

TDK RF Products for Wireless LAN

2/3/2003

for 2.4GHz

Antennas

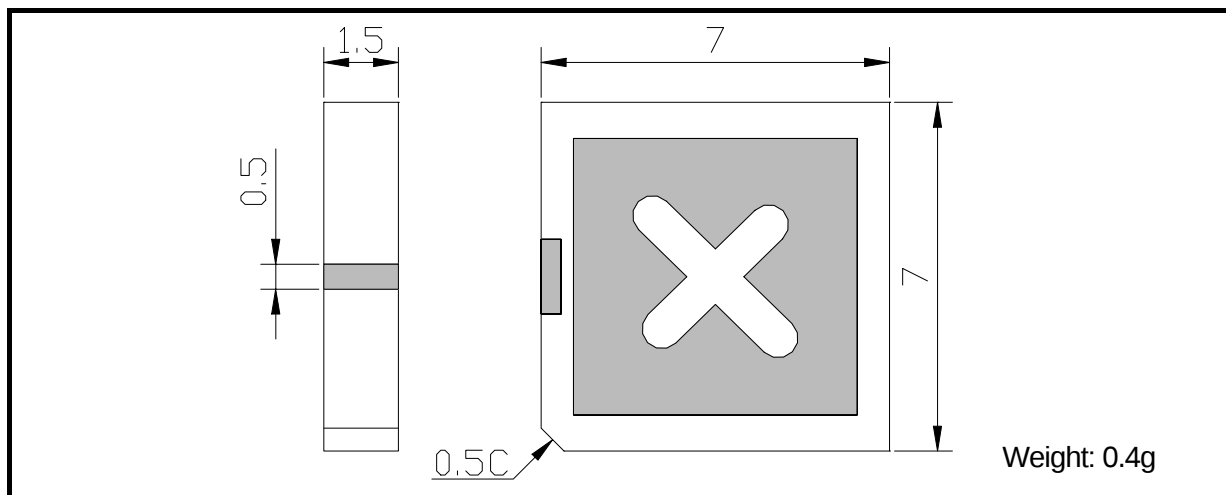
Start Freq. MHz	Stop Freq. MHz	Type	Gain dBi(typ)	Return loss dB (typ.)	Size mm (typ.)	Part No.
2400	2500	SMD ceramic patch	-5	-2.5	7.0x7.0x1.5	CABPB0715A
2400	2500	SMD ceramic patch	-3	-3	7.0x7.0x3.0	CABPB0730A
2400	2500	SMD ceramic patch	2	-6	12.0x12.0x4.0	CABPB1240A
2400	2500	SMD ceramic multilayer	+1	-15	8.0x3.0x1.2	HAN8030B2R4GT-000

	Sample Available
	Under developing

CERAMIC PATCH ANTENNA FOR Bluetooth & 2.4 GHz W-LAN

SAMPLE P/N: CABPB0715A (7x7x1.5 mm type)

[MECHANICAL DIMENSIONS]



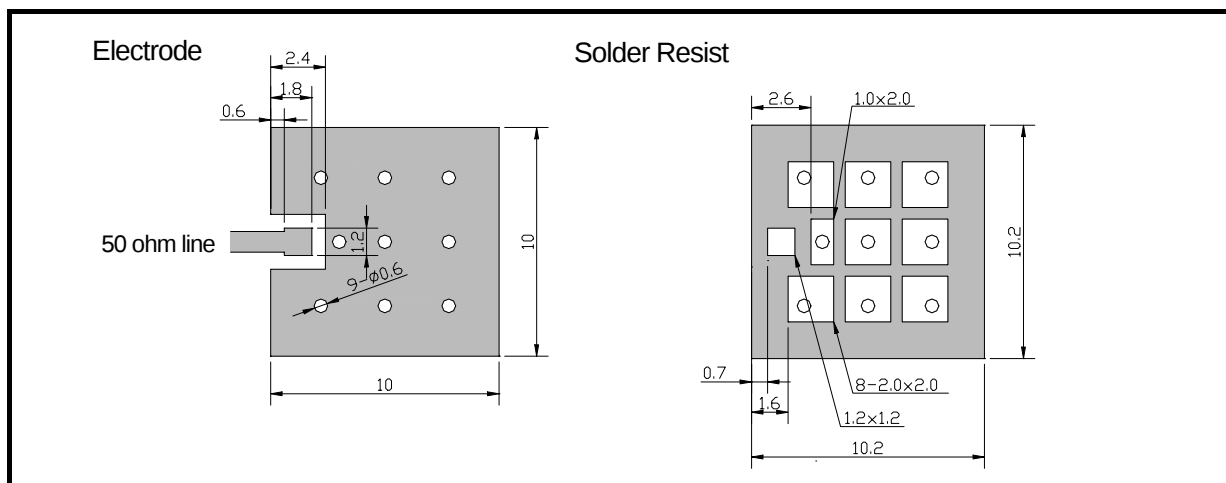
[ELECTRICAL CHARACTERISTICS]

PARAMETER	FREQ (MHz)	MIN.	MAX.	UNIT
Centre frequency		2442		MHz
Bandwidth		85		MHz
Antenna Gain	2400-2485		-3	dBi
Impedance	2400-2485	50		ohm
Return Loss	2400-2485		-2	dB
VSWR	2400-2485		8.5	

Operating temperature	-30	+85	°C
Storage temperature	-40	+85	°C

Note: Please use the 0dBi = -2.15dBd to convert antenna gain expressed in dBd.

