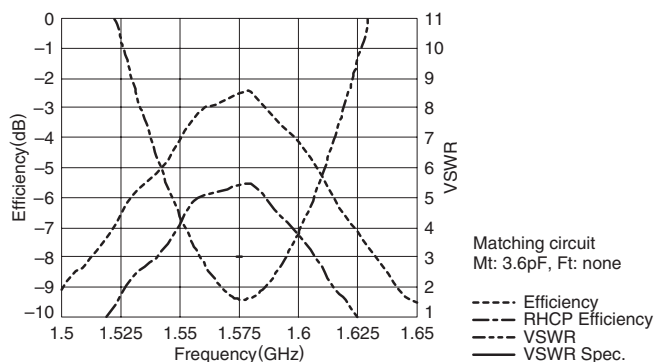
ELECTRICAL CHARACTERISTICS

Center frequency(F ₀)	1575MHz
Band width(BW)	F ₀ ±1MHz
VSWR(at BW)	3max.
Impedance	50Ω
PCB size	80×37×1.0mm
Temperature range	Operating -40 to +85°C
	Storage -40 to +85°C

• This is typical antenna performance with the standard PCB.

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EFFICIENCY AND VSWR



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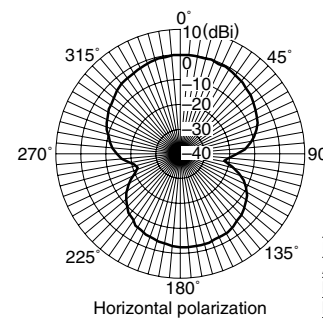
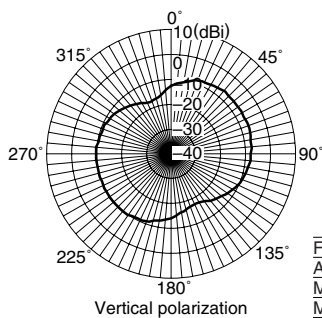
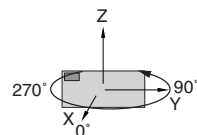
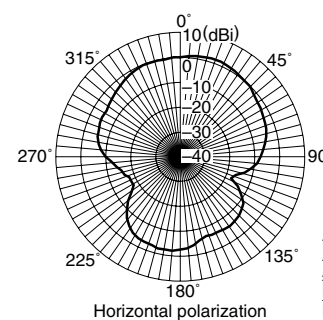
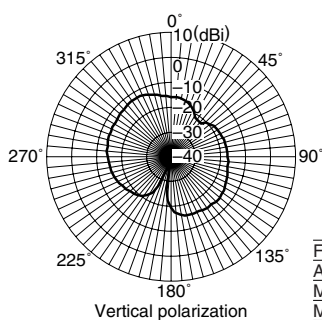
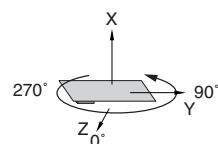
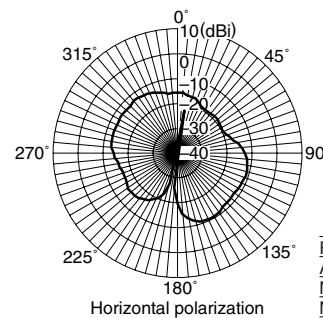
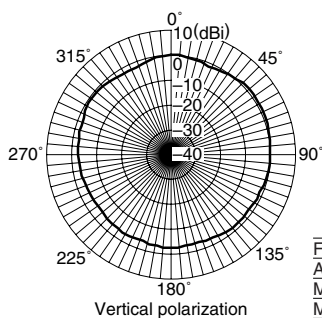
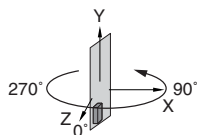
RADIATION PATTERNS LINIER

Directivity angle

Vertical polarization

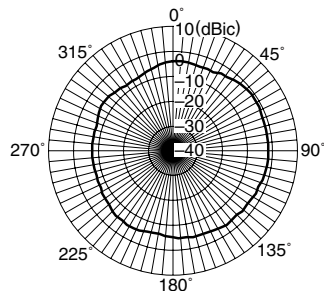


Horizontal polarization

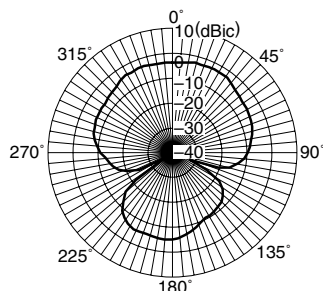


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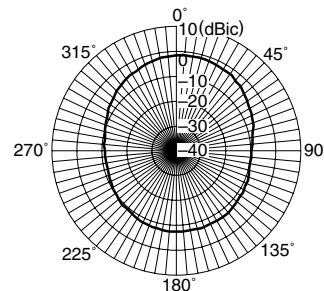
RHCP



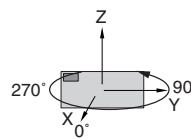
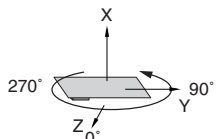
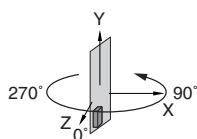
Frequency(GHz)	1.575
Average(dBic)	-4.25
Maximum(dBic)	-1.15
Minimum(dBic)	-7.71



Frequency(GHz)	1.575
Average(dBic)	-6.52
Maximum(dBic)	-2.46
Minimum(dBic)	-36.86



Frequency(GHz)	1.575
Average(dBic)	-6.08
Maximum(dBic)	-1.54
Minimum(dBic)	-11.27



- Tested antenna has been soldered.