

High Frequency Ceramic Solutions

1575 MHz GPS Antenna

P/N 1575AM55B0001

Detail Specification: 08/03/16

Page 1 of 5

General Specifications

Part Number	1575AM55B0001
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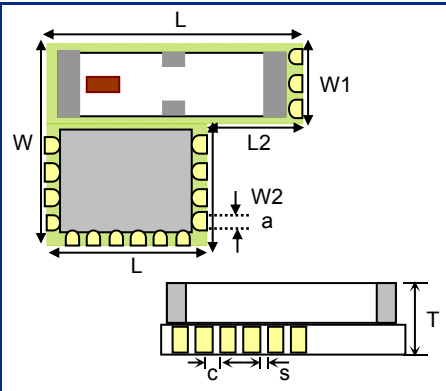
Antenna	
Center Frequency	1575.42 ± 5 MHz
Peak Gain	1.3 dBi typ. (YZ-total)
Average Gain	-0.7 dBi typ. (YZ-total)
Return Loss	9.5 dB min.
Impedance	50 Ω

Total	
Center Frequency	1575.42 MHz
Peak Gain	15.0 dBi typ. (YZ-total)
Average Gain	13.0 dBi typ. (YZ-total)
Impedance	50 Ω

Low Noise Amplifier	
Center Frequency (MHz)	1575.42 ± 5 MHz
Gain (dB)	15.0 typ. / 14 min.
Noise (dB)	0.8 typ. / 0.9 max
Return Loss	7.36 dB min.
Voltage	2.5 - 5.5 V
Current (mA @ 3.3V)	6.5 typ. / 10 max.
Impedance	50 Ω

Operating Temp	-40 to +85°C
Storage Temp	+5 to +35°C
Storage Peroid	Hum. 45 to 75%RH
Power Capacity	-25dBm max (316mW max)
Reel Quantity	300

	In	mm
L	0.669 ± 0.012	17.00 ± 0.30
L1	0.425 ± 0.012	10.80 ± 0.30
L2	0.244 ± 0.012	6.20 ± 0.30
W	0.535 ± 0.012	13.60 ± 0.30
W1	0.240 ± 0.012	6.10 ± 0.30
W2	0.295 ± 0.012	7.50 ± 0.30
T	0.142 ± 0.012	3.60 ± 0.30
a	0.039 ± 0.006	1.00 ± 0.15
c	0.039 ± 0.006	1.00 ± 0.15
s	0.015 ± 0.006	0.38 ± 0.15



Terminal Configuration	
No.	Function
1	ANT-OUT
2	LNA-RF-IN
9	DC-IN / RF-OUT
All Others	GND

The diagram shows the terminal configuration of the antenna. It is a rectangular shape with terminals numbered 1 through 9. Terminal 1 is at the top left, terminal 2 is at the top right, terminal 9 is at the bottom right, and terminals 3, 4, 5, 6, 7, 8 are along the bottom edge. The diagram also shows the internal layout of the antenna with a central rectangular area and a smaller rectangle inside it.

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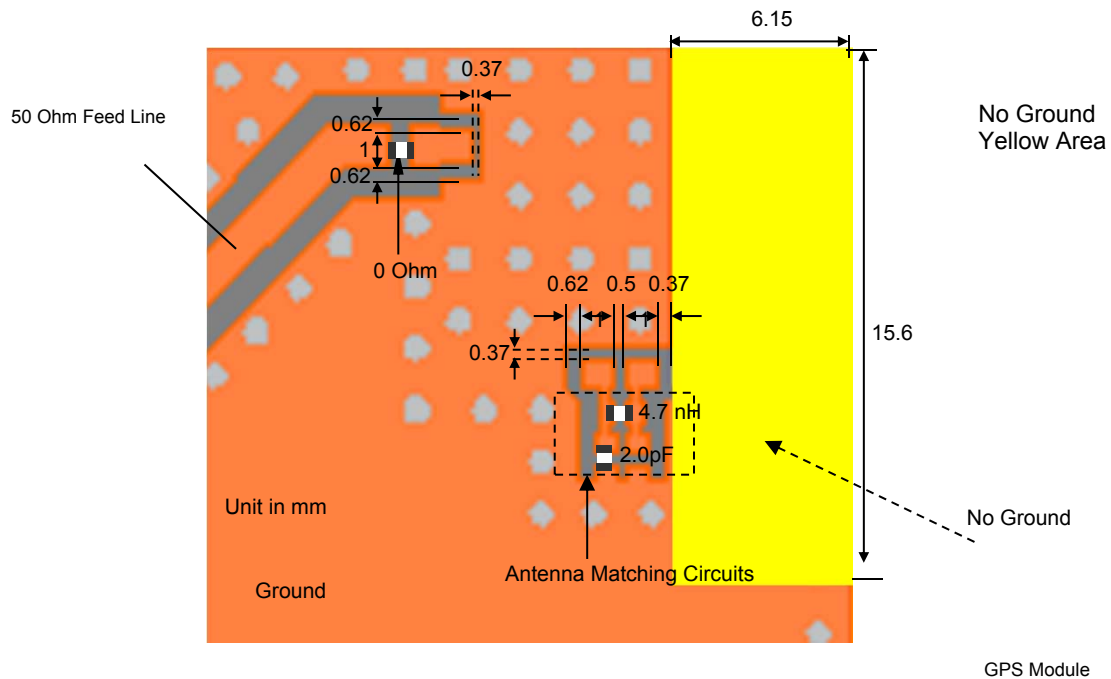
Detail Specification: 08/03/16

