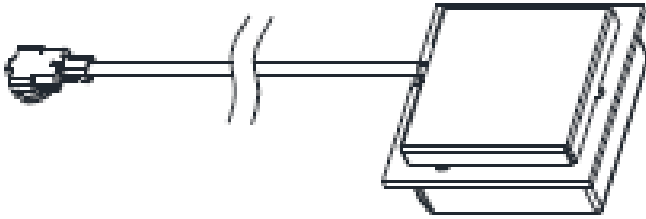


GPS Ceramic Patch Antenna

Pulse Part Number SWR0042



Applications

This application shall apply for antenna unit which shall be used with an engine for an automobile.(for impedance 50Ω)

Appearance

Antenna Unit (with radome, connector, and cable –refer to an attached drawing)

Characteristics	Specification
Dimensions	13.4*13.4*2.6mm
Radome	#N
Weight	4.2 ± 1g
Connector	HRS U.FL
Cable	RF φ 1.13 50mm
Color	Gray
PCB	Lead free

Operating Condition

Temperature(° C)	-40~+90
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Storage Condition

Temperature(° C)	-40~+90
Humidity	65 ± 20%RH

GPS Ceramic Patch Antenna

Pulse Part Number SWR0042

Electrical specifications

Note: All value are defined at $25 \pm 15^\circ \text{C}$, $65 \pm 20\% \text{RH}$, power handling $1 \mu \text{ watt}$, air pressure $960 \pm 100 \text{ HPA}$ unless otherwise noted.
Patch characteristics are measured with test ground plane in an anechoic chamber.

Patch Specification

Characteristics	Specification
Center Frequency	$1575.42 \pm 1.5 \text{ MHz}$ (when covered with a radome on LNA ground plane.)
Bandwidth (10dB return loss)	16.0MHz min
Zenith Gain	-1.5dBic typ
Polarization	RHCP
Axial Ratio	7.0dB typ

LNA Specification

Characteristics	Specification
Center Frequency	$1575.42 \pm 1.023 \text{ MHz}$
Gain	$19 \pm 3 \text{ dB}$ (at $3.0 \pm 0.1 \text{ V}$)
Noise Figure	1.5 dB typ
Output VSWR	2.0 typ
Operation Voltage	DC= $3.0 \pm 0.6 \text{ V}$
Current	DC= $4 \pm 1.5 \text{ mA}$ (at $3.0 \pm 0.1 \text{ V}$)

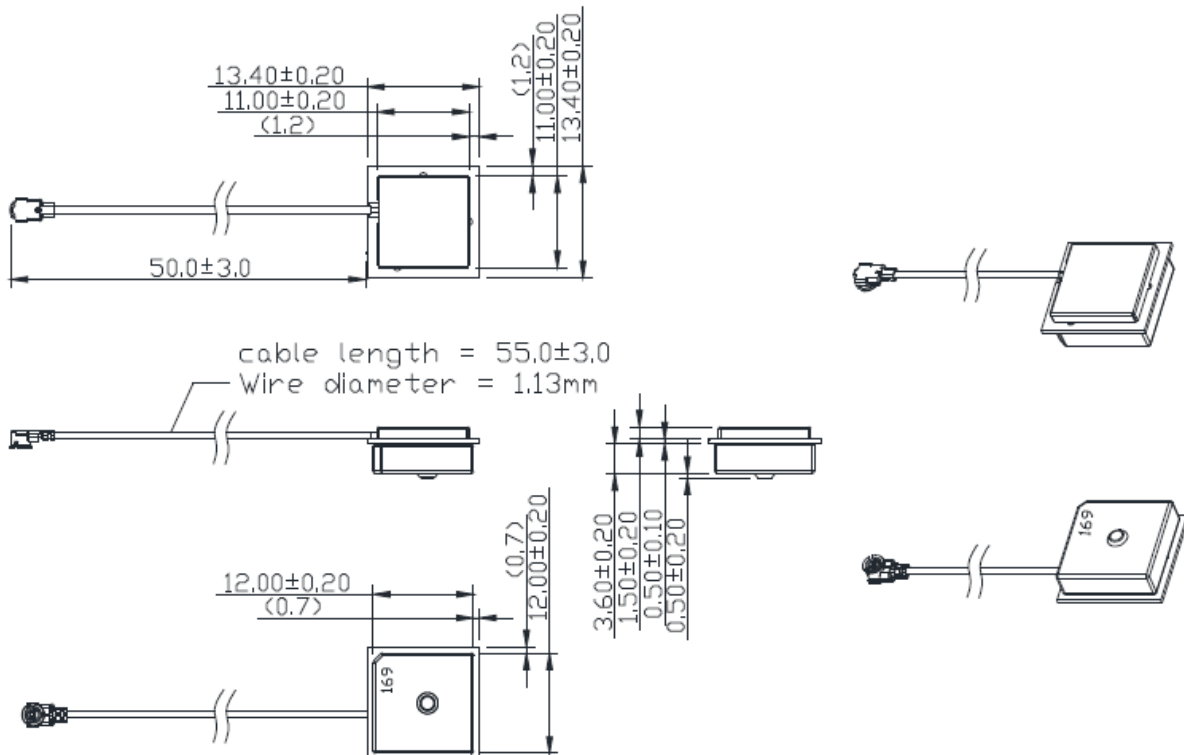
GPS Ceramic Patch Antenna

Pulse Part Number SWR0042

Overall Specification (Through Antenna, LNA, without cable loss)

Characteristics	Specification
Center Frequency	1575.42 ± 1.023MHz (when covered with a radome on LNA ground plane.)
Zenith Gain	17.5 ± 3dBic (for ground 13.4x13.4mm at 3.0 ± 0.1V)
Output Impedance	50Ω
Output VSWR	2.0 typ
Operation Voltage	DC=3.0 ± 0.6V
Current	DC=4 ± 1.5mA (at 3.0 ± 0.1V)

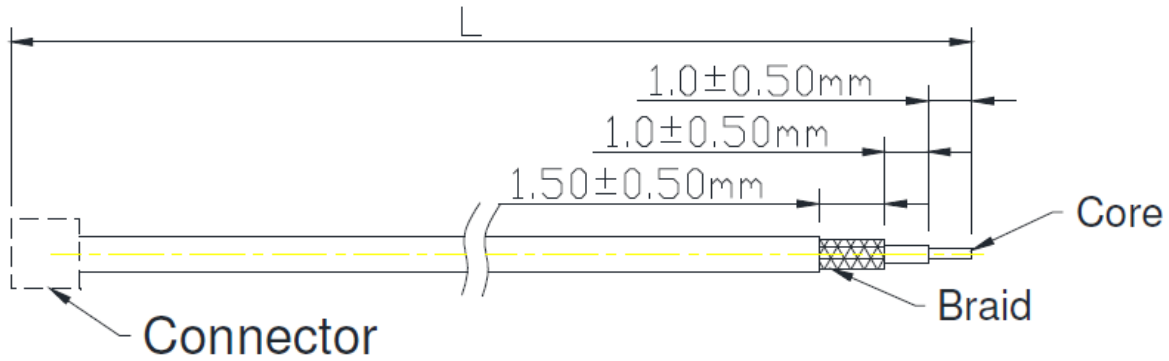
Antenna Dimensions (unit : mm)



GPS Ceramic Patch Antenna

Pulse Part Number SWR0042

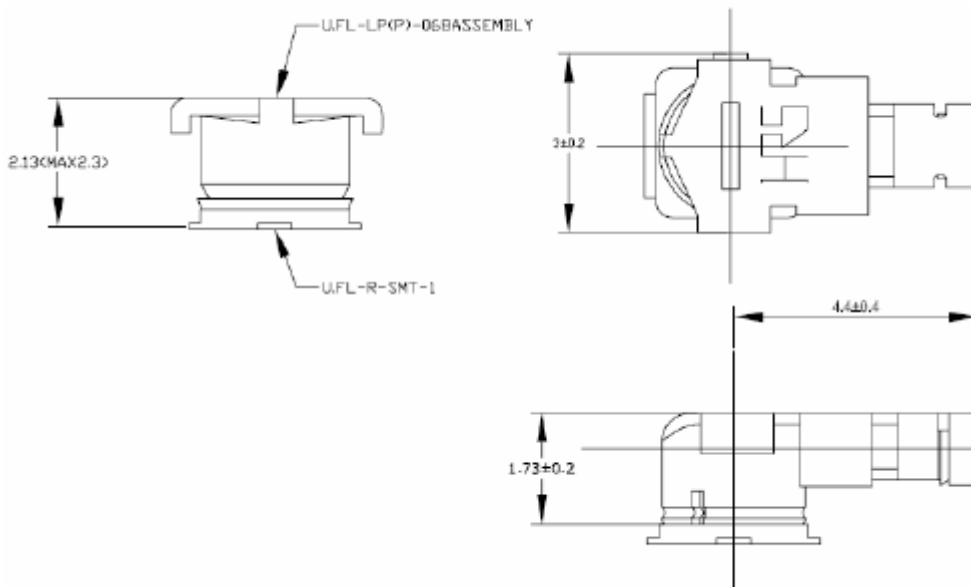
Cable Length



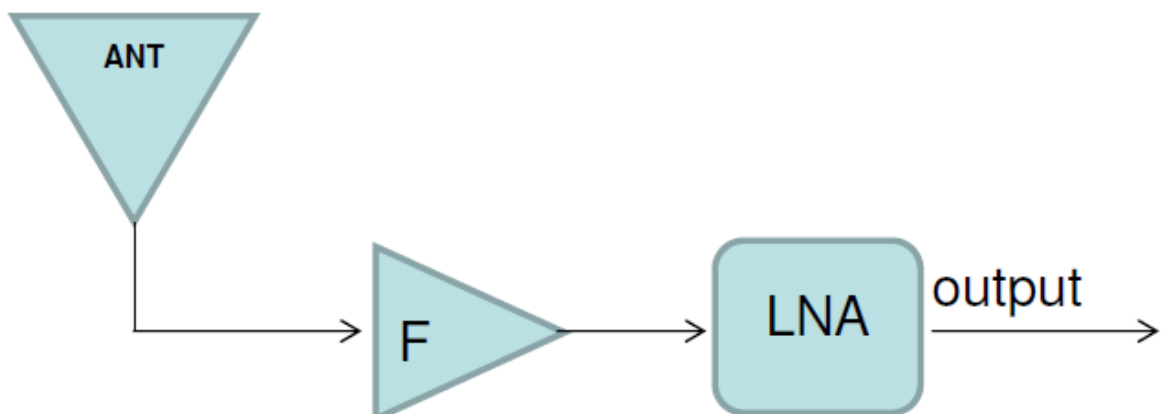
Connector: HRS U.FL-LP(P)-068

Cable : RF Cable 1.13 (Gray)

L: $55.0 \pm 3.0\text{mm}$



Design Block Diagram



Contact: mobiledeviceantenna.sales@pulseelectronics.com