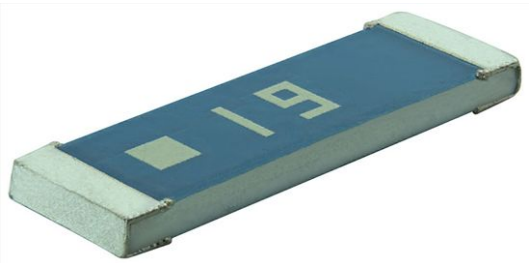
Чип-антенны
Технические характеристики

Surface Mount Ceramic Chip Antennas for 1.575 GHz



VJ5101W157GXCMT chip antenna

The VJ5101W157 series are small form-factor, high-performance chip-antennas optimized for GPS applications.

Designed for GPS applications, the VJ5101W157GXCMT antenna shows a superb performance and excellent peak/ average gain, allowing longer ranges than similar GPS patch antennas.

DESCRIPTION

The VJ5101W157GXCMT ceramic chip antenna is a small form-factor, high-performance, chip-antenna designed for operation at 1.575 GHz. It allows manufacturers to design high quality products that do not bear the penalty of a large external antenna, and is designed to be assembled onto a PC board using a standard reflow process.

FEATURES

RoHS COMPLIANT

- Small outline (10 mm x 3.2 mm x 0.8 mm)
- 50 Ω unbalanced tuning interface
- Linear polarization
- Assembled onto a PCB in the standard reflow process
- Wide transmit / receive range
- High stability in temperature / humidity changes
- Excellent peak / average gain
- Wide operating temperature range (- 40 °C to + 85 °C)

APPLICATIONS

- GPS L1 band
- Transmission / reception at 1.575 GHz

ELECTRICAL SPECIFICATIONS

Operating temperature: - 40 °C to + 85 °C

Frequency range (transmission / reception): 1575 MHz ± 50 MHz

Note

- Electrical characteristics at + 25 °C unless otherwise specified.

QUICK REFERENCE DATA

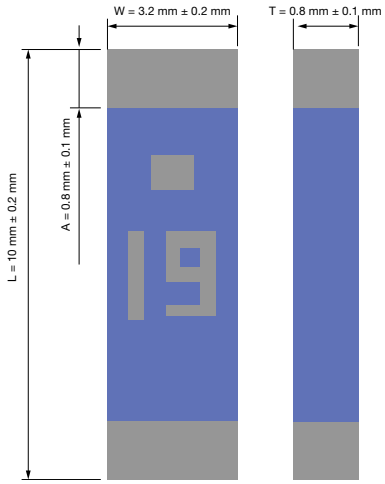
SERIES	FREQUENCY (MHz)	MAX. GAIN (dBi)	AVERAGE GAIN (dBi)	BANDWIDTH (- 10 dB) (MHz)	BANDWIDTH (- 3 dB) (MHz)
VJ5101W157GXCMT	1575	+ 2.5	- 1.60	50	110

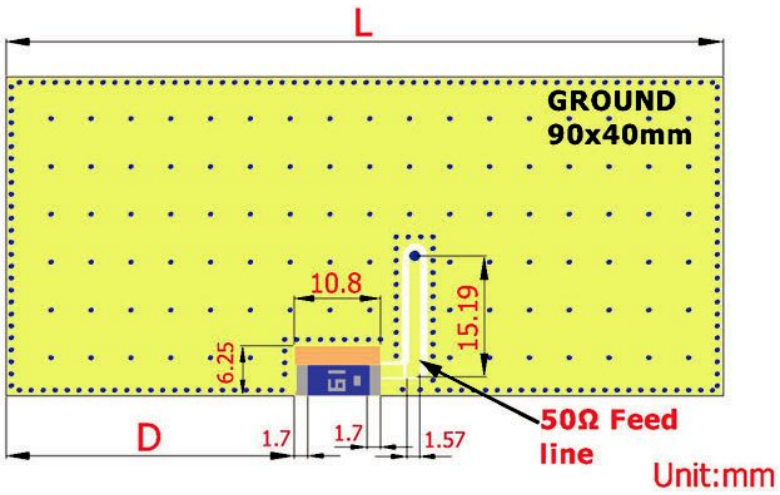
CHIP ANTENNA PERFORMANCE

NOMINAL FREQUENCY (MHz)	NOMINAL IMPEDANCE (Ω)	1.575 GHz PEAK GAIN (dBi)	1.575 GHz AVERAGE GAIN (dBi)	1.575 GHz REFLECTED POWER LOSS	1.575 GHz INSERTION POWER LOSS	- 3 dB BANDWIDTH 1.575 GHz	- 3 dB REFLECTED POWER LOSS	- 10 dB BANDWIDTH 1.575 GHz	- 10 dB REFLECTED POWER LOSS
1575	50	- 1.60	+ 2.5	< - 15 dB	< 4 %	110	50 %	50	10 %
				< 3.2 %	< 0.14 dB		3 dB		0.46 dB

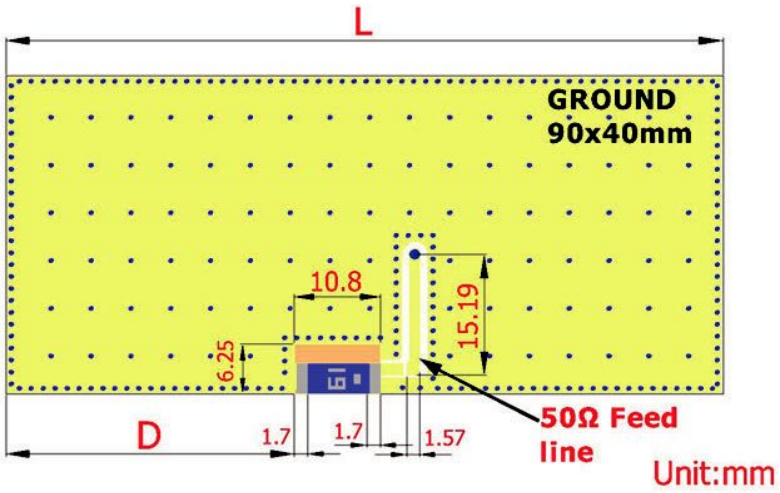
FOOTPRINT, MECHANICAL, AND PCB DIMENSIONS

The antenna footprint and mechanical dimensions are presented in figure 7. Optimal tuning is adjusted according to PCB layout.

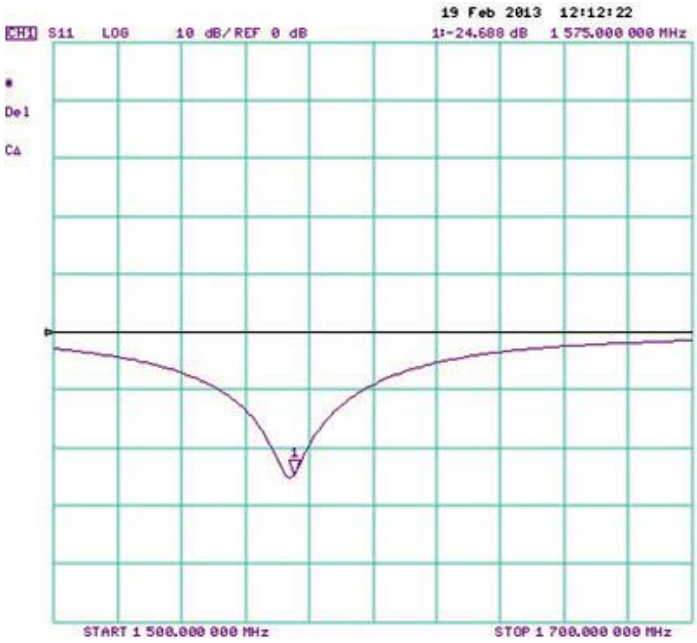
FIGURE	SYMBOL	DIMENSION (mm)
	L	10 ± 0.20
	W	3.2 ± 0.20
	T	0.80 ± 0.10
	A	0.80 ± 0.10



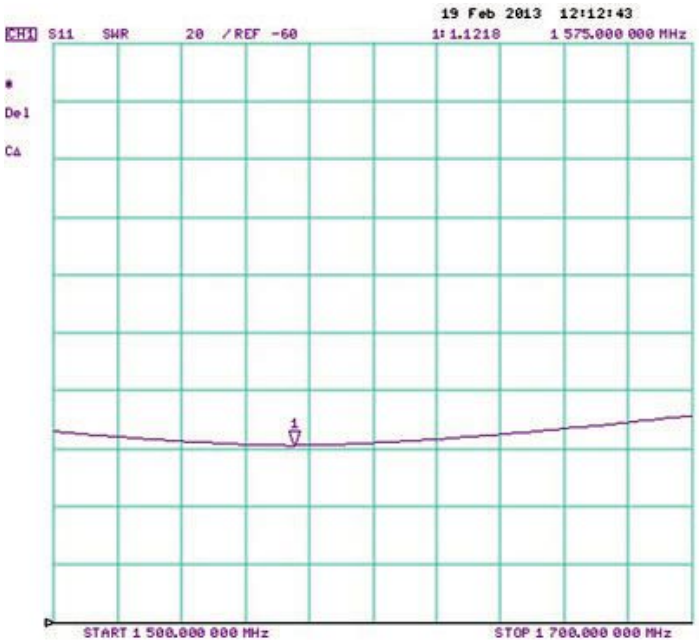
Layout Design



Antenna on Test Board (thickness 0.8 mm)