Page 2 of 5

Mounting Considerations

Mount these devices with brown mark facing up. Units: mm

*Line width should be designed to provide 50 Ω impedance matching characteristics.



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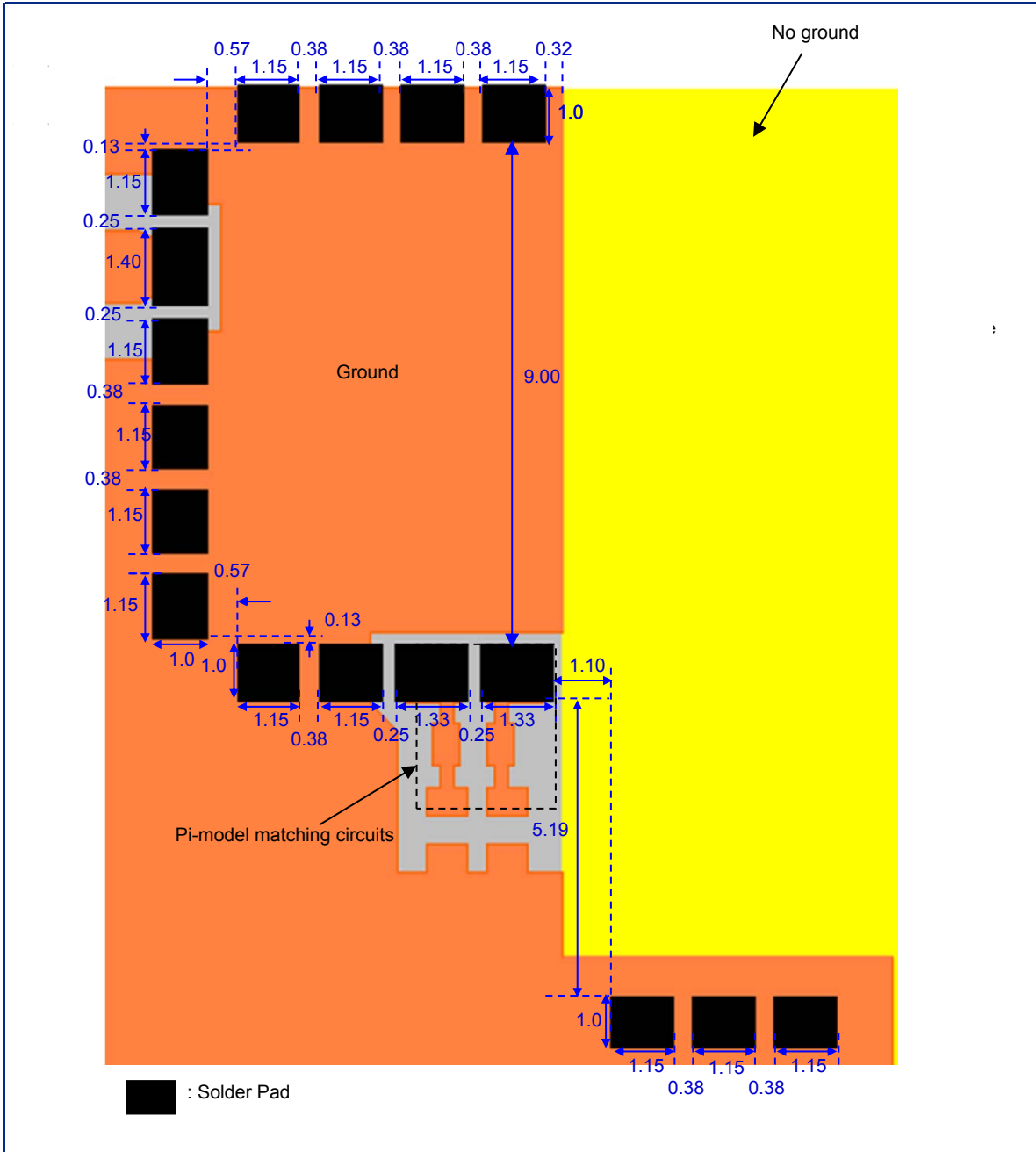
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Detail Specification: 08/03/16

