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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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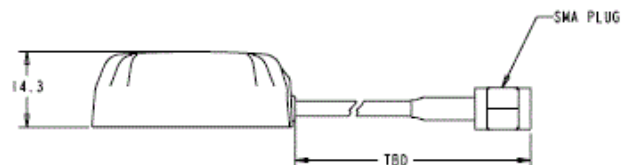
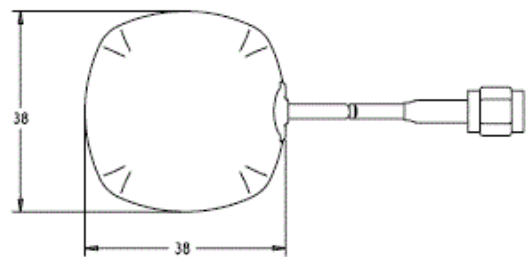
TW4027/TW4029 Low Current GPS Antenna

The TW4027/TW4029 is a very low power, compact GNSS antenna covering the GPS L1, frequency band. This antenna features an LNA with a nominal current consumption of just 2mA, with constant performance from 2.5V to 15V supply voltage, and includes protection against close proximity L-band transmitting antennas such as Iridium™ and Globalstar™

The TW4027/TW4029 has among the lowest power consumption available, yet still provides 21dB nominal gain and an excellent Noise Figure. The TW4027/TW4029 patch has 40% wider bandwidth for better axial ratio and has 15 KV ESD circuit protection. The LNA has a +/- 10MHz bandwidth that covers the full GPS L1 signal plus the SBAS (WAAS /EGNOS/MSAS) frequency band (1572.5 to 1578 MHz).

The TW4029 variant provides a “Brick-Wall” pre-filter to protect against saturation by high level sub-harmonics and L-Band signals.

It is housed in a compact IP67 magnetic mount enclosure.



Applications

- Battery operated monitoring
- Covert Surveillance
- Fleet Management & Asset Tracking
- Satcom based AVL solutions

Features

- Nominal 2mA current draw
- Invariant response, 2.5 to 16 VDC Supply
- Low Noise 1.0dB/3.5dB Typ. (TW4027/TW4029)
- Axial ratio: 4 dB max (GPS)
- TW4122 “Brick-Wall” pre-filter option
- High gain: 24dB/18dB Typ. (TW4027/TW4029)
- IP67 weather proof housing

Benefits

- Longer battery life
- Excellent signal to noise ratio
- RoHS compliant
- Ideal for harsh environments
- Excellent out of band signal rejection



TW4027/TW4029 Low Power GPS Antenna

Specifications Vcc = 3V, over full bandwidth, T=25°C

Antenna

Architecture	Wideband Single Feed Patch
1 dB Bandwidth	31 MHz
10dB Return Loss Bandwidth	45MHz
Antenna Gain (with 100mm ground plane)	4.5 dBic
Axial Ratio over Bandwidth	4dB @ Fcenter
Polarization	RHCP

Electrical

Architecture	TW4027:Patch -> LNA1->SAW -> LNA2 TW4029: Patch -> Pre-filter SAW-> LNA1> SAW -> LNA2,	
Gain @ 1575.42 MHz	24dB Typ, 21dB Min (TW4027); , 21dB Typ,18dB Min (TW4029)	
Gain flatness	+/- 2 dB	
Out-of-Band Rejection	<1500 MHz	>50dB (TW4029)
	<1550 MHz	>50dB
	>1640 MHz	>70dB
VSWR (at LNA output)	<1.5:1 typ. 1.8:1 max.	
Noise Figure	1 dB typ. (TW4027)	3.5dB typ. (TW4029)
Supply Voltage Range (over coaxial cable)	+2.5 to 16 VDC nominal (12VDC recommended maximum)	
Supply Current	1.75mA typical, 2.2mA max,	
Operating Supply Voltage	2.5V to 16V DC.	
ESD Circuit Protection	15 KV air discharge	

Mechanicals & Environmental

Mechanical Size	38mm x 38mm dia. x 14.3mm H
Cable	RG174
Operating Temp. Range	-40 to +85 °C
Enclosure	Radome and base: EXL9330
Weight	73g (enclosure 34gm, 3m cable 39gm)
Attachment Method	Magnetic
Environmental (housing)	IP67 and RoHS compliant
Shock	Vertical axis: 50 G, other axes: 30 G
Vibration	3 axis, sweep = 15 min, 10 to 200 Hz sweep: 3 G

Ordering Information

Part Numbers:

TW4027 – Wideband GPS Antenna	33-4027-xx-yyyy
TW4029 – Prefiltered Wideband GPS Antenna	33-4029-xx-yyyy

Please refer to the Ordering Guide(<http://www.tallysman.com/wp-content/uploads/Current-Ordering-Guide.pdf>) for the current and complete list of available radomes and connectors.

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