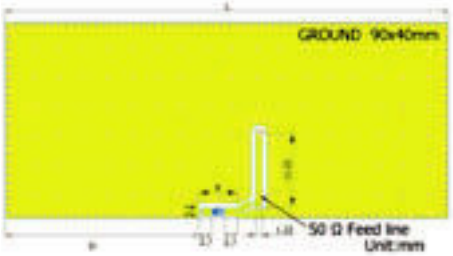
Antenna S11 on Test Board



Antenna VSWR on Test Board

RADIATION PATTERN

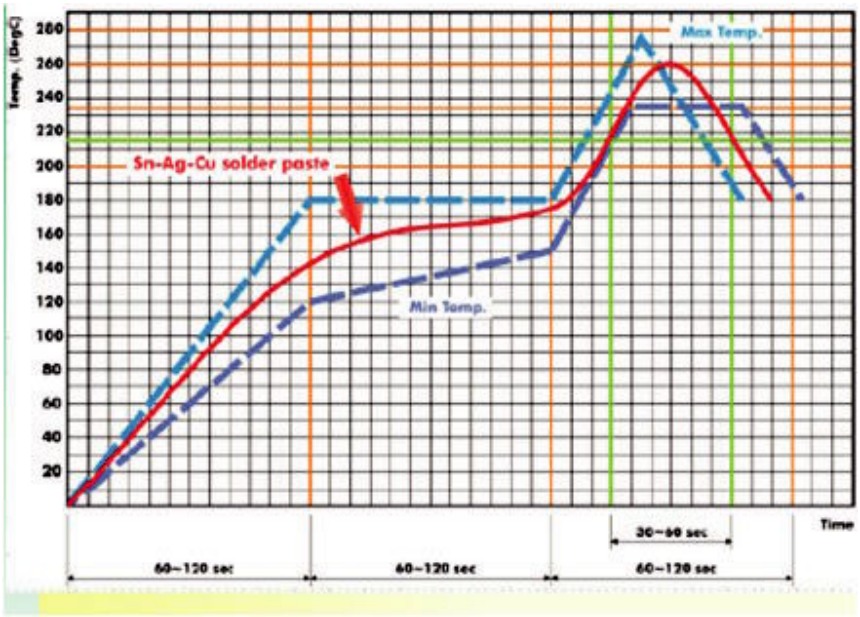
Radiation pattern and gain were dependent on measurement board design. The specification of VJ5101W157GXCMT antenna was measured based on the PCB size and installation position as shown in the below figure test board



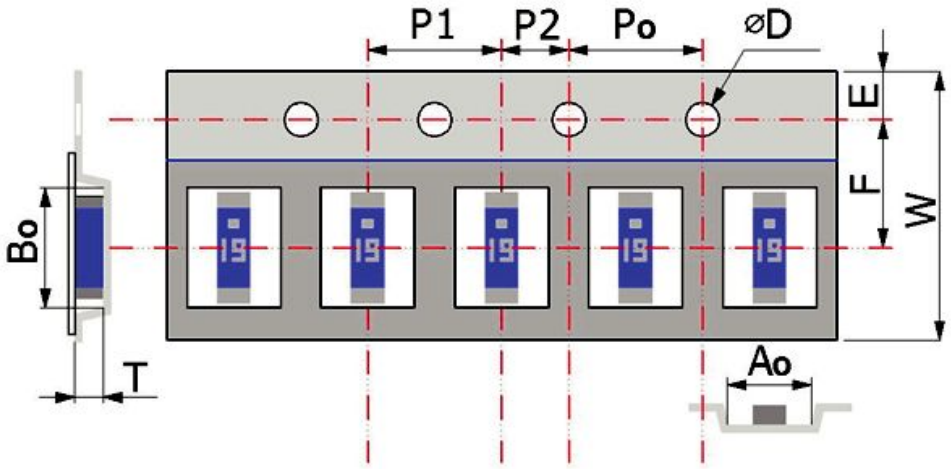
	VERTICAL	HORIZONTAL
Y - Z Plane Average Gain = 0.651 dBi	Peak Gain = - 6.92 dBi, Average Gain = - 12.58 dBi	Peak Gain = 2.49 dBi, Average Gain = 0.44 dBi
X - Z Plane Average Gain = - 3.82 dBi	Peak Gain = 1.27 dBi, Average Gain = - 4.23 dBi	Peak Gain = - 8.51 dBi, Average Gain = - 14.30 dBi
X - Y Plane Average Gain = - 2.93 dBi	Peak Gain = 1.42 dBi, Average Gain = - 3.37 dBi	Peak Gain = - 7.87 dBi, Average Gain = - 13.13 dBi

SOLDERING CONDITION

Typical examples of soldering processes that provide reliable joints without any damage are given in figure 2.



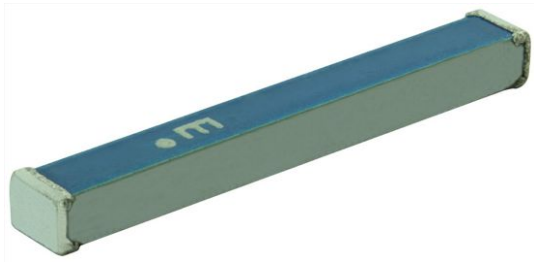
PACKAGING



PLASTIC TAPE SPECIFICATIONS (Dimensions in mm)									
A_O	B_O	ØD	T	W	E	F	P_O	P_1	P_2
3.40 ± 0.10	10.20 ± 0.10	1.50 ± 0.10	1.00 ± 0.10	24 ± 0.30	1.75 ± 0.10	11.50 ± 0.10	4.00 ± 0.10	8.00 ± 0.10	2.00 ± 0.10

ORDERING INFORMATION	VISHAY MATERIAL	PACKAGING QUANTITY
VJ5101W157 Chip Antenna	VJ5101W157GXCMT	2000 pieces

Surface Mount Ceramic Chip Antennas for 2.4 GHz



VJ5103W240GXCMT chip antenna

The VJ5103W240 series are small form-factor, high-performance chip-antennas designed to be used in wireless, bluetooth and ISM band 2.4 GHz.

The VJ5103W240 series present an excellent performance (max. gain 3 dBi) with a low profile needed in most wireless applications.

DESCRIPTION

The VJ5103W240GXCMT ceramic chip antenna is a small form-factor, high-performance, chip-antenna designed for operation at 2.4 GHz. It allows manufacturers to design high quality products that do not bear the penalty of a large external antenna, and is designed to be assembled onto a PC board using a standard reflow process.

FEATURES

RoHS COMPLIANT HALOGEN FREE

- Small outline (8.0 mm x 1.05 mm x 0.8 mm)
- 50 Ω unbalanced tuning interface
- Omnidirectional
- Assembled onto a PCB in the standard reflow process
- Low profile for thin type terminal
- High stability in temperature / humidity changes
- High mechanical strength
- Wide operating temperature range (- 40 °C to + 85 °C)

APPLICATIONS

- Bluetooth
- Wireless LAN
- ISM band 2.4 GHz wireless applications

ELECTRICAL SPECIFICATIONS

Operating temperature: - 40 °C to + 85 °C

Frequency range (transmission / reception): 2450 MHz ± 50 MHz

Note

- Electrical characteristics at + 25 °C unless otherwise specified.

QUICK REFERENCE DATA

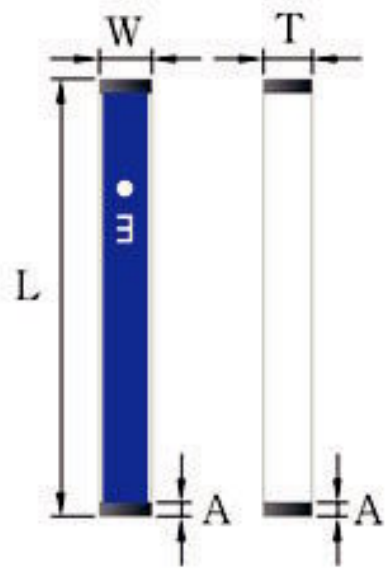
SERIES	FREQUENCY (MHz)	MAX. GAIN (dBi)	AVERAGE GAIN (dBi)	BANDWIDTH (- 10 dB) (MHz)	BANDWIDTH (- 3 dB) (MHz)
VJ5103W240GXCMT	2450	+ 3.0	- 0.60	250	570