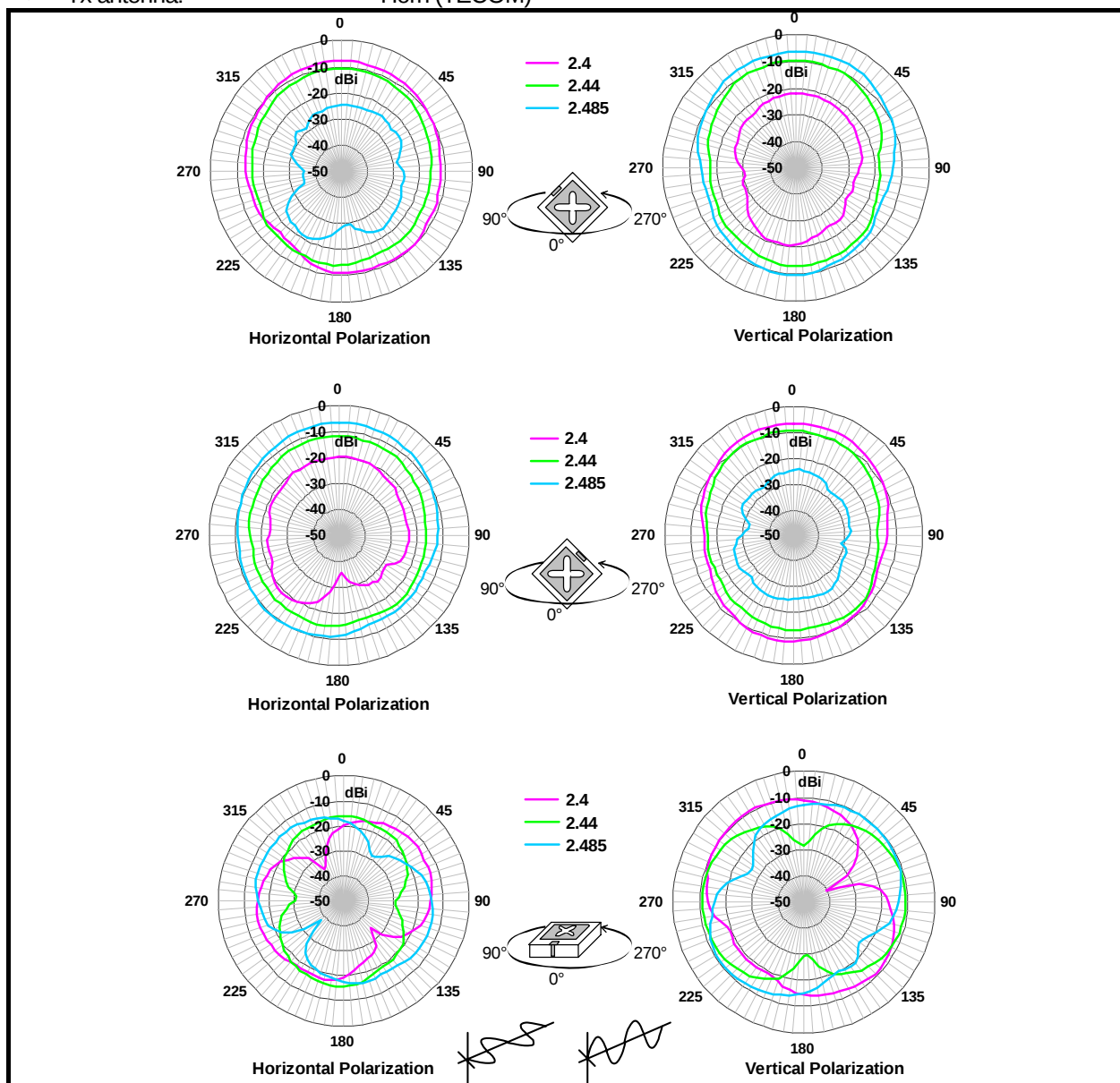
[RECOMMENDED PCB PATTERN]



*Note: This document is PRELIMINARY. All specifications are subject to change without notice and are not guaranteed.

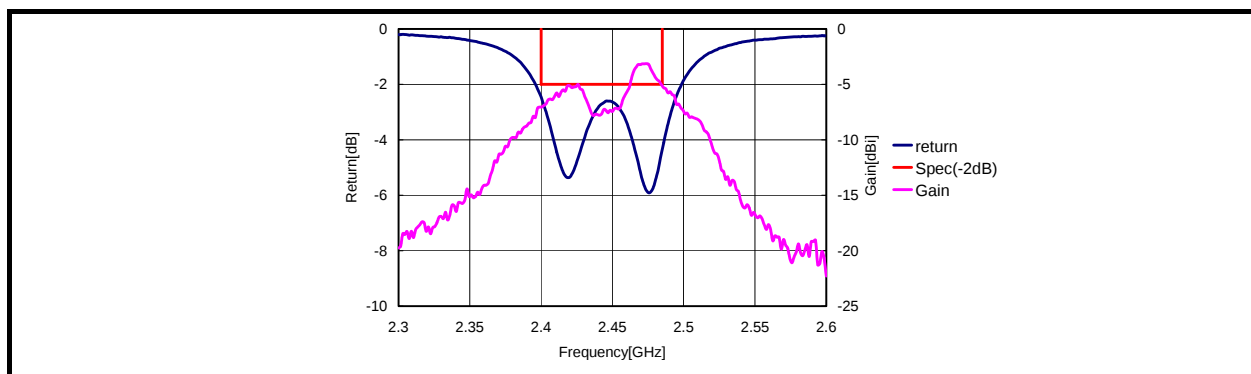
[RADIATION PATTERN]

- Item: CABPB0715A (7x7x1.5mm Type)
- Standard antenna: Standard dipole (Anritsu)
- Tx antenna: Horn (TECOM)



Note: Tested antenna has been soldered on 30x30 mm² PCB.

[RETURN LOSS&GAIN]



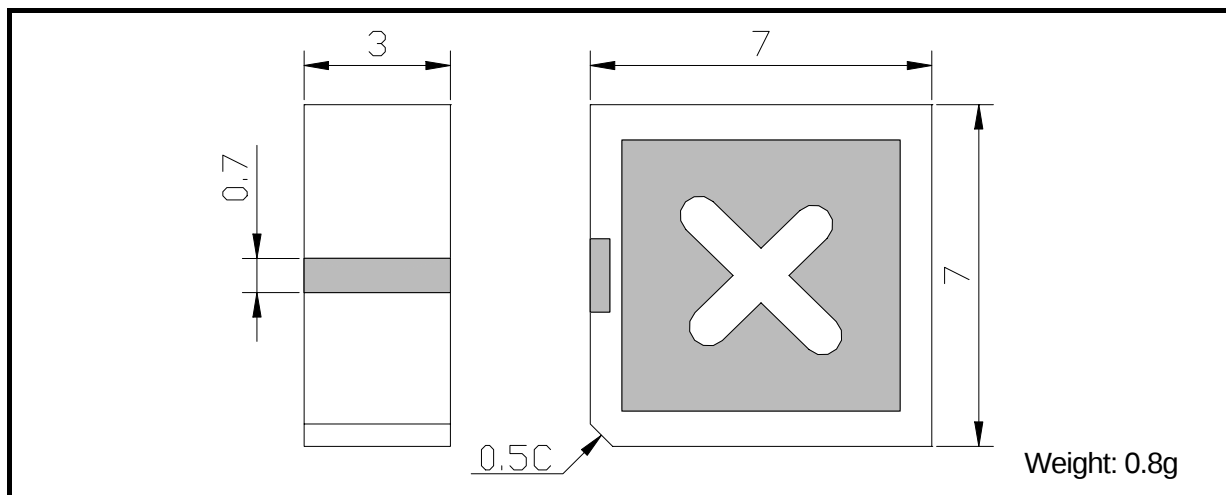
Note: Tested antenna has been soldered on 30x30 mm² PCB.

