

Ceramic, Hermetic SPDT RF Switch

50Ω 500-6000 MHz

Absorptive RF Switch with internal driver.
Single Supply Voltage, +3V to +5V

Product Features

- Wide bandwidth, 500 to 6000 MHz
- High Isolation, 65 dB typ. at 1 GHz
- Low insertion loss, 1.0 dB typ.
- Internal CMOS driver
- Fast switching, Rise/fall time, 30 ns typ.
- Built rugged for tough environments
- Hermetically sealed
- Wide operating temperature, -55°C to 125°C

Typical Applications

- Automated switching networks
- Cellular
- PCN
- ISM, WCDMA, WiMAX
- Military

General Description

The CSWA2-63DR+ is a 50Ω high isolation, absorptive SPDT RF switch designed for wireless applications, covering a broad frequency range from 500 to 6000 MHz with low insertion loss. In non absorptive mode, the switch is usable down to 0.3 MHz. It may also be used in 75Ω systems over 0.3-3000 MHz. The CSWA2-63DR+ operates on a single supply voltage in the range of +3V to +5V. This unit includes an internal CMOS driver. The CSWA2-63DR+ switch comes in a low profile hermetic very small size package, 4mm x 4mm x 1.2mm. Expected MTBF is 373 years at 85°C case temperature. This switch is capable of meeting MIL requirements for gross leak, fine leak, thermal shock, vibration, acceleration, mechanical shock, and HTOL. The testing can be done if requested.



CSWA2-63DR+

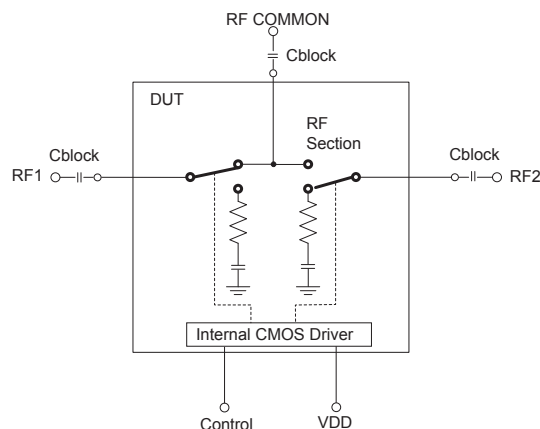
CASE STYLE: DG1293

*MIL screening available
Please consult Applications Dept.*

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Schematic and Application Circuit



Cblock should be free of resonance over frequency of operation.

| Frequency (MHz) | Cblock (Suggested value) |
|-----------------|--------------------------|
| 0.3-500 | 0.1μF |
| 500-6000 | 47pF |

Notes

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RF Electrical Specifications⁽¹⁾, 500 - 6000 MHz, T_{AMB}=25°C, V_{DD}= +3V to +5V

| Parameter | | Min. | Typ. | Max. | Units |
|---|--------------------------------------|------|------|------|-------|
| Frequency Range | | 500 | | 6000 | MHz |
| Insertion Loss | 0.3 to 500 MHz | | 1.0 | | dB |
| | 500 to 2000 MHz | | 1.0 | 1.3 | |
| | 2000 to 3000 MHz | | 1.1 | 1.4 | |
| | 3000 to 4000 MHz | | 1.2 | 1.5 | |
| | 4000 to 6000 MHz | | 1.5 | 1.8 | |
| Isolation between Common port and RF1/RF2 Ports | 0.3 to 500 MHz | — | 60 | | dB |
| | 500 to 2000 MHz | 50 | 60 | | |
| | 2000 to 3000 MHz | 47 | 52 | | |
| | 3000 to 4000 MHz | 45 | 50 | | |
| | 4000 to 6000 MHz | 40 | 44 | | |
| Isolation between RF1 and RF2 ports | 0.3 to 500 MHz | — | 70 | | dB |
| | 500 to 2000 MHz | 52 | 60 | | |
| | 2000 to 3000 MHz | 47 | 52 | | |
| | 3000 to 4000 MHz | 44 | 50 | | |
| | 4000 to 6000 MHz | 36 | 44 | | |
| Return Loss (ON STATE) | 0.3 to 500 MHz | | 20 | | dB |
| | 100 to 2000 MHz | | 20 | | |
| | 2000 to 3000 MHz | | 15 | | |
| | 3000 to 4000 MHz | | 15 | | |
| | 4000 to 6000 MHz | | 15 | | |
| Return Loss @ RF1/RF2 ports (OFF STATE) | 500 to 2000 MHz | | 13 | | dB |
| | 2000 to 3000 MHz | | 13 | | |
| | 3000 to 4000 MHz | | 14 | | |
| | 4000 to 6000 MHz | | 14 | | |
| | | | | | |
| Input IP3 | V _{DD} =3V, 500 to 2000 MHz | | 47 | | dBm |
| | 2000 to 6000 MHz | | 40 | | |
| | V _{DD} =5V, 500 to 2000 MHz | | 50 | | |
| | 2000 to 6000 MHz | | 45 | | |
| Input 1dB Compression ⁽²⁾ | V _{DD} =3V, 500 to 2000 MHz | | 24 | | dBm |
| | 2000 to 6000 MHz | | 24 | | |
| | V _{DD} =5V, 500 to 2000 MHz | | 30 | | |
| | 2000 to 6000 MHz | | 27 | | |