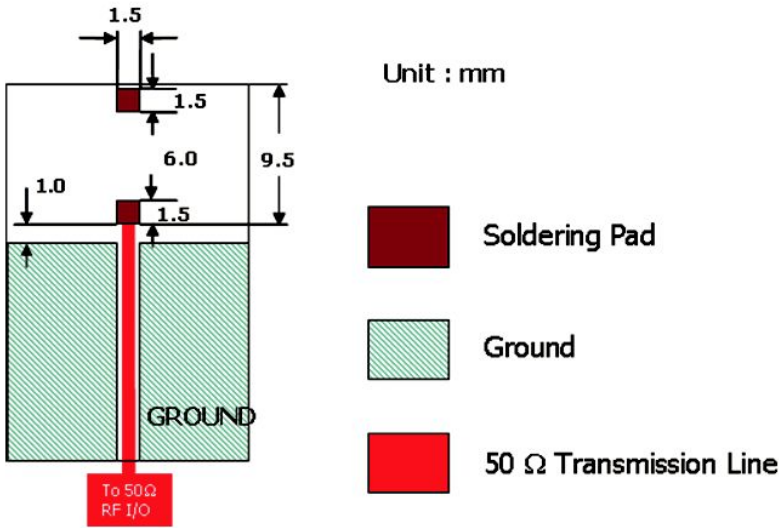
CHIP ANTENNA PERFORMANCE

NOMINAL FREQUENCY (MHz)	NOMINAL IMPEDANCE (Ω)	2.45 GHz PEAK GAIN (dBi)	2.45 GHz AVERAGE GAIN (dBi)	2.45 GHz REFLECTED POWER LOSS	2.45 GHz INSERTION POWER LOSS	- 3 dB BANDWIDTH 2.45 GHz	- 3 dB REFLECTED POWER LOSS	- 10 dB BANDWIDTH 2.45 GHz	- 10 dB REFLECTED POWER LOSS
2450	50	- 0.60	+ 3.0	< - 15 dB	< 4 %	570	50 %	250	10 %
				< 3.2 %	< 0.14 dB		3 dB		0.46 dB

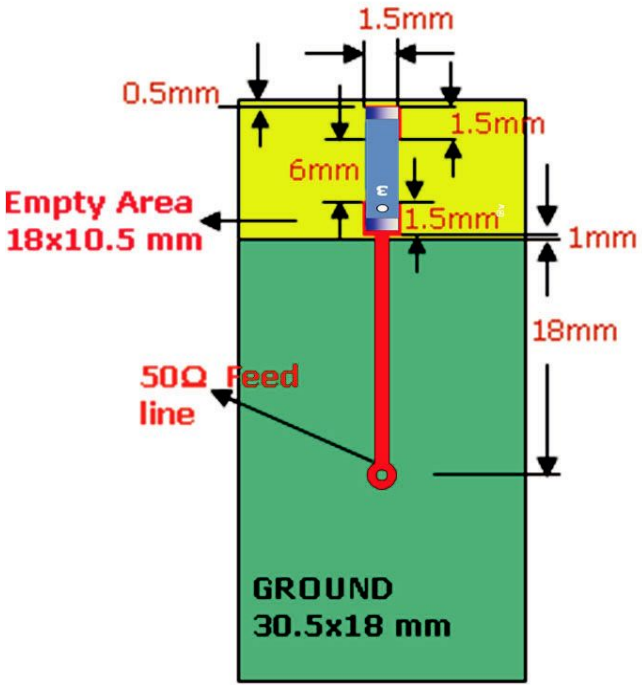
FOOTPRINT, MECHANICAL, AND PCB DIMENSIONS

The antenna footprint and mechanical dimensions are presented in figure 7. Optimal tuning is adjusted according to PCB layout.

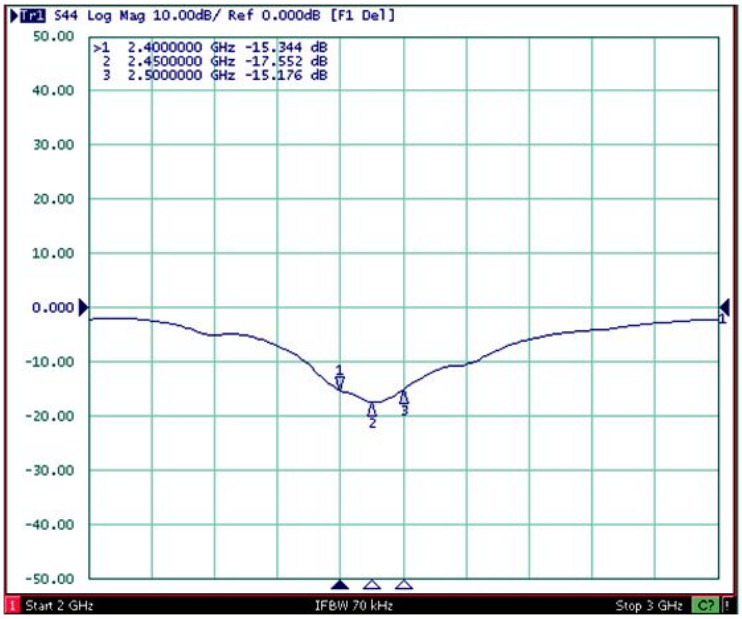
FIGURE	SYMBOL	DIMENSION (mm)
	L	8.0 ± 0.20
	W	1.05 ± 0.20
	T	0.80 ± 0.10
	A	0.30 ± 0.10



Top View



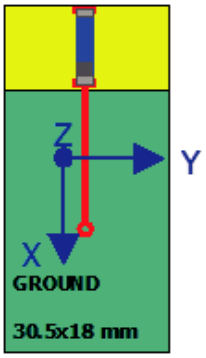
Antenna on Test Board (FRA thickness 0.8 mm)

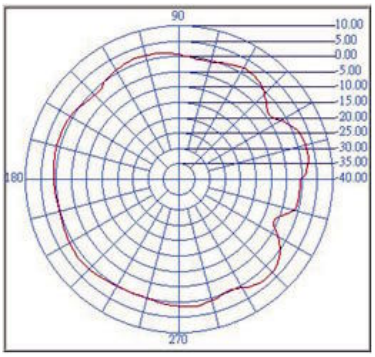
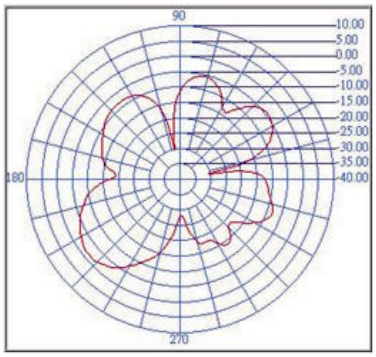
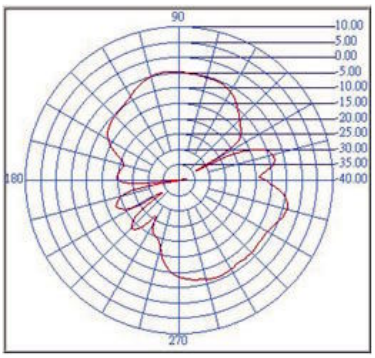
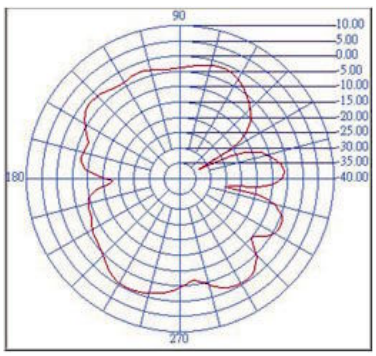
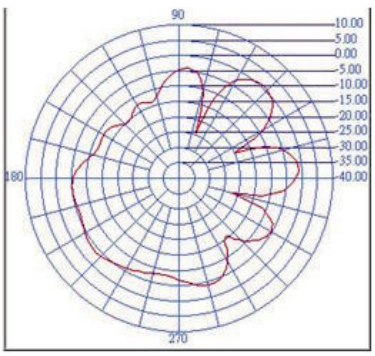
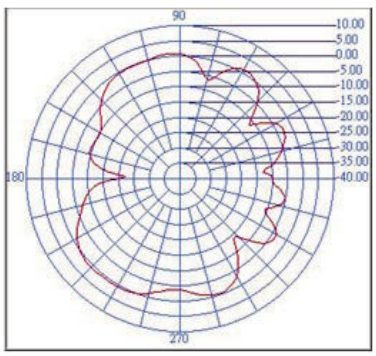


Antenna S11 on Test Board

RADIATION PATTERN

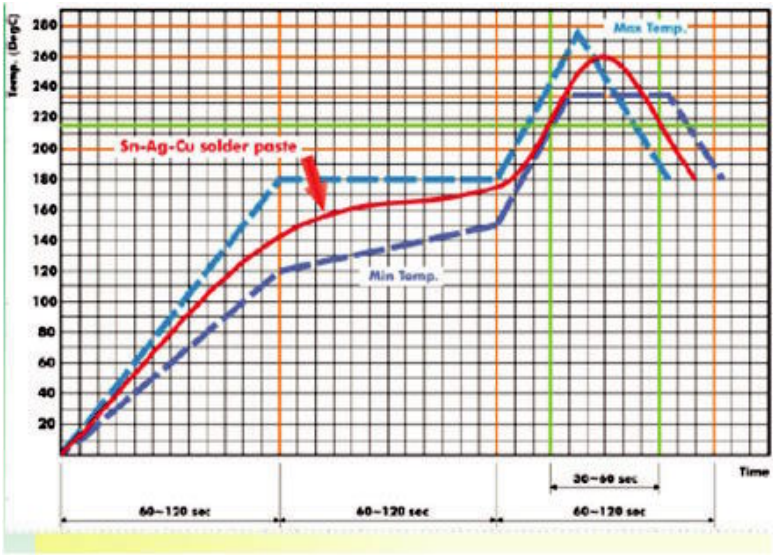
Radiation pattern and gain were dependent on measurement board design. The specification of VJ5103W240GXCMT antenna was measured based on the PCB size and installation position as shown in the below figure test board.