*Note: This document is PRELIMINARY. All specifications are subject to change without notice and are not guaranteed.

CERAMIC PATCH ANTENNA FOR Bluetooth & 2.4GHz W-LAN

SAMPLE P/N: CABPB0730A (7x7x3 mm type)

[MECHANICAL DIMENSIONS]



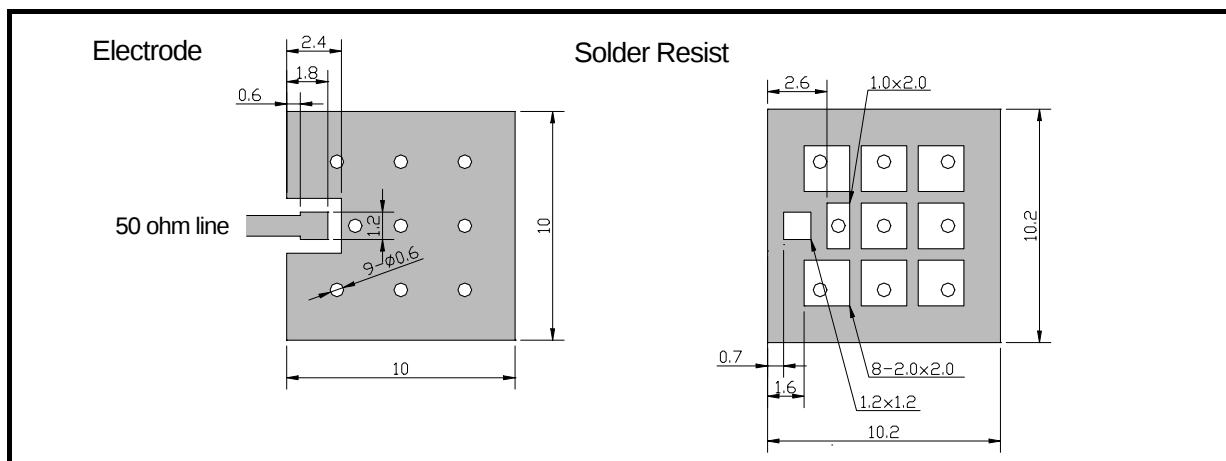
[ELECTRICAL CHARACTERISTICS]

PARAMETER	FREQ (MHz)	MIN.	MAX.	UNIT
Centre frequency		2442		MHz
Bandwidth		85		MHz
Antenna Gain	2400-2485		-1	dBi
Impedance	2400-2485	50		ohm
Return Loss	2400-2485		-2.5	dB
VSWR	2400-2485		7	

Operating temperature	-30	+85	°C
Storage temperature	-40	+85	°C

Note: Please use the $0\text{dBi} = -2.15\text{dBd}$ to convert antenna gain expressed in dBd.

[RECOMMENDED PCB PATTERN]



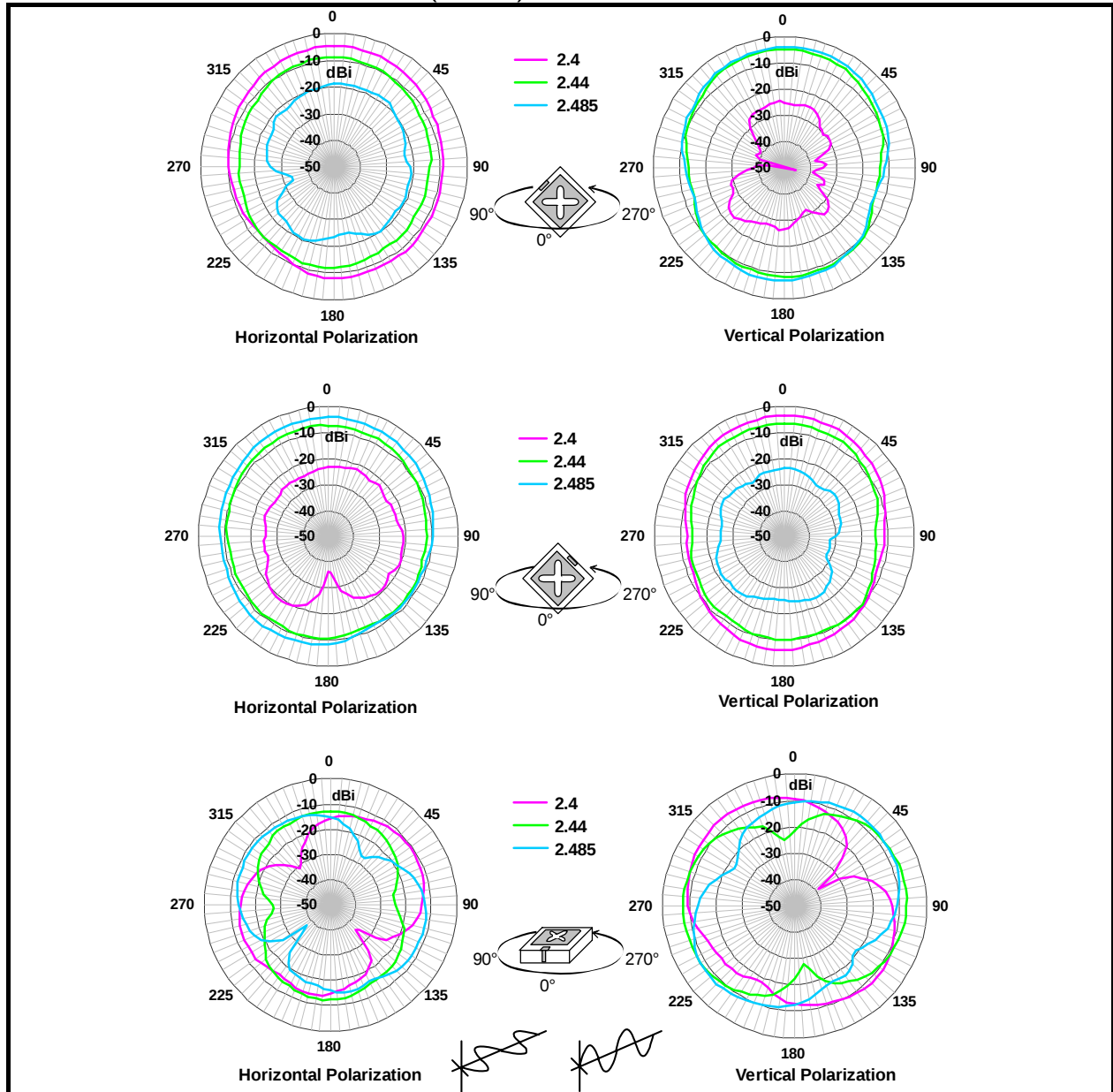
*Note: This document is PRELIMINARY. All specifications are subject to change without notice and are not guaranteed.