DC Electrical Specifications

| Parameter | Min. | Typ. | Max. | Units |
|--|--------------------|------|-----------------|-------|
| VDD, Supply Voltage | 3 | | 5 | V |
| Supply Current (V _{DD} = 5V) ⁽³⁾ | | 50 | | μA |
| Control Voltage Low | 0 | | 0.5 | V |
| Control Voltage High ⁽⁴⁾ | 2.7 ⁽⁵⁾ | | V _{DD} | V |
| Control Current | | 5 | | μA |

Notes:

- Insertion loss values are deembedded from test board loss. Tested using Agilent's N5230A network analyzer with internal DC blocks, except for IP3 and compression.
- Note absolute maximum rating for input and dissipated power. At 5V, over 2000-6000 MHz, 0.2 dB compression.
- Increases with switching repetition rate. See graph.
- CMOS interface latch-up condition may occur when logic high signal is applied prior to power supply.
- 3.5V for V_{DD}=4 to 5V

Switching Specifications at V_{DD}=5V

| Parameter | Min. | Typ. | Max. | Units |
|---|------|------|------|-------------------|
| Rise/Fall Time (10 to 90% or 90 to 10% RF) | | 23 | | nSec |
| Switching Time (50% CTRL to 90/10% RF) | | 35 | | nSec |
| Video Feedthrough (Control 0-5V, Frequency 1 MHz) | | 25 | | mV _{p-p} |

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Absolute Maximum Ratings

| Parameter | Ratings |
|----------------------------------|---|
| Operating Temperature | -55°C to 125°C |
| Storage Temperature | -65°C to 150°C |
| V _{DD} , Supply Voltage | 2.7 to 5.5V |
| Voltage Control | -0.2V Min. V _{DD} Max. |
| RF input power | 1Watt |
| Dissipated Power at 25°C | 370mW |
| ESD, HBM | Class 1A (250 to <500V) per JESD22-A114 |
| ESD, MM | Class A (passes 50V) per JESD22-A115 |
| ESD, CDM | Class III (500 to <1000V) per JESD22-C101 |

Truth Table (State of control voltage selects the desired switch state)

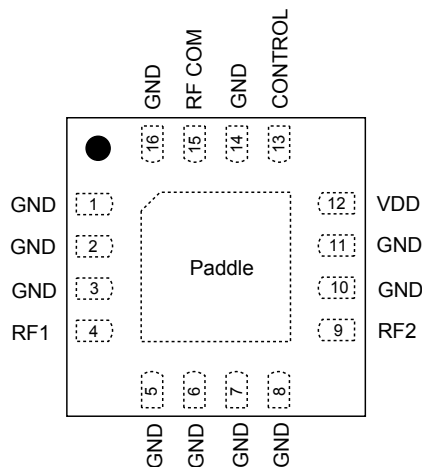
| State of Control Voltage | Switch State - RF Common to | |
|--------------------------|-----------------------------|-----|
| | RF1 | RF2 |
| Low | ON | OFF |
| High | OFF | ON |