	VERTICAL	HORIZONTAL
Y - Z Plane Average Gain = 1.19 dBi	Peak Gain = 3.03 dBi, Average Gain = 0.71 dBi 	Peak Gain = - 1.37 dBi, Average Gain = - 8.6 dBi 
X - Z Plane Average Gain = - 2.91 dBi	Peak Gain = - 3.76 dBi, Average Gain = - 8.72 dBi 	Peak Gain = 0.25 dBi, Average Gain = - 4.24 dBi 
X - Y Plane Average Gain = - 0.95 dBi	Peak Gain = - 0.76 dBi, Average Gain = - 5.81 dBi 	Peak Gain = 1.37 dBi, Average Gain = - 2.67 dBi 

SOLDERING CONDITION

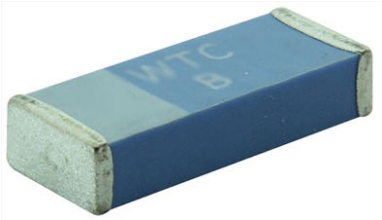
Typical examples of soldering processes that provide reliable joints without any damage are given in figure 2.



PLASTIC TAPE SPECIFICATIONS (Dimensions in mm)									
A_O	B_O	ØD	T	W	E	F	P_O	P_1	P_2
1.20 ± 0.10	8.20 ± 0.10	1.50 ± 0.10	1.00 ± 0.10	16.0 ± 0.10	1.75 ± 0.10	7.50 ± 0.10	4.00 ± 0.05	4.00 ± 0.10	2.00 ± 0.05

ORDERING INFORMATION	VISHAY MATERIAL	PACKAGING QUANTITY
VJ5103W240 Chip Antenna	VJ5103W240GXCMT	2000 pieces

Surface Mount Ceramic Chip Antennas for 2.4 GHz



VJ5104W240GXCMT chip antenna

The VJ5104W240 series are small form-factor, high-performance chip-antennas designed to be used in wireless, bluetooth and ISM band 2.4 GHz.

The VJ5104W240 series present an excellent performance (max. gain 2.1 dBi) with a low profile needed in most wireless applications.

DESCRIPTION

The VJ5104W240GXCMT ceramic chip antenna is a small form-factor, high-performance, chip-antenna designed for operation at 2.4 GHz. It allows manufacturers to design high quality products that do not bear the penalty of a large external antenna, and is designed to be assembled onto a PC board using a standard reflow process.

FEATURES

RoHS COMPLIANT

- Small outline (5.2 mm x 2.0 mm x 1.1 mm)
- 50 Ω unbalanced tuning interface
- Omnidirectional
- Assembled onto a PCB in the standard reflow process
- Low profile for thin type terminal
- High stability in temperature / humidity changes
- High mechanical strength
- Wide operating temperature range (- 40 °C to + 85 °C)

APPLICATIONS

- Bluetooth
- Wireless LAN
- ISM band 2.4 GHz wireless applications

ELECTRICAL SPECIFICATIONS

Operating temperature: - 40 °C to + 85 °C

Frequency range (transmission / reception): 2450 MHz ± 50 MHz

Note

- Electrical characteristics at + 25 °C unless otherwise specified.

QUICK REFERENCE DATA

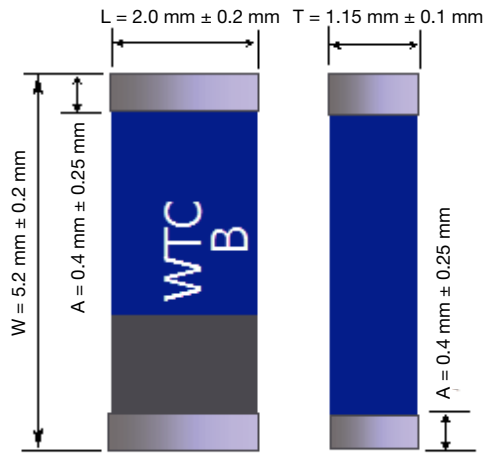
SERIES	FREQUENCY (MHz)	MAX. GAIN (dBi)	AVERAGE GAIN (dBi)	BANDWIDTH (- 10 dB) (MHz)	BANDWIDTH (- 3 dB) (MHz)
VJ5104W240GXCMT	2450	+ 2.1	- 0.80	180	480

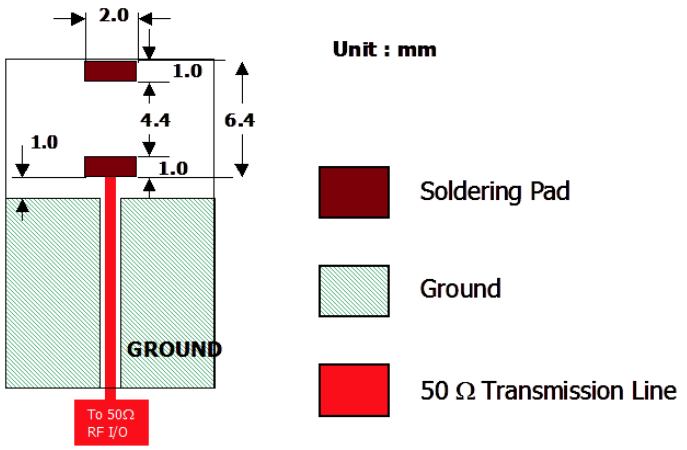
CHIP ANTENNA PERFORMANCE

NOMINAL FREQUENCY (MHz)	NOMINAL IMPEDANCE (Ω)	2.45 GHz PEAK GAIN (dBi)	2.45 GHz AVERAGE GAIN (dBi)	2.45 GHz REFLECTED POWER LOSS	2.45 GHz INSERTION POWER LOSS	- 3 dB BANDWIDTH 2.45 GHz	- 3 dB REFLECTED POWER LOSS	- 10 dB BANDWIDTH 2.45 GHz	- 10 dB REFLECTED POWER LOSS
2450	50	- 0.80	+ 2.1	< - 15 dB	< 4 %	480	50 %	180	10 %
				< 3.2 %	< 0.14 dB		3 dB		0.46 dB

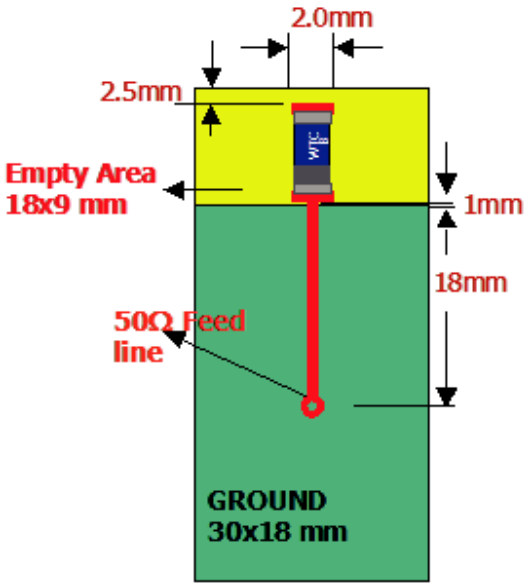
FOOTPRINT, MECHANICAL, AND PCB DIMENSIONS

The antenna footprint and mechanical dimensions are presented in figure 7. Optimal tuning is adjusted according to PCB layout.