PRELIMINARY (under development)

Jan./2003 Ver.1.2
TDK Corporation

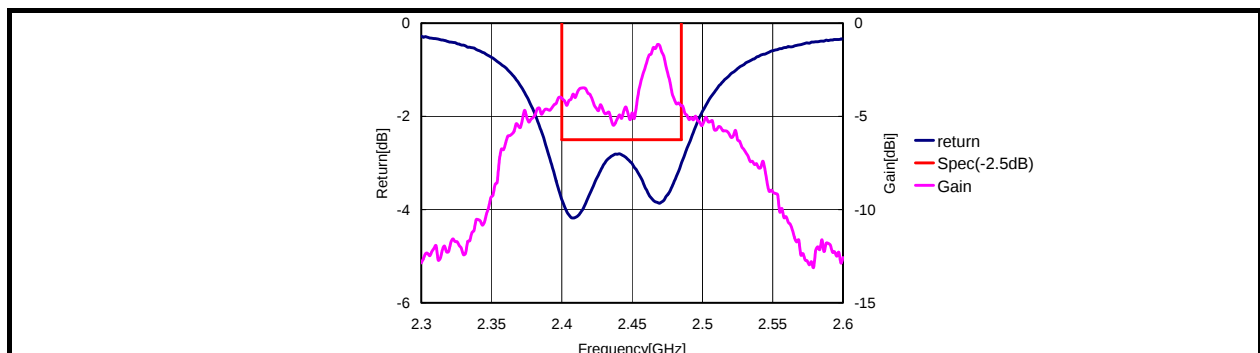
[RADIATION PATTERN]

- Item: CABPB0730A (7x7x3mm Type)
- Standard antenna: Standard dipole (Anritsu)
- Tx antenna: Horn (TECOM)



Note: Tested antenna has been soldered on 30x30 mm² PCB.

[RETURN LOSS&GAIN]



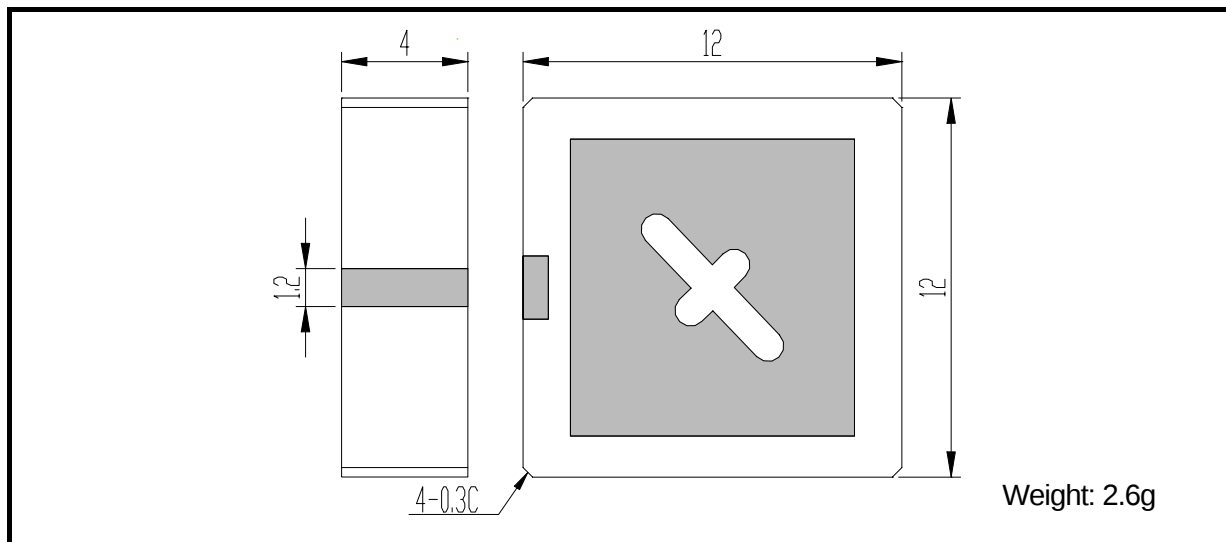
Note: Tested antenna has been soldered on 30x30 mm² PCB.

*Note: This document is PRELIMINARY. All specifications are subject to change without notice and are not guaranteed.

CERAMIC PATCH ANTENNA FOR Bluetooth & 2.4GHz W-LAN

SAMPLE P/N: CABPB1240A (12x12x4 mm type)

[MECHANICAL DIMENSIONS]



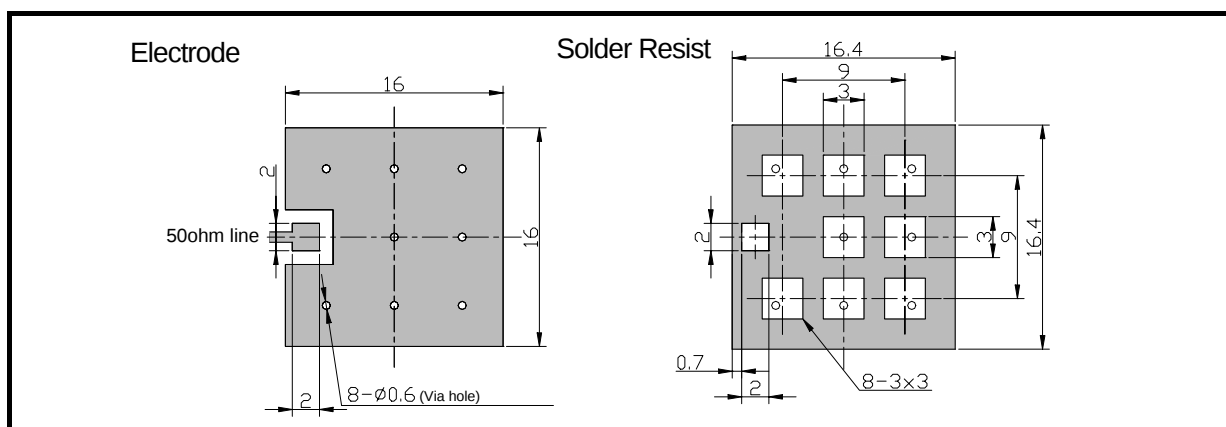
[ELECTRICAL CHARACTERISTICS]

PARAMETER	FREQ (MHz)	MIN.	MAX.	UNIT
Center frequency		2442		MHz
Bandwidth		85		MHz
Antenna Gain	2400-2485		+2	dBi
Impedance	2400-2485	50		ohm
Return Loss	2400-2485		-6	dB
VSWR	2400-2485		3	

Operating temperature	-30	+85	°C
Storage temperature	-40	+85	°C

Note: Please use the 0 dBi = -2.15dBd to convert antenna gain expressed in dBd.