Page 3 of 5

Land Pattern (units in mm)



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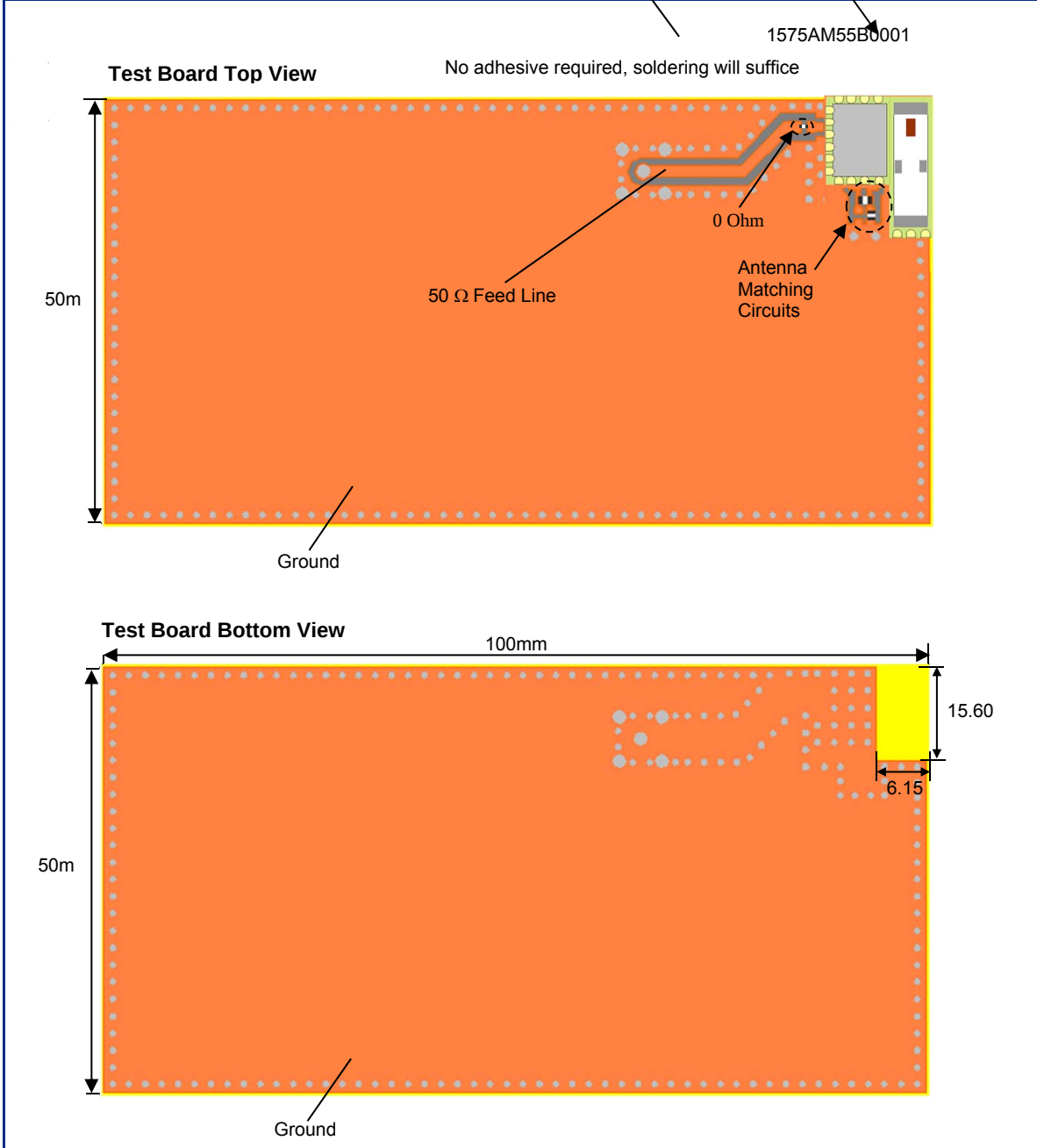
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Detail Specification: 08/03/16