ON- low insertion loss state
OFF- Isolation State

Pad Connections

| Function | Pad Number | Description |
|----------|-----------------------------------|----------------------|
| RF COM | 15 | RF Common/ SUM Port |
| RF1 | 4 | RF Out #1/In Port #1 |
| RF2 | 9 | RF Out #1/In Port #2 |
| Control | 13 | CMOS Control IN |
| VDD | 12 | Supply Voltage |
| GND | 1,2,3,5,6,7,8,10,11,14,16, paddle | RF Ground |

Pad Configuration (Top View)

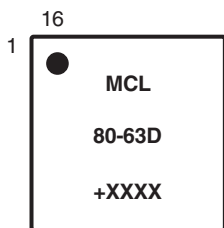


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Product Marking



Additional Detailed Technical Information

Additional information is available on our web site. To access this information enter the model number on our web site home page.

Performance data, graphs

Case Style: DG1293

Ceramic, finish: gold over nickel

Tape & Reel: F70

Standard quantities available on reel: 7" reels with 20, 50, 100, 200, 500, 1K devices.
13" reels with 2K devices.

Suggested Layout for PCB Design: PL-279

Evaluation Board: TB-461+

Environmental Ratings: ENV40

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Typical Performance Data

| RF FREQ (MHz) | INSERTION LOSS (dB) | | | | RF FREQ (MHz) | ISOLATION (dB) | | | | | | | |
|------------------|---------------------|------------|------------|------------|------------------|----------------|------------|------------|------------|-----------------------|------------------------|-----------------------|------------------------|
| | VDD=+3V | | VDD=+5V | | | VDD=+3V | | VDD=+5V | | VDD=+3V | | VDD=+5V | |
| | RF COM-RF1 | RF COM-RF2 | RF COM-RF1 | RF COM-RF2 | | RF COM-RF1 | RF COM-RF2 | RF COM-RF1 | RF COM-RF2 | RF1-RF2 State LOW* | RF1-RF2 State HIGH* | RF1-RF2 State LOW* | RF1-RF2 State HIGH* |
| 0.3 | 0.95 | 0.96 | 0.97 | 1.00 | 0.3 | 103.28 | 93.64 | 96.64 | 101.06 | 96.74 | 84.91 | 95.19 | 86.81 |
| 1 | 0.93 | 0.96 | 0.94 | 0.97 | 1 | 113.23 | 103.22 | 95.85 | 98.18 | 100.00 | 99.52 | 102.25 | 106.48 |
| 5 | 0.88 | 0.94 | 0.90 | 0.96 | 5 | 79.17 | 87.42 | 81.83 | 86.90 | 89.17 | 80.37 | 89.30 | 81.04 |
| 10 | 0.87 | 0.93 | 0.89 | 0.95 | 10 | 72.73 | 82.78 | 74.13 | 83.33 | 83.63 | 72.75 | 87.79 | 75.91 |
| 20 | 0.87 | 0.94 | 0.89 | 0.95 | 20 | 69.52 | 81.06 | 71.13 | 83.55 | 82.05 | 70.41 | 82.93 | 72.36 |
| 30 | 0.87 | 0.95 | 0.89 | 0.96 | 30 | 65.23 | 84.57 | 66.32 | 86.30 | 84.63 | 66.14 | 85.39 | 67.68 |
| 40 | 0.87 | 0.95 | 0.89 | 0.96 | 40 | 62.49 | 82.08 | 63.59 | 83.46 | 82.41 | 63.50 | 83.24 | 64.91 |