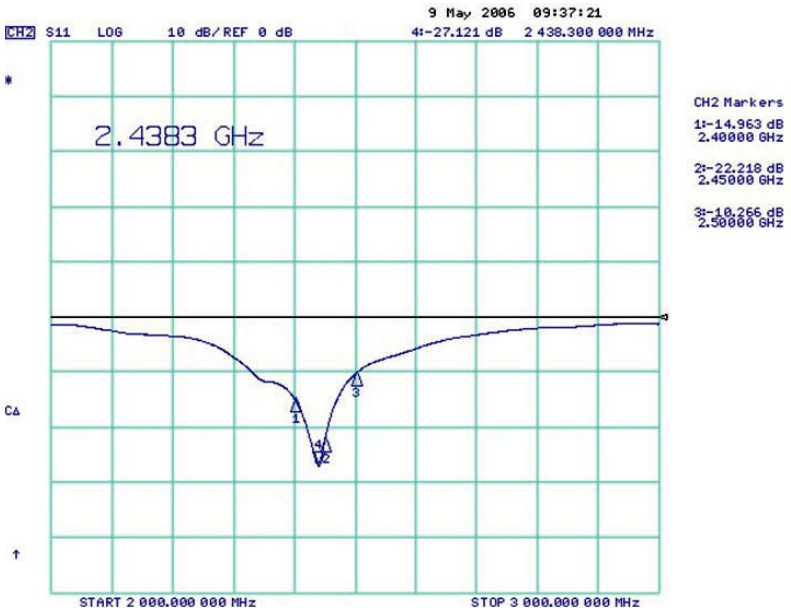
FIGURE	SYMBOL	DIMENSION (mm)
	L	2.0 ± 0.20
	W	5.2 ± 0.20
	T	1.15 ± 0.10
	A	0.40 ± 0.25



Top View



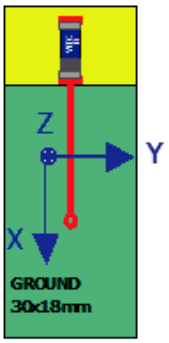
Antenna on Test Board (FRA4 thickness 0.8 mm)

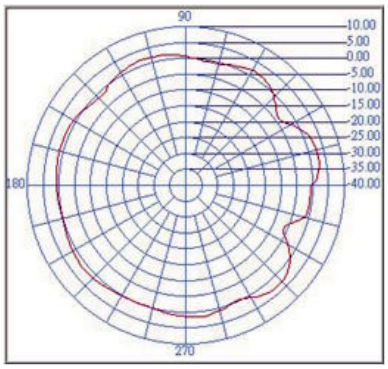
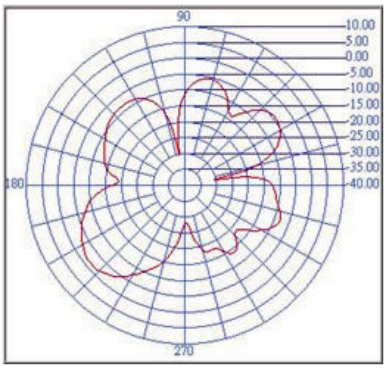
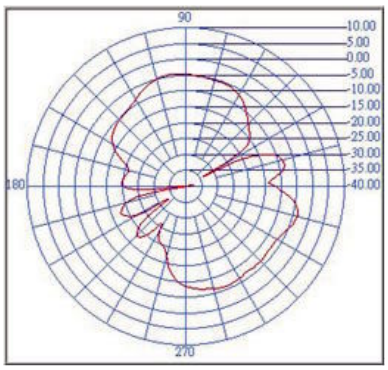
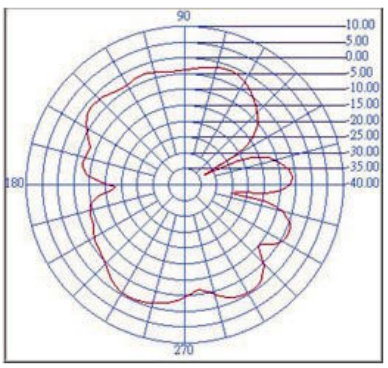
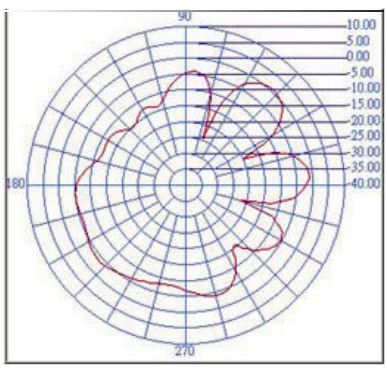
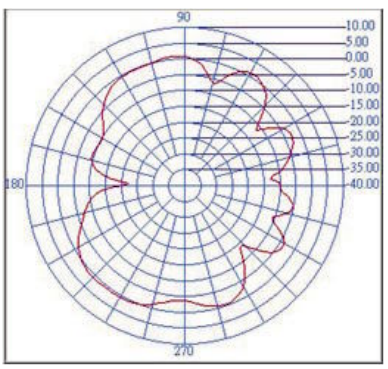


Antenna S11 on Test Board

RADIATION PATTERN

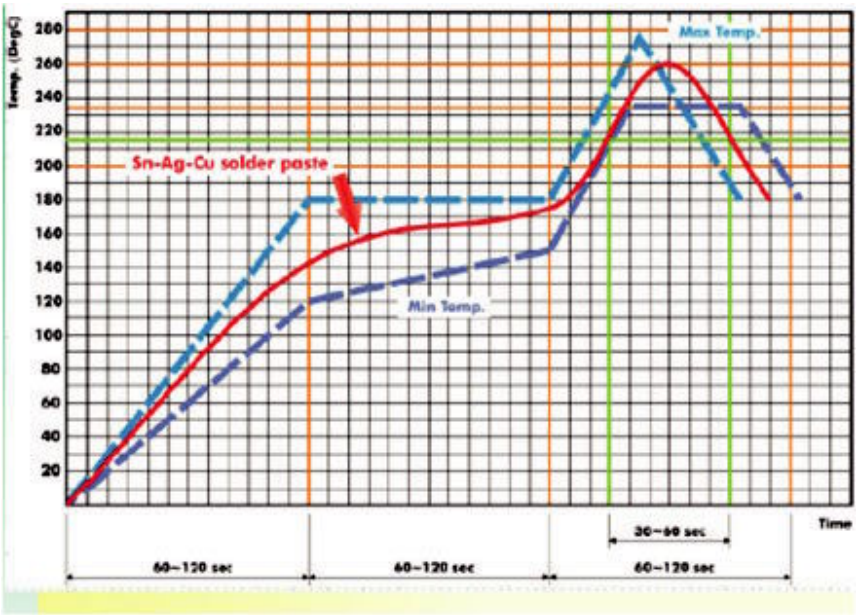
Radiation pattern and gain were dependent on measurement board design. The specification of VJ5104W240GXCMT antenna was measured based on the PCB size and installation position as shown in the below figure test board.



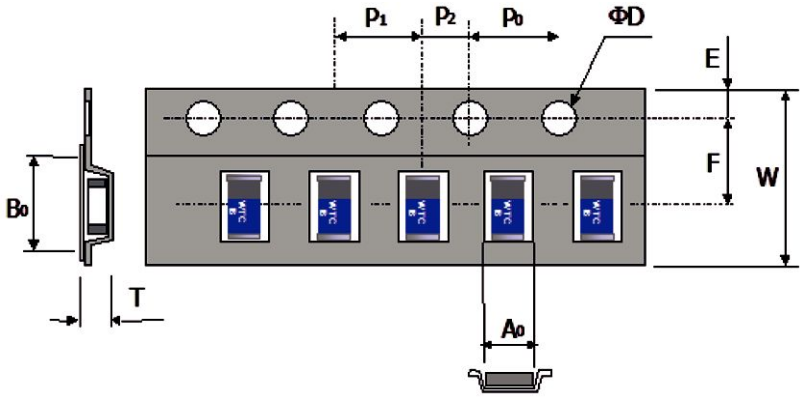
	VERTICAL	HORIZONTAL
Y - Z Plane Average Gain = 1.19 dBi	Peak Gain = 3.03 dBi, Average Gain = 0.71 dBi 	Peak Gain = - 1.37 dBi, Average Gain = - 8.6 dBi 
X - Z Plane Average Gain = - 2.91 dBi	Peak Gain = - 3.76 dBi, Average Gain = - 11.97 dBi 	Peak Gain = 0.25 dBi, Average Gain = - 4.24 dBi 
X - Y Plane Average Gain = - 0.95 dBi	Peak Gain = - 0.76 dBi, Average Gain = - 5.81 dBi 	Peak Gain = 1.37 dBi, Average Gain = - 2.67 dBi 

SOLDERING CONDITION

Typical examples of soldering processes that provide reliable joints without any damage are given in figure 2.



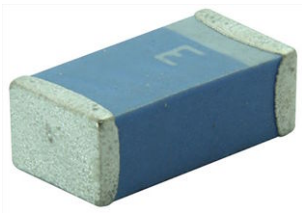
PACKAGING



PLASTIC TAPE SPECIFICATIONS (Dimensions in mm)									
A_O	B_O	ØD	T	W	E	F	P_O	P_1	P_2
1.20 ± 0.10	8.20 ± 0.10	1.50 ± 0.10	1.00 ± 0.10	16.0 ± 0.10	1.75 ± 0.10	7.50 ± 0.10	4.00 ± 0.05	4.00 ± 0.10	2.00 ± 0.05

ORDERING INFORMATION	VISHAY MATERIAL	PACKAGING QUANTITY
VJ5104W240 Chip Antenna	VJ5104W240GXCMT	2000 pieces

Surface Mount Ceramic Chip Antennas for 2.4 GHz



VJ5105W240GXCMT chip antenna

The VJ5105W240 series are small form-factor, high-performance chip-antennas designed to be used in wireless, bluetooth and ISM band 2.4 GHz.

The VJ5105W240 series present an excellent performance (max. gain 2.1 dBi) with a low profile needed in most wireless applications.