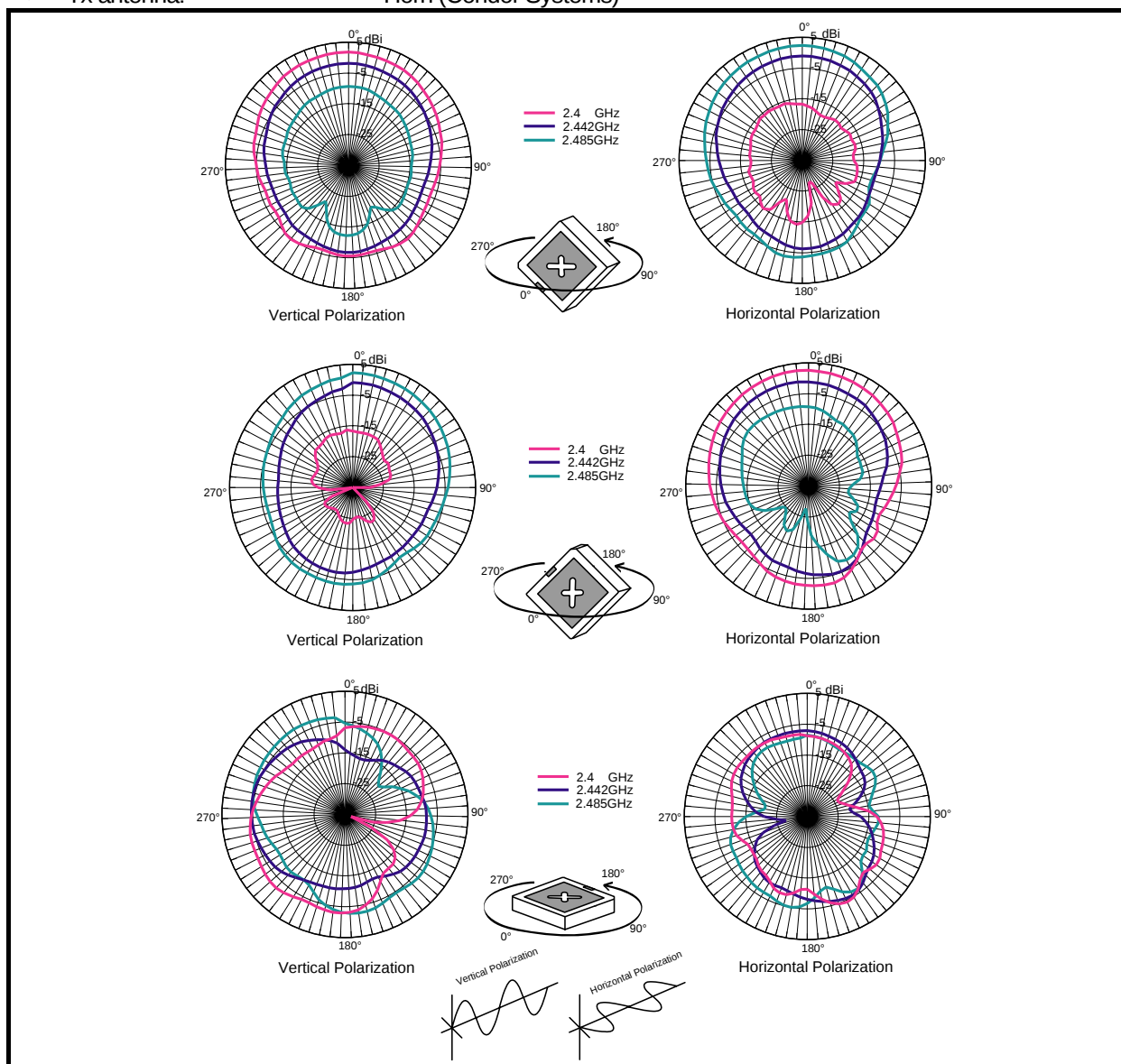
[RECOMMENDED PCB PATTERN]



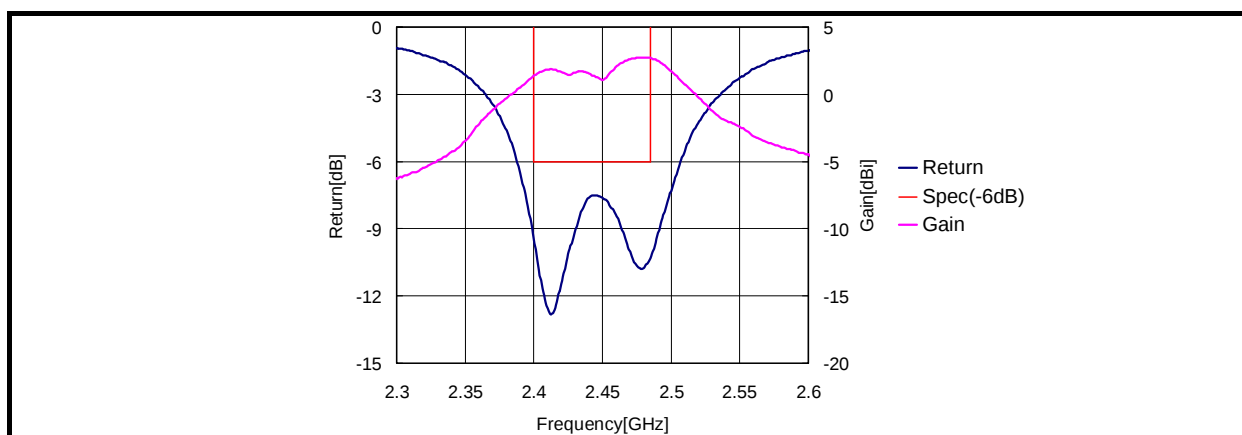
*Note: This document is PRELIMINARY. All specifications are subject to change without notice and are not guaranteed.

[RADIATION PATTERN]

- Item: CABPB1240A (12x12x4mm Type)
- Standard antenna: Standard dipole (Anritsu)
- Tx antenna: Horn (Condor Systems)



[RETURN LOSS&GAIN]

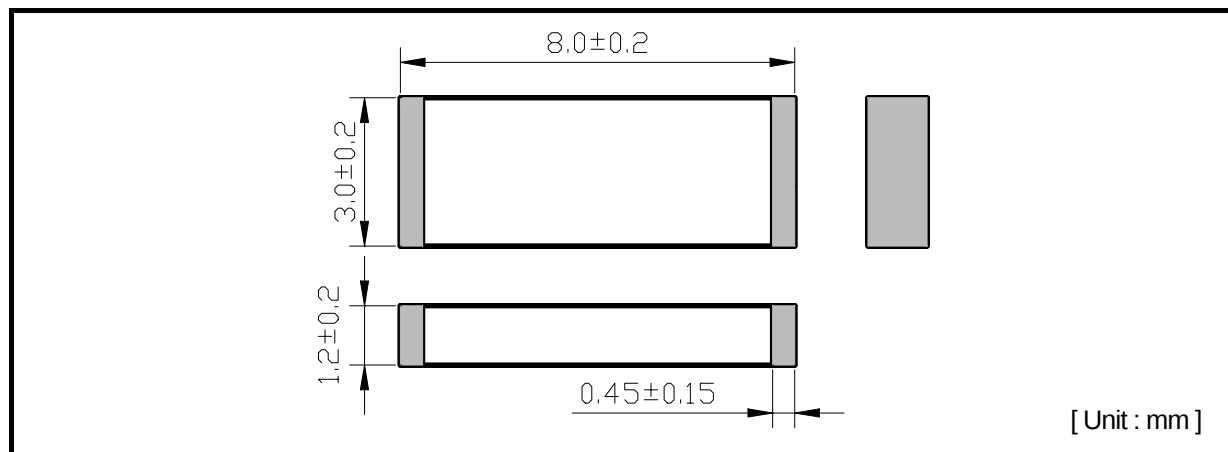


*Note: This document is PRELIMINARY. All specifications are subject to change without notice and are not guaranteed.

MULTILAYER ANTENNA FOR Bluetooth & 2.4 GHz W-LAN

SAMPLE P/N: **HAN8030B2R4GT- 000**

[MECHANICAL DIMENSIONS]

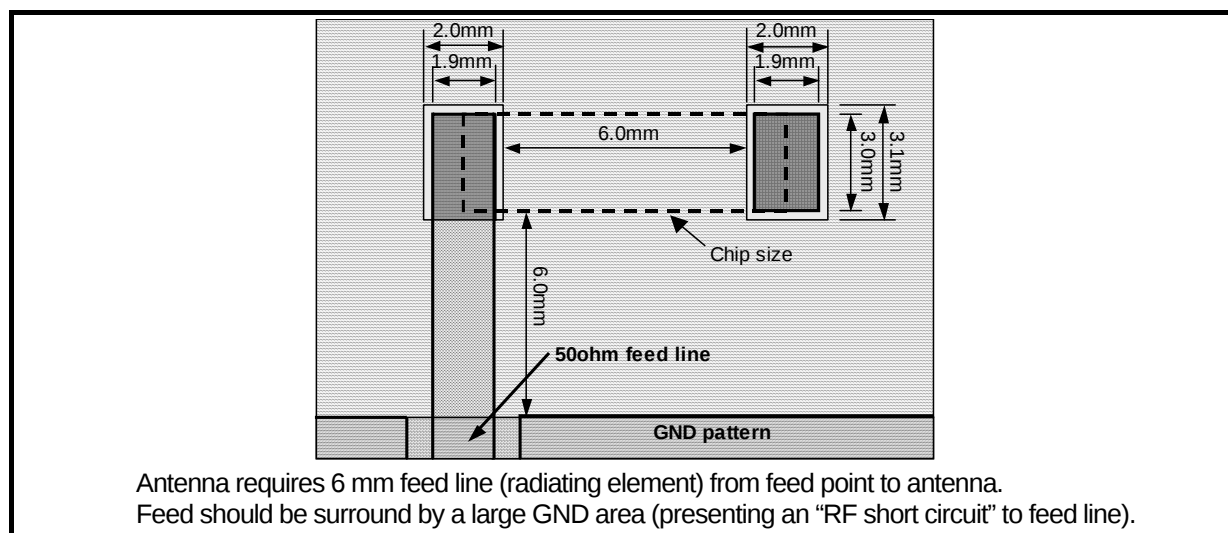


[ELECTRICAL CHARACTERISTICS]

PARAMETER	FREQ (MHz)	MIN.	MAX.	UNIT
Centre frequency		2442		MHz
Bandwidth		85		MHz
Antenna Gain	2400-2485		2	dBi
Impedance	2400-2485	50		ohm
Return Loss	2400-2485		-9.5	dB
V.S.W.R.	2400-2485		2	

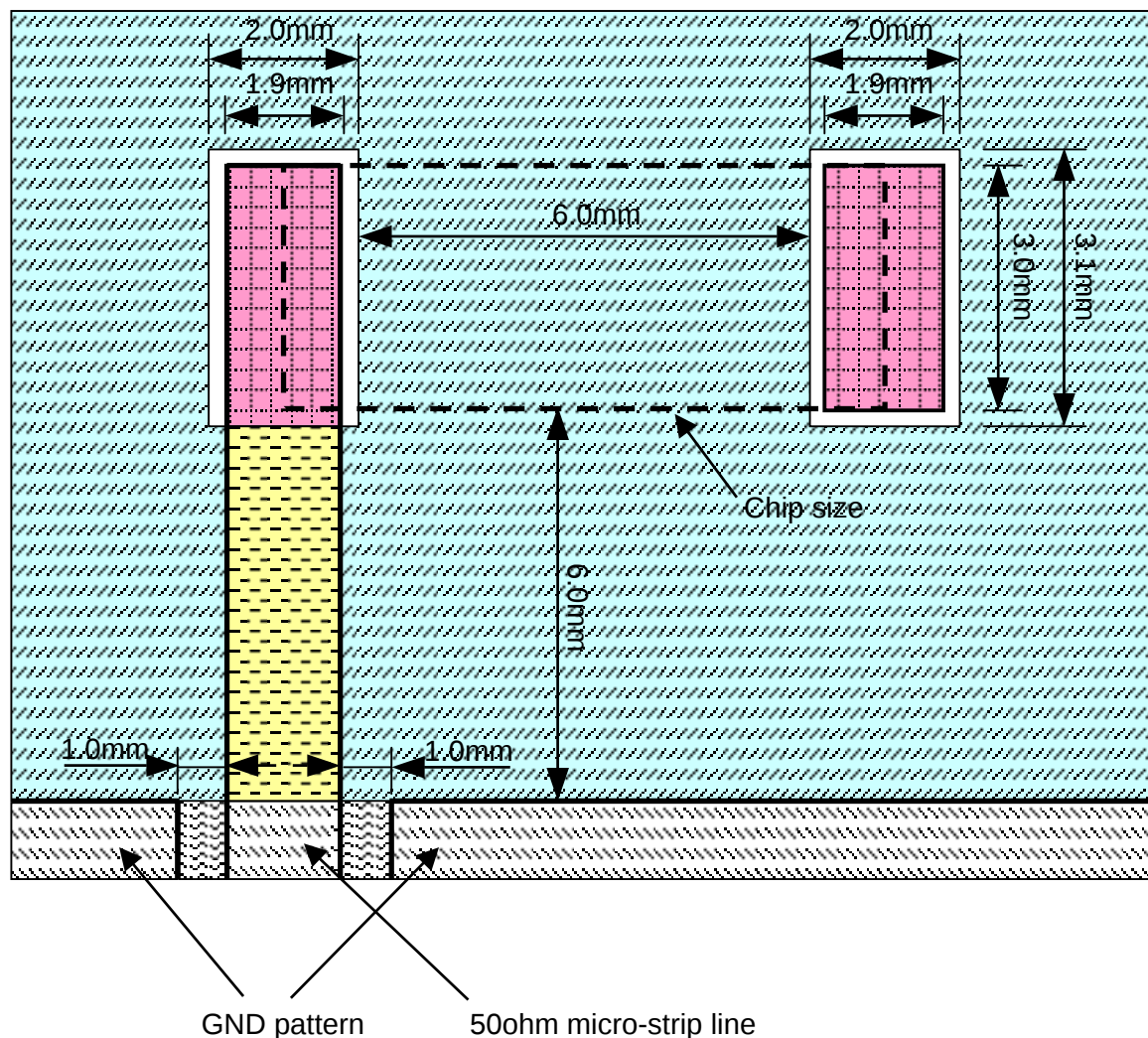
Operating temperature	-25	+70	°C
Storage temperature	-40	+85	°C

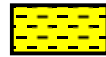
[RECOMMENDED PCB PATTERN]



*Note: This document is PRELIMINARY. All specifications are subject to change without notice and are not guaranteed.

Recommend PCB Pattern for HAN8030B2R4GT- 000



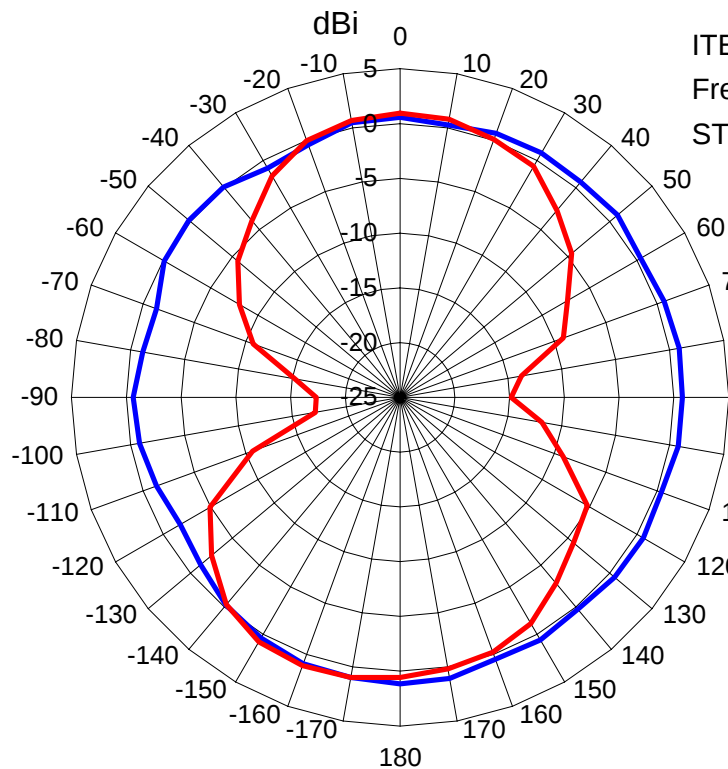
-  Front side : Without pattern and resist (film)
Back side : Resist without pattern
-  Both side (Front and Back) : Resist without pattern
-  Front side : Solder resist / Back side : Resist without pattern
-  Both side (Front and Back) : Solder resist
-  Front side : Resist without pattern / Back side : Solder resist
-  Front side : Land / Back side : Resist without pattern

*Note : Recommend PCB (50mm x 20mm t=0.8mm , PPE (Er=3.5))

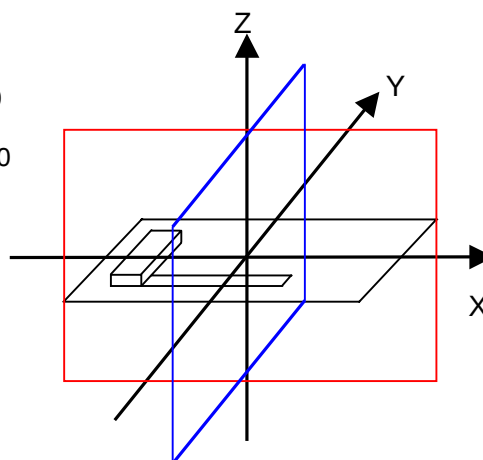
Multilayer Antenna Type : HAN8030B2R4GT-000

Typical Data

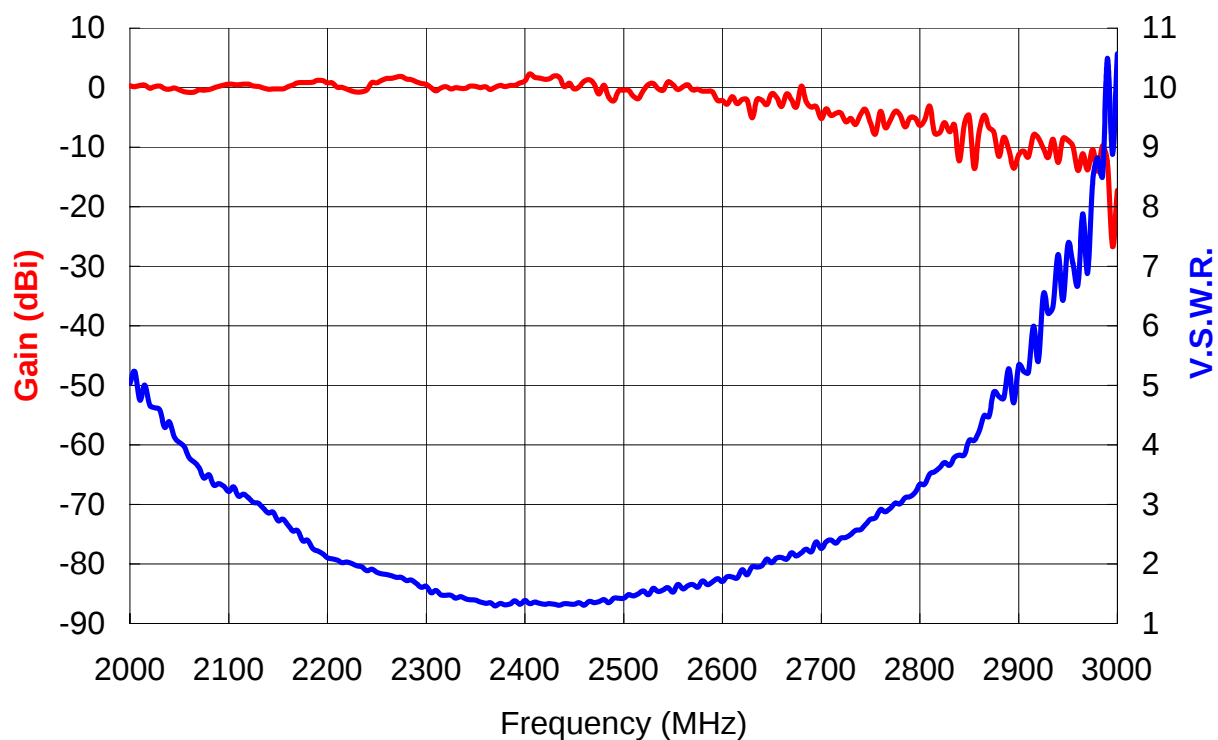
Radiation Pattern Plots



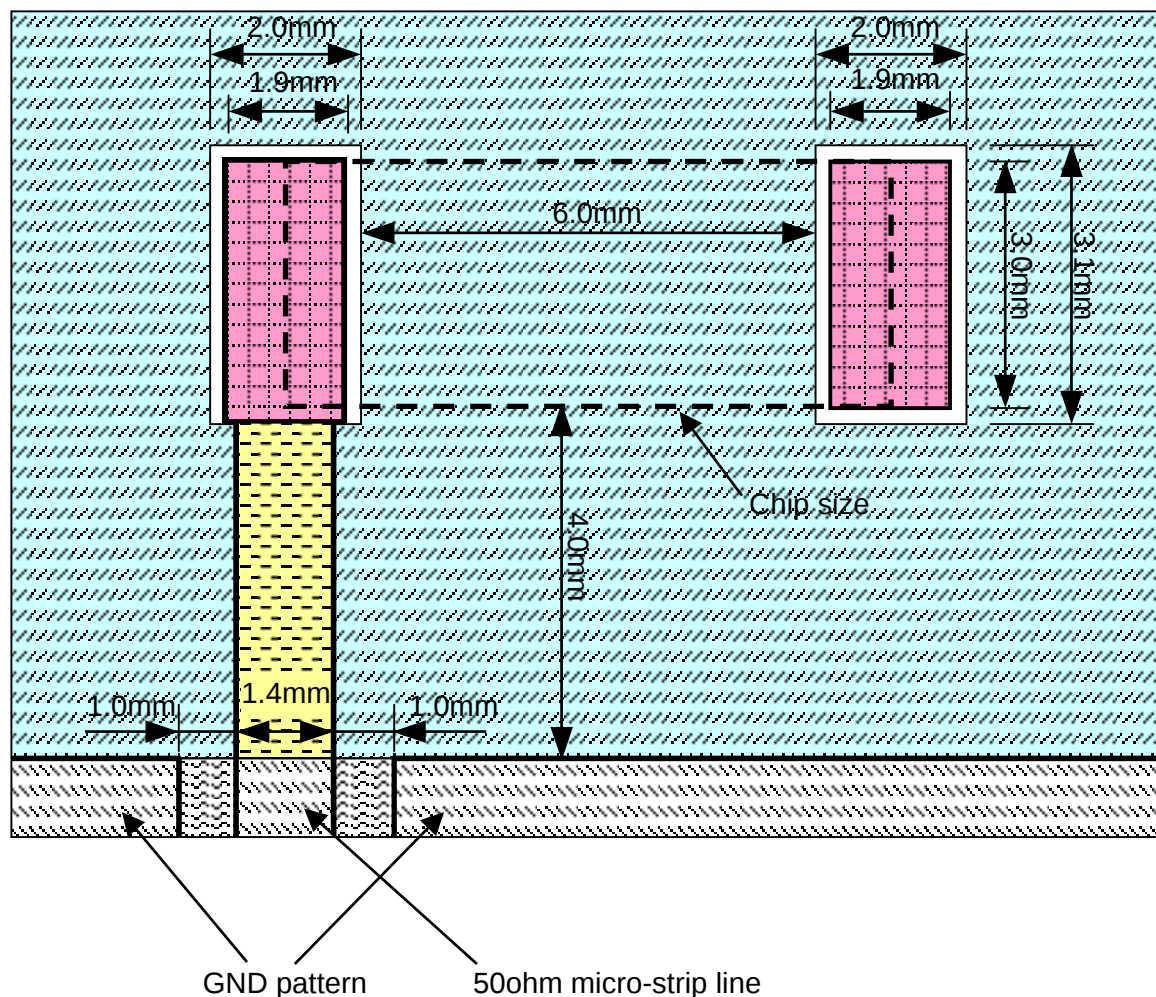
ITEM : HAN8030B2R4GT-000
 Frequency : 2.45GHz
 STD Antenna : Dipole Antenna (2.2-2.6GHz)

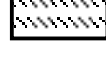


Gain / V.S.W.R.



Example of FR-4 PCB Pattern for HAN8030B2R4GT- 000



-  Front side : Without pattern and resist (film)
Back side : Resist without pattern
-  Both side (Front and Back) : Resist without pattern
-  Front side : Solder resist / Back side : Resist without pattern
-  Both side (Front and Back) : Solder resist
-  Front side : Resist without pattern / Back side : Solder resist
-  Front side : Land / Back side : Resist without pattern

*Note : FR-4 PCB (52mm x 20mm t=0.8mm , FR-4 (Er=4.6))