| 50 | 0.87 | 0.95 | 0.89 | 0.96 | 50 | 61.03 | 79.81 | 61.97 | 81.07 | 80.41 | 61.95 | 82.23 | 63.10 |
| 60 | 0.87 | 0.95 | 0.89 | 0.97 | 60 | 60.01 | 78.50 | 60.89 | 79.51 | 79.60 | 60.94 | 80.74 | 62.01 |
| 70 | 0.87 | 0.95 | 0.89 | 0.97 | 70 | 59.32 | 76.89 | 60.11 | 78.12 | 77.93 | 60.28 | 79.39 | 61.24 |
| 80 | 0.88 | 0.95 | 0.90 | 0.97 | 80 | 58.86 | 75.69 | 59.57 | 76.51 | 76.47 | 59.72 | 78.09 | 60.65 |
| 90 | 0.88 | 0.94 | 0.90 | 0.96 | 90 | 58.71 | 75.84 | 59.18 | 75.85 | 76.68 | 59.64 | 75.89 | 60.10 |
| 100 | 0.88 | 0.95 | 0.90 | 0.97 | 100 | 58.82 | 75.41 | 59.49 | 76.50 | 76.30 | 59.65 | 78.02 | 60.53 |
| 200 | 0.88 | 0.96 | 0.90 | 0.97 | 200 | 60.05 | 71.74 | 60.28 | 72.37 | 73.13 | 60.41 | 74.08 | 60.85 |
| 300 | 0.88 | 0.97 | 0.90 | 0.98 | 300 | 61.81 | 70.83 | 61.97 | 70.93 | 72.04 | 61.63 | 72.91 | 61.94 |
| 400 | 0.88 | 0.97 | 0.90 | 0.99 | 400 | 62.99 | 69.63 | 63.15 | 69.87 | 71.04 | 62.43 | 71.66 | 62.78 |
| 500 | 0.88 | 0.98 | 0.90 | 0.99 | 500 | 63.73 | 68.70 | 63.79 | 68.71 | 69.93 | 62.91 | 70.58 | 63.33 |
| 600 | 0.87 | 0.98 | 0.90 | 1.00 | 600 | 63.91 | 67.51 | 64.00 | 67.78 | 68.94 | 63.45 | 69.23 | 63.72 |
| 700 | 0.88 | 0.98 | 0.90 | 1.00 | 700 | 63.82 | 66.63 | 63.88 | 66.81 | 68.05 | 63.90 | 68.16 | 64.09 |
| 800 | 0.88 | 0.99 | 0.90 | 1.00 | 800 | 63.45 | 65.80 | 63.52 | 65.82 | 66.98 | 64.18 | 67.27 | 64.29 |
| 900 | 0.89 | 1.00 | 0.91 | 1.01 | 900 | 62.80 | 64.79 | 62.89 | 64.97 | 66.03 | 64.26 | 66.18 | 64.58 |
| 1000 | 0.90 | 1.00 | 0.92 | 1.02 | 1000 | 62.22 | 63.91 | 62.24 | 64.02 | 65.01 | 64.33 | 65.10 | 64.46 |
| 1100 | 0.91 | 1.01 | 0.93 | 1.03 | 1100 | 61.54 | 63.07 | 61.60 | 63.23 | 64.12 | 64.27 | 64.13 | 64.35 |
| 1200 | 0.93 | 1.02 | 0.95 | 1.03 | 1200 | 60.87 | 62.36 | 60.96 | 62.37 | 63.22 | 64.08 | 63.30 | 64.32 |
| 1300 | 0.94 | 1.03 | 0.96 | 1.04 | 1300 | 60.22 | 61.64 | 60.36 | 61.78 | 62.44 | 64.00 | 62.54 | 64.03 |
| 1400 | 0.96 | 1.03 | 0.97 | 1.05 | 1400 | 59.70 | 60.91 | 59.78 | 61.15 | 61.73 | 63.77 | 61.86 | 63.85 |
| 1500 | 0.97 | 1.04 | 0.99 | 1.06 | 1500 | 59.07 | 60.16 | 59.14 | 60.41 | 60.88 | 63.34 | 60.97 | 63.39 |
| 1600 | 0.98 | 1.05 | 1.00 | 1.06 | 1600 | 58.53 | 59.56 | 58.68 | 59.78 | 60.22 | 62.73 | 60.19 | 62.90 |
| 1700 | 0.98 | 1.05 | 1.00 | 1.07 | 1700 | 58.09 | 59.00 | 58.24 | 59.14 | 59.44 | 62.10 | 59.46 | 62.34 |
| 1800 | 0.99 | 1.06 | 1.01 | 1.07 | 1800 | 57.67 | 58.38 | 57.82 | 58.55 | 58.83 | 61.45 | 58.85 | 61.70 |
| 1900 | 0.98 | 1.06 | 1.00 | 1.08 | 1900 | 57.30 | 57.85 | 57.45 | 58.13 | 58.12 | 60.84 | 58.27 | 61.08 |