DESCRIPTION

The VJ5105W240GXCMT ceramic chip antenna is a small form-factor, high-performance, chip-antenna designed for operation at 2.4 GHz. It allows manufacturers to design high quality products that do not bear the penalty of a large external antenna, and is designed to be assembled onto a PC board using a standard reflow process.

FEATURES

RoHS COMPLIANT

- Ultre small outline (3.2 mm x 1.6 mm x 1.2 mm)
- 50 Ω unbalanced tuning interface
- Omnidirectional
- Assembled onto a PCB in the standard reflow process
- Low profile for thin type terminal
- High stability in temperature / humidity changes
- High mechanical strength
- Wide operating temperature range (- 40 °C to + 85 °C)

APPLICATIONS

- Bluetooth
- Wireless LAN
- ISM band 2.4 GHz wireless applications
- Home WF wireless

ELECTRICAL SPECIFICATIONS

Operating temperature: - 40 °C to + 85 °C

Frequency range (transmission / reception): 2450 MHz ± 50 MHz

Note

- Electrical characteristics at + 25 °C unless otherwise specified.

QUICK REFERENCE DATA

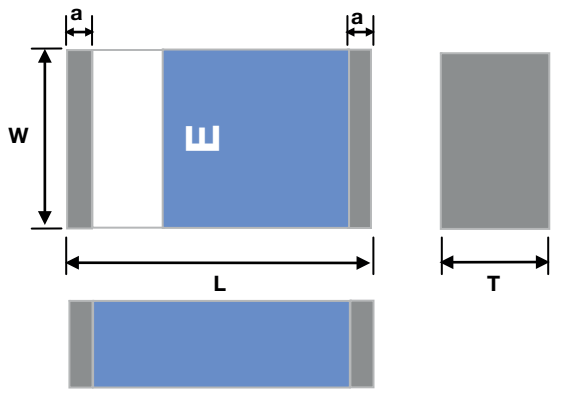
SERIES	FREQUENCY (MHz)	MAX. GAIN (dBi)	AVERAGE GAIN (dBi)	BANDWIDTH (- 10 dB) (MHz)	BANDWIDTH (- 3 dB) (MHz)
VJ5105W240GXCMT	2450	+ 2.1	- 0.90	210	560

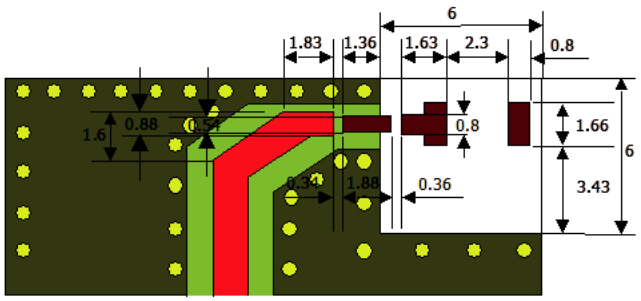
CHIP ANTENNA PERFORMANCE

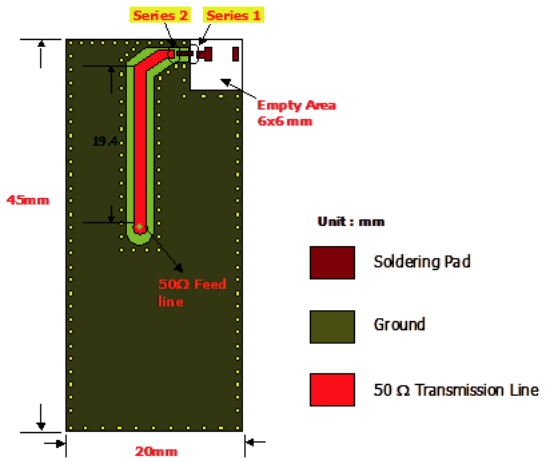
NOMINAL FREQUENCY (MHz)	NOMINAL IMPEDANCE (Ω)	2.45 GHz PEAK GAIN (dBi)	2.45 GHz AVERAGE GAIN (dBi)	2.45 GHz REFLECTED POWER LOSS	2.45 GHz INSERTION POWER LOSS	- 3 dB BANDWIDTH 2.45 GHz	- 3 dB REFLECTED POWER LOSS	- 10 dB BANDWIDTH 2.45 GHz	- 10 dB REFLECTED POWER LOSS
2450	50	- 0.90	+ 2.1	< - 15 dB	< 4 %	560	50 %	210	10 %
				< 3.2 %	< 0.14 dB		3 dB		0.46 dB

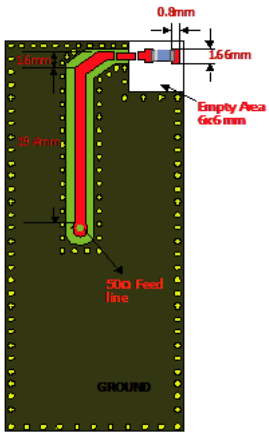
FOOTPRINT, MECHANICAL, AND PCB DIMENSIONS

The antenna footprint and mechanical dimensions are presented in figure 7. Optimal tuning is adjusted according to PCB layout.

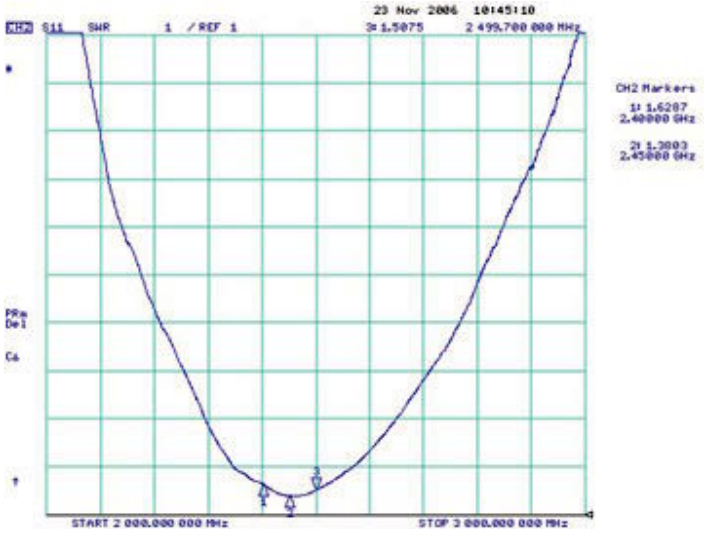
FIGURE	SYMBOL	DIMENSION (mm)
	L	3.20 ± 0.20
	W	1.60 ± 0.10
	T	1.20 ± 0.10
	a	0.25 ± 0.15



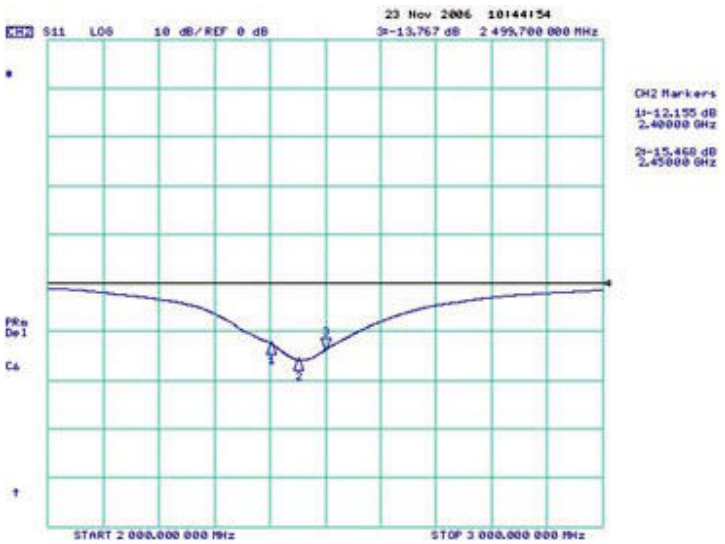




Antenna on Test Board (thickness 1.2 mm)



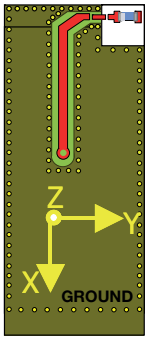
Antenna S11 on Test Board

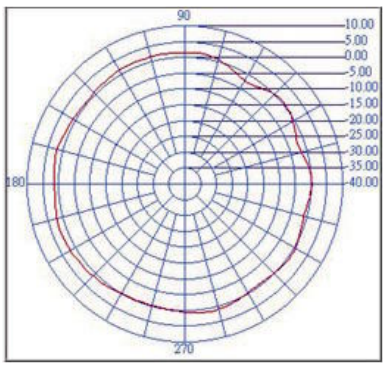
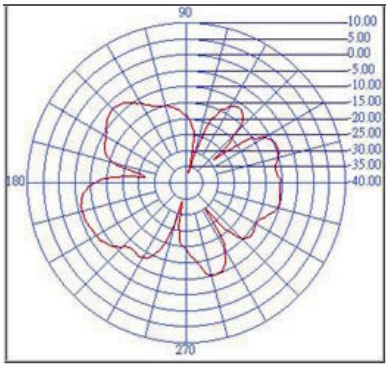
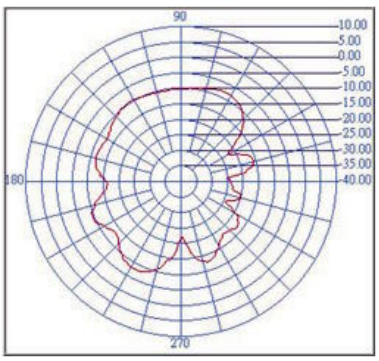
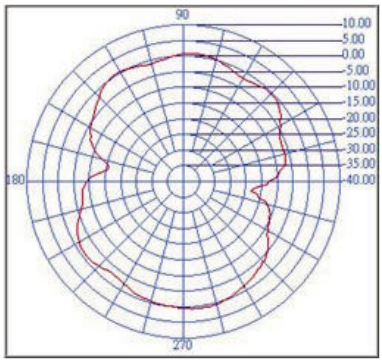
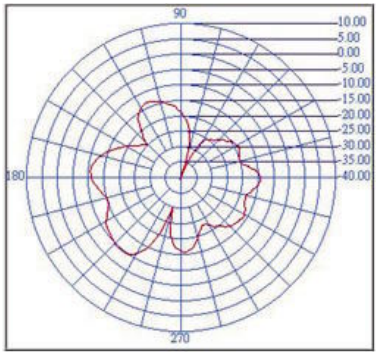
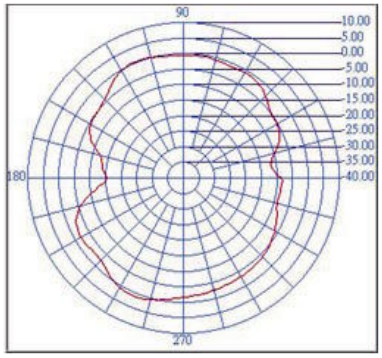


Antenna VSWR on Test Board

RADIATION PATTERN

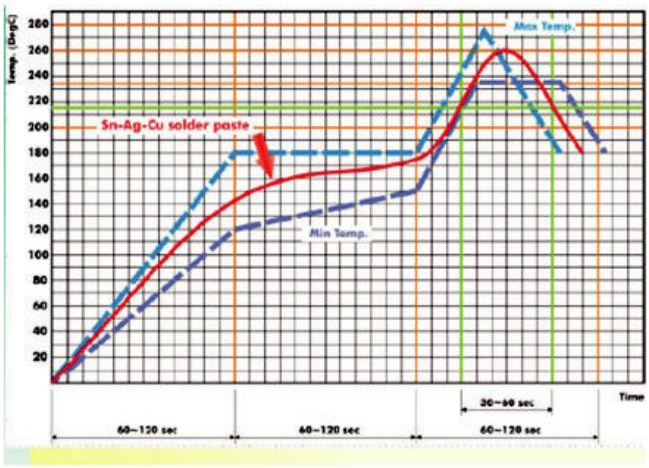
Radiation pattern and gain were dependent on measurement board design. The specification of VJ5105W240GXCMT antenna was measured based on the PCB size and installation position as shown in the below figure test board.



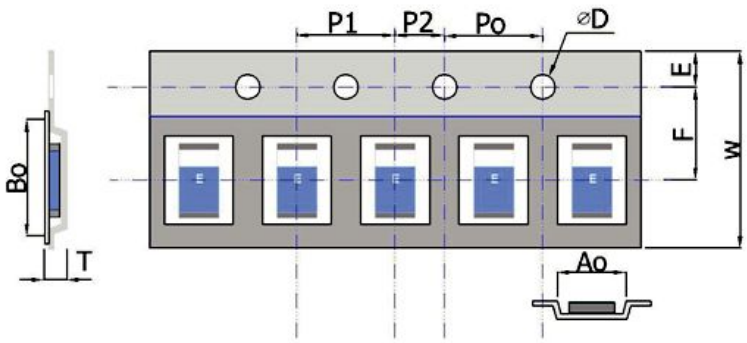
	VERTICAL	HORIZONTAL
Y - Z Plane Average Gain = 0.891 dBi	Peak Gain = 2.12 dBi, Average Gain = 0.64 dBi 	Peak Gain = - 6.07 dBi, Average Gain = - 11.62 dBi 
X - Z Plane Average Gain = - 1.846 dBi	Peak Gain = - 7.78 dBi, Average Gain = - 11.97 dBi 	Peak Gain = - 0.96 dBi, Average Gain = - 2.29 dBi 
X - Y Plane Average Gain = - 2.556 dBi	Peak Gain = - 9.41 dBi, Average Gain = - 15.54 dBi 	Peak Gain = 1.40 dBi, Average Gain = - 2.78 dBi 

SOLDERING CONDITION

Typical examples of soldering processes that provide reliable joints without any damage are given in figure 2.



PACKAGING



PLASTIC TAPE SPECIFICATIONS (Dimensions in mm)									
A_O	B_O	ØD	T	W	E	F	P_O	P_1	P_2
1.95 ± 0.10	3.45 ± 0.10	1.55 ± 0.05	1.30 ± 0.10	8.20 + 0.10 - 0.30	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10

ORDERING INFORMATION	VISHAY MATERIAL	PACKAGING QUANTITY
VJ5105W240 Chip Antenna	VJ5105W240GXCMT	2000 pieces

Surface Mount Ceramic Chip Antennas for 2.4 GHz

VJ5106W240GXCMT chip antenna

The VJ5106W240 series are small form-factor, high-performance chip-antennas designed to be used in wireless, bluetooth and ISM band 2.4 GHz.

The VJ5106W240 series present an excellent performance (max. gain 2 dBi) with a low profile needed in most Wireless applications.

DESCRIPTION

The VJ5106W240GXCMT ceramic chip antenna is a small form-factor, high-performance, chip-antenna designed for operation at 2.4 GHz. It allows manufacturers to design high quality products that do not bear the penalty of a large external antenna, and is designed to be assembled onto a PC board using a standard reflow process.

FEATURES

RoHS COMPLIANT HALOGEN FREE

- Ultra small outline (3.1 mm x 1.6 mm x 0.6 mm)
- 50 Ω unbalanced tuning interface
- Omnidirectional
- Assembled onto a PCB in the standard reflow process
- Low profile for thin type terminal
- High stability in temperature / humidity changes
- High mechanical strength
- Wide operating temperature range (- 40 °C to + 85 °C)

APPLICATIONS

- Bluetooth
- Wireless LAN
- ISM band 2.4 GHz wireless applications
- Home WF wireless

ELECTRICAL SPECIFICATIONS

Operating temperature: - 40 °C to + 85 °C

Frequency range (transmission / reception): 2450 MHz ± 50 MHz

Note

- Electrical characteristics at + 25 °C unless otherwise specified.

QUICK REFERENCE DATA

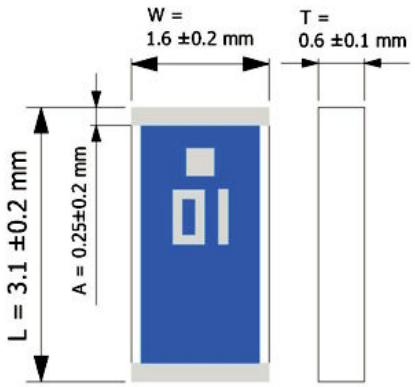
SERIES	FREQUENCY (MHz)	MAX. GAIN (dBi)	AVERAGE GAIN (dBi)	BANDWIDTH (- 10 dB) (MHz)	BANDWIDTH (- 3 dB) (MHz)
VJ5106W240GXCMT	2450	+ 3.1	- 0.50	100	240

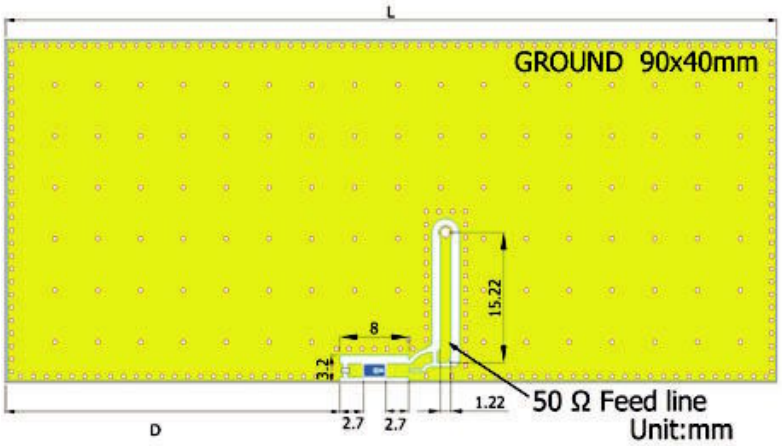
CHIP ANTENNA PERFORMANCE

NOMINAL FREQUENCY (MHz)	NOMINAL IMPEDANCE (Ω)	2.45 GHz PEAK GAIN (dBi)	2.45 GHz AVERAGE GAIN (dBi)	2.45 GHz REFLECTED POWER LOSS	2.45 GHz INSERTION POWER LOSS	- 3 dB BANDWIDTH 2.45 GHz	- 3 dB REFLECTED POWER LOSS	- 10 dB BANDWIDTH 2.45 GHz	- 10 dB REFLECTED POWER LOSS
2450	50	- 0.50	+ 3.1	< - 15 dB	< 4 %	240	50 %	100	10 %
				< 3.2 %	< 0.14 dB		3 dB		0.46 dB

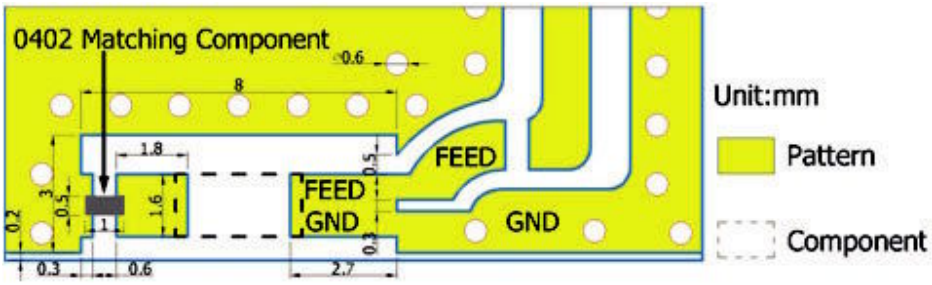
FOOTPRINT, MECHANICAL, AND PCB DIMENSIONS

The antenna footprint and mechanical dimensions are presented in figure 7. Optimal tuning is adjusted according to PCB layout.

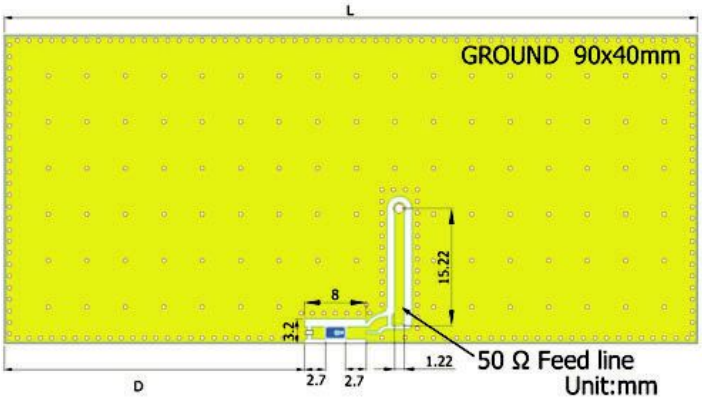
FIGURE	SYMBOL	DIMENSION (mm)
	L	3.10 ± 0.20
	W	1.60 ± 0.20
	T	0.60 ± 0.10
	A	0.25 ± 0.10



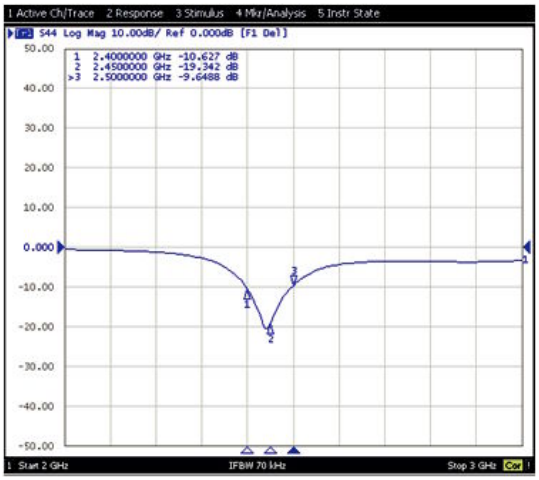
The minimum sie for VJ5106W240 is L > 30 mm and D > 6 mm



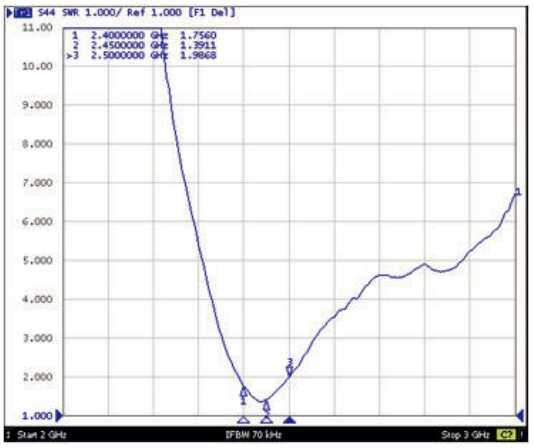
Land Pattern



Antenna on Test Board (thickness 0.8 mm)



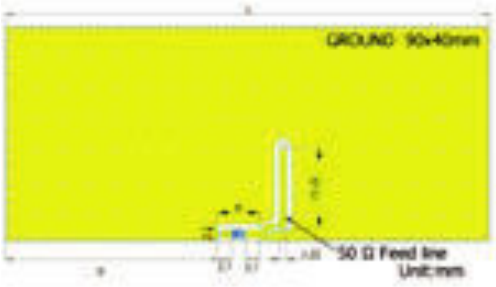
Antenna S11 on Test Board



Antenna VSWR on Test Board

RADIATION PATTERN

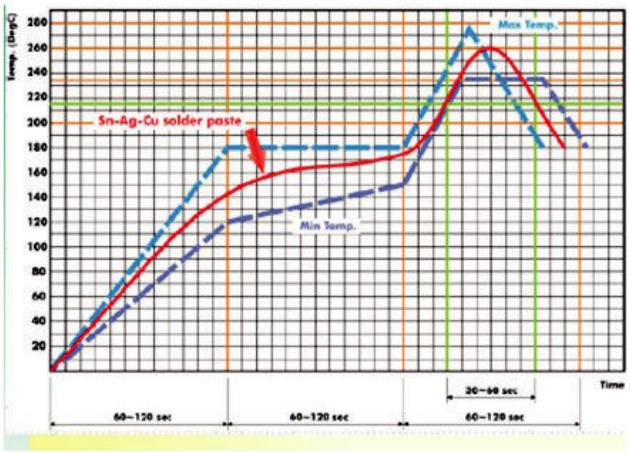
Radiation pattern and gain were dependent on measurement board design. The specification of VJ5106W240GXCMT antenna was measured based on the PCB size and installation position as shown in the below figure test board.



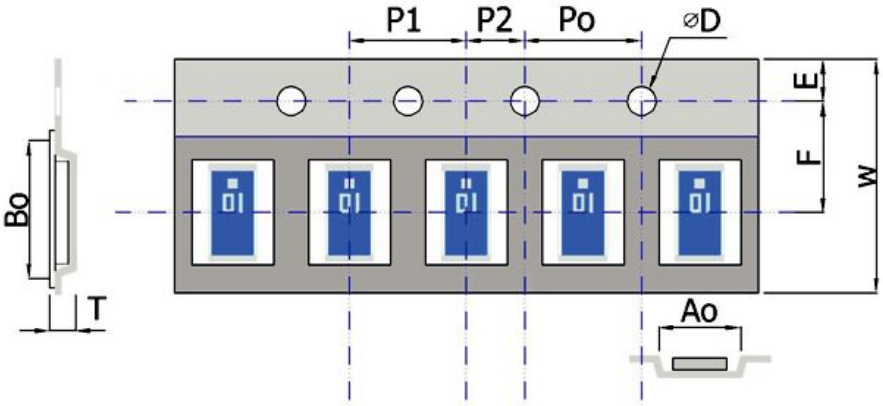
	VERTICAL	HORIZONTAL
Y - Z Plane Average Gain = 0.795 dBi	Peak Gain = 3.14 dBi, Average Gain = 0.05 dBi	Peak Gain = - 0.35 dBi, Average Gain = - 7.23 dBi
X - Z Plane Average Gain = - 1.51 dBi	Peak Gain = - 2.29 dBi, Average Gain = - 7.03 dBi	Peak Gain = 1.08 dBi, Average Gain = - 2.94 dBi
X - Y Plane Average Gain = - 1.05 dBi	Peak Gain = - 7.02 dBi, Average Gain = - 11.95 dBi	Peak Gain = 3.32 dBi, Average Gain = - 1.42 dBi

SOLDERING CONDITION

Typical examples of soldering processes that provide reliable joints without any damage are given in figure 2.



PACKAGING



PLASTIC TAPE SPECIFICATIONS (Dimensions in mm)									
A_O	B_O	ØD	T	W	E	F	P_O	P_1	P_2
1.95 ± 0.10	3.45 ± 0.10	1.55 ± 0.05	1.30 ± 0.10	8.20 + 0.10 - 0.30	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10

ORDERING INFORMATION	VISHAY MATERIAL	PACKAGING QUANTITY
VJ5106W240 Chip Antenna	VJ5106W240GXCMT	2000 pieces

По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46

Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12

Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56

Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Ярославль (4852)69-52-93

Россия (495)268-04-70

Киргизия (996)312-96-26-47

Казахстан (7172)727-132

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