P/N 1575AM55B0001

Page 4 of 5

Typical Electrical Characteristics (T=25°C)



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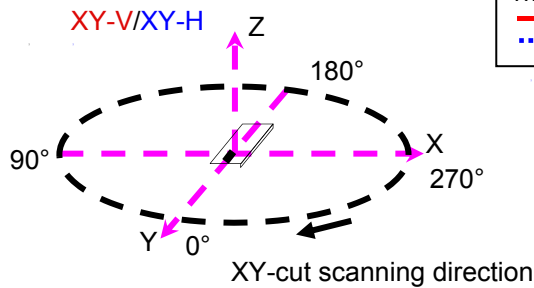
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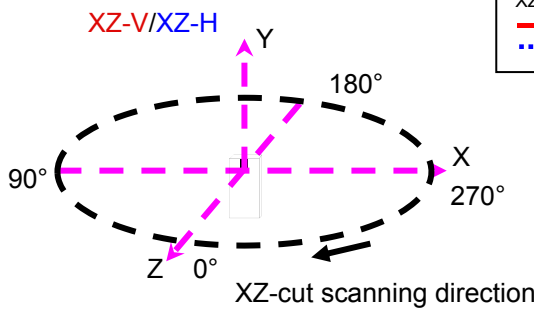
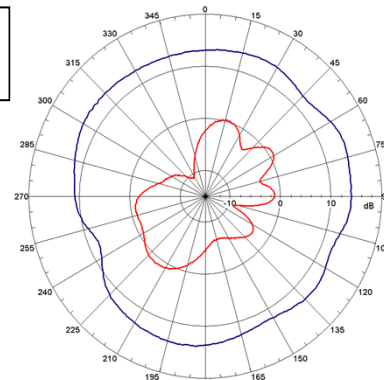
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Page 5 of 5

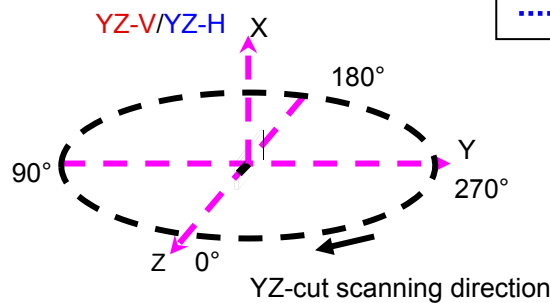
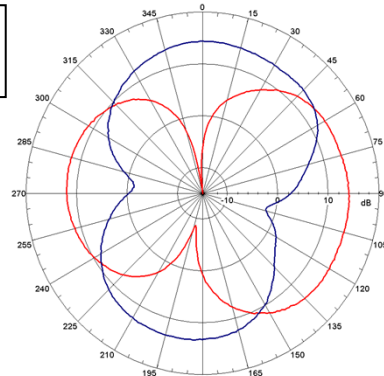
Typical Radiation Patterns



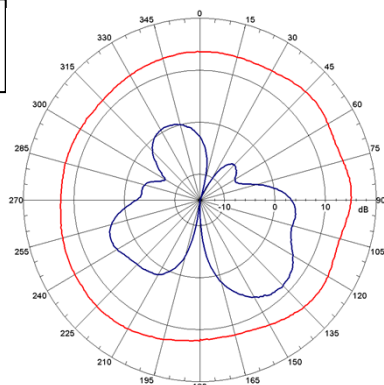
XY cut @1.575GHz
— Vertical
... Horizontal



XZ cut @1.575GHz
— Vertical
... Horizontal



YZ cut @1.575GHz
— Vertical
... Horizontal



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