| 2000 | 0.98 | 1.07 | 1.00 | 1.09 | 2000 | 57.02 | 57.55 | 57.19 | 57.80 | 57.64 | 60.28 | 57.75 | 60.49 |
| 2100 | 0.97 | 1.07 | 0.99 | 1.09 | 2100 | 56.64 | 57.06 | 56.85 | 57.20 | 56.98 | 59.53 | 57.07 | 59.71 |
| 2200 | 0.97 | 1.08 | 0.99 | 1.10 | 2200 | 56.37 | 56.51 | 56.53 | 56.69 | 56.32 | 58.89 | 56.36 | 59.02 |
| 2300 | 0.97 | 1.09 | 0.99 | 1.10 | 2300 | 55.97 | 55.98 | 56.15 | 56.17 | 55.49 | 58.10 | 55.65 | 58.27 |
| 2400 | 0.97 | 1.09 | 0.99 | 1.11 | 2400 | 55.80 | 55.82 | 55.93 | 55.89 | 54.99 | 57.41 | 55.12 | 57.60 |
| 2500 | 0.97 | 1.10 | 1.00 | 1.12 | 2500 | 55.57 | 55.34 | 55.73 | 55.48 | 54.40 | 56.80 | 54.50 | 56.93 |
| 2600 | 0.98 | 1.10 | 1.01 | 1.13 | 2600 | 55.37 | 54.93 | 55.54 | 55.12 | 53.77 | 56.08 | 53.84 | 56.22 |
| 2700 | 0.99 | 1.11 | 1.02 | 1.13 | 2700 | 55.21 | 54.62 | 55.39 | 54.74 | 53.22 | 55.43 | 53.29 | 55.54 |
| 2800 | 1.01 | 1.12 | 1.03 | 1.14 | 2800 | 55.13 | 54.37 | 55.31 | 54.42 | 52.86 | 54.91 | 52.86 | 54.98 |
| 2900 | 1.02 | 1.12 | 1.05 | 1.14 | 2900 | 54.75 | 53.45 | 54.93 | 53.58 | 52.15 | 54.28 | 51.96 | 54.22 |
| 3000 | 1.04 | 1.13 | 1.06 | 1.15 | 3000 | 54.89 | 53.62 | 55.09 | 53.84 | 51.83 | 53.75 | 51.90 | 53.94 |
| 3250 | 1.04 | 1.13 | 1.06 | 1.16 | 3250 | 54.81 | 53.08 | 54.91 | 53.11 | 50.33 | 52.24 | 50.35 | 52.39 |
| 3500 | 1.01 | 1.13 | 1.04 | 1.16 | 3500 | 54.56 | 52.48 | 54.77 | 52.70 | 48.87 | 50.89 | 49.20 | 51.24 |
| 3750 | 1.01 | 1.14 | 1.03 | 1.16 | 3750 | 54.28 | 51.71 | 54.57 | 51.97 | 47.64 | 49.76 | 47.94 | 50.09 |
| 4000 | 1.05 | 1.17 | 1.07 | 1.18 | 4000 | 53.85 | 51.20 | 54.27 | 51.46 | 46.55 | 48.73 | 46.82 | 49.02 |
| 4250 | 1.12 | 1.21 | 1.13 | 1.22 | 4250 | 53.24 | 50.67 | 53.57 | 50.98 | 45.70 | 47.84 | 45.91 | 48.19 |
| 4500 | 1.18 | 1.27 | 1.19 | 1.28 | 4500 | 52.65 | 50.24 | 52.78 | 50.36 | 44.90 | 47.00 | 45.11 | 47.34 |
| 4750 | 1.22 | 1.33 | 1.23 | 1.34 | 4750 | 52.42 | 49.89 | 52.15 | 49.33 | 43.98 | 46.37 | 44.25 | 46.76 |
| 5000 | 1.25 | 1.37 | 1.26 | 1.38 | 5000 | 51.49 | 48.85 | 51.76 | 48.61 | 43.13 | 45.58 | 43.35 | 45.87 |
| 5250 | 1.26 | 1.37 | 1.27 | 1.39 | 5250 | 50.20 | 48.29 | 50.25 | 48.01 | 42.22 | 44.39 | 42.78 | 44.93 |
| 5500 | 1.25 | 1.36 | 1.27 | 1.37 | 5500 | 49.52 | 47.81 | 48.83 | 47.50 | 41.57 | 43.37 | 42.23 | 44.08 |
| 5750 | 1.26 | 1.34 | 1.27 | 1.34 | 5750 | 48.22 | 46.88 | 47.91 | 46.33 | 40.79 | 42.47 | 41.39 | 43.09 |
| 6000 | 1.26 | 1.33 | 1.27 | 1.33 | 6000 | 47.13 | 45.73 | 46.96 | 44.94 | 39.91 | 41.54 | 40.41 | 42.00 |

*Note:

| State of Control Voltage | RF Common to | |
|--------------------------|--------------|-----|
| | RF1 | RF2 |
| LOW | ON | OFF |
| HIGH | OFF | ON |

ON - Low insertion loss state
 OFF - Isolation state



Typical Performance Data

| RF FREQ (MHz) | VSWR (:1) | | | | | | | | RF FREQ (MHz) | VSWR (:1) | | | |
|------------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------------|-------------|------------|-------------|------------|
| | VDD=+3V | | | | VDD=+5V | | | | | VDD=+3V | | VDD=+5V | |
| | RF COM | | RF1 | RF2 | RF COM | | RF1 | RF2 | | RF1 | RF2 | RF1 | RF2 |
| | State LOW* | State HIGH* | State LOW* | State HIGH* | State LOW* | State HIGH* | State LOW* | State HIGH* | | State HIGH* | State LOW* | State HIGH* | State LOW* |
| 0.3 | 1.19 | 1.20 | 1.20 | 1.20 | 1.19 | 1.21 | 1.20 | 1.21 | 500 | 1.65 | 1.67 | 1.67 | 1.69 |
| 1 | 1.18 | 1.20 | 1.19 | 1.20 | 1.19 | 1.20 | 1.19 | 1.20 | 600 | 1.59 | 1.62 | 1.61 | 1.64 |
| 5 | 1.17 | 1.19 | 1.17 | 1.19 | 1.18 | 1.19 | 1.17 | 1.19 | 700 | 1.55 | 1.58 | 1.57 | 1.60 |
| 10 | 1.17 | 1.17 | 1.17 | 1.17 | 1.18 | 1.18 | 1.17 | 1.18 | 800 | 1.52 | 1.56 | 1.54 | 1.58 |
| 20 | 1.17 | 1.17 | 1.17 | 1.16 | 1.18 | 1.17 | 1.17 | 1.17 | 900 | 1.51 | 1.55 | 1.53 | 1.57 |
| 30 | 1.17 | 1.16 | 1.17 | 1.16 | 1.18 | 1.16 | 1.18 | 1.16 | 1000 | 1.49 | 1.54 | 1.52 | 1.57 |
| 40 | 1.17 | 1.15 | 1.17 | 1.15 | 1.18 | 1.16 | 1.18 | 1.16 | 1100 | 1.49 | 1.54 | 1.51 | 1.57 |
| 50 | 1.17 | 1.15 | 1.17 | 1.15 | 1.18 | 1.16 | 1.18 | 1.16 | 1200 | 1.48 | 1.54 | 1.51 | 1.57 |
| 60 | 1.17 | 1.15 | 1.17 | 1.15 | 1.18 | 1.16 | 1.18 | 1.16 | 1300 | 1.48 | 1.55 | 1.51 | 1.57 |
| 70 | 1.18 | 1.15 | 1.17 | 1.15 | 1.18 | 1.16 | 1.18 | 1.16 | 1400 | 1.48 | 1.55 | 1.51 | 1.58 |
| 80 | 1.18 | 1.15 | 1.17 | 1.15 | 1.18 | 1.16 | 1.18 | 1.16 | 1500 | 1.48 | 1.56 | 1.51 | 1.59 |
| 90 | 1.18 | 1.15 | 1.17 | 1.16 | 1.18 | 1.16 | 1.18 | 1.16 | 1600 | 1.48 | 1.57 | 1.51 | 1.60 |
| 100 | 1.18 | 1.15 | 1.17 | 1.15 | 1.18 | 1.16 | 1.18 | 1.16 | 1700 | 1.49 | 1.58 | 1.52 | 1.61 |
| 200 | 1.17 | 1.15 | 1.18 | 1.16 | 1.18 | 1.16 | 1.18 | 1.16 | 1800 | 1.49 | 1.59 | 1.52 | 1.62 |
| 300 | 1.17 | 1.15 | 1.18 | 1.16 | 1.17 | 1.16 | 1.18 | 1.16 | 1900 | 1.50 | 1.60 | 1.53 | 1.63 |
| 400 | 1.16 | 1.15 | 1.18 | 1.16 | 1.16 | 1.16 | 1.18 | 1.17 | 2000 | 1.50 | 1.61 | 1.53 | 1.65 |
| 500 | 1.16 | 1.15 | 1.17 | 1.16 | 1.16 | 1.16 | 1.18 | 1.17 | 2100 | 1.51 | 1.63 | 1.54 | 1.66 |
| 600 | 1.16 | 1.16 | 1.17 | 1.17 | 1.16 | 1.16 | 1.18 | 1.17 | 2200 | 1.51 | 1.64 | 1.55 | 1.67 |
| 700 | 1.16 | 1.16 | 1.17 | 1.17 | 1.16 | 1.16 | 1.18 | 1.18 | 2300 | 1.52 | 1.65 | 1.55 | 1.68 |
| 800 | 1.17 | 1.16 | 1.17 | 1.18 | 1.18 | 1.16 | 1.17 | 1.18 | 2400 | 1.52 | 1.65 | 1.56 | 1.69 |
| 900 | 1.19 | 1.16 | 1.16 | 1.18 | 1.19 | 1.16 | 1.17 | 1.18 | 2500 | 1.53 | 1.66 | 1.56 | 1.70 |
| 1000 | 1.20 | 1.16 | 1.16 | 1.18 | 1.20 | 1.17 | 1.16 | 1.19 | 2600 | 1.53 | 1.67 | 1.57 | 1.71 |
| 1100 | 1.22 | 1.17 | 1.15 | 1.18 | 1.22 | 1.17 | 1.16 | 1.19 | 2700 | 1.54 | 1.68 | 1.57 | 1.71 |
| 1200 | 1.22 | 1.17 | 1.15 | 1.18 | 1.22 | 1.17 | 1.15 | 1.19 | 2800 | 1.54 | 1.68 | 1.57 | 1.72 |
| 1300 | 1.23 | 1.18 | 1.14 | 1.18 | 1.23 | 1.17 | 1.14 | 1.18 | 2900 | 1.54 | 1.68 | 1.58 | 1.72 |
| 1400 | 1.23 | 1.18 | 1.13 | 1.18 | 1.24 | 1.18 | 1.13 | 1.18 | 3000 | 1.54 | 1.68 | 1.58 | 1.72 |
| 1500 | 1.23 | 1.18 | 1.12 | 1.17 | 1.23 | 1.18 | 1.13 | 1.18 | 3250 | 1.54 | 1.68 | 1.58 | 1.72 |
| 1600 | 1.23 | 1.17 | 1.11 | 1.17 | 1.23 | 1.17 | 1.12 | 1.18 | 3500 | 1.53 | 1.67 | 1.57 | 1.71 |
| 1700 | 1.23 | 1.17 | 1.11 | 1.17 | 1.23 | 1.17 | 1.11 | 1.18 | 3750 | 1.51 | 1.64 | 1.55 | 1.68 |
| 1800 | 1.22 | 1.17 | 1.10 | 1.17 | 1.23 | 1.17 | 1.11 | 1.17 | 4000 | 1.48 | 1.60 | 1.52 | 1.64 |
| 1900 | 1.22 | 1.16 | 1.11 | 1.17 | 1.23 | 1.16 | 1.12 | 1.18 | 4250 | 1.45 | 1.54 | 1.49 | 1.59 |
| 2000 | 1.23 | 1.16 | 1.11 | 1.18 | 1.23 | 1.16 | 1.12 | 1.19 | 4500 | 1.41 | 1.48 | 1.45 | 1.52 |
| 2100 | 1.23 | 1.15 | 1.12 | 1.19 | 1.23 | 1.16 | 1.13 | 1.20 | 4750 | 1.37 | 1.42 | 1.41 | 1.46 |
| 2200 | 1.23 | 1.14 | 1.13 | 1.20 | 1.24 | 1.15 | 1.15 | 1.22 | 5000 | 1.33 | 1.35 | 1.37 | 1.39 |
| 2300 | 1.23 | 1.14 | 1.15 | 1.22 | 1.24 | 1.15 | 1.16 | 1.24 | 5250 | 1.30 | 1.29 | 1.33 | 1.32 |
| 2400 | 1.23 | 1.14 | 1.16 | 1.24 | 1.24 | 1.16 | 1.18 | 1.26 | 5500 | 1.27 | 1.23 | 1.31 | 1.27 |
| 2500 | 1.24 | 1.15 | 1.18 | 1.27 | 1.25 | 1.16 | 1.20 | 1.28 | 5750 | 1.24 | 1.19 | 1.28 | 1.23 |
| 2600 | 1.23 | 1.15 | 1.20 | 1.29 | 1.24 | 1.17 | 1.22 | 1.31 | 6000 | 1.23 | 1.17 | 1.27 | 1.21 |
| 2700 | 1.23 | 1.16 | 1.22 | 1.31 | 1.24 | 1.17 | 1.24 | 1.33 | | | | | |
| 2800 | 1.22 | 1.16 | 1.23 | 1.33 | 1.23 | 1.18 | 1.26 | 1.35 | | | | | |
| 2900 | 1.21 | 1.17 | 1.25 | 1.34 | 1.22 | 1.19 | 1.27 | 1.37 | | | | | |
| 3000 | 1.20 | 1.17 | 1.25 | 1.36 | 1.21 | 1.19 | 1.28 | 1.38 | | | | | |
| 3250 | 1.17 | 1.17 | 1.26 | 1.36 | 1.18 | 1.19 | 1.29 | 1.39 | | | | | |
| 3500 | 1.18 | 1.17 | 1.24 | 1.34 | 1.19 | 1.19 | 1.27 | 1.37 | | | | | |
| 3750 | 1.24 | 1.21 | 1.20 | 1.29 | 1.25 | 1.23 | 1.23 | 1.33 | | | | | |
| 4000 | 1.33 | 1.30 | 1.16 | 1.26 | 1.33 | 1.30 | 1.19 | 1.30 | | | | | |
| 4250 | 1.41 | 1.42 | 1.18 | 1.28 | 1.41 | 1.42 | 1.20 | 1.30 | | | | | |
| 4500 | 1.50 | 1.55 | 1.23 | 1.33 | 1.50 | 1.55 | 1.25 | 1.34 | | | | | |
| 4750 | 1.60 | 1.65 | 1.29 | 1.38 | 1.60 | 1.66 | 1.30 | 1.39 | | | | | |
| 5000 | 1.66 | 1.71 | 1.33 | 1.41 | 1.67 | 1.71 | 1.34 | 1.42 | | | | | |
| 5250 | 1.67 | 1.70 | 1.34 | 1.40 | 1.68 | 1.71 | 1.35 | 1.40 | | | | | |
| 5500 | 1.62 | 1.64 | 1.34 | 1.35 | 1.64 | 1.66 | 1.35 | 1.36 | | | | | |
| 5750 | 1.55 | 1.56 | 1.30 | 1.29 | 1.56 | 1.58 | 1.33 | 1.31 | | | | | |
| 6000 | 1.49 | 1.49 | 1.28 | 1.23 | 1.50 | 1.49 | 1.30 | 1.25 | | | | | |

*Note:

| State of Control Voltage | RF Common to | |
|-------------------------------|--------------|-----|
| | RF1 | RF2 |
| LOW | ON | OFF |
| HIGH | OFF | ON |
| ON - Low insertion loss state | | |
| OFF - Isolation state | | |

Typical Performance Data

| RF FREQ (MHz) | INPUT IP3 (dBm) | | | | RF FREQ (MHz) | INPUT 1dB COMPRESSION (dBm) | | RF FREQ (MHz) | COMPRESSION (dB) @ FIXED POWER FOR PIN=27dBm | |
|------------------|--------------------|------------|------------|------------|------------------|--------------------------------|----------|------------------|--|------------|
| | VDD=+3V | | VDD =+5V | | | VDD=+3V | VDD =+5V | | VDD=+5V | |
| | RF COM-RF1 | RF COM-RF2 | RF COM-RF1 | RF COM-RF2 | | | | | RF COM-RF1 | RF COM-RF2 |
| 500 | 48.31 | 48.44 | 51.09 | 52.07 | 500 | 23.96 | 30.61 | 2000 | 0.11 | 0.08 |
| 550 | 47.68 | 47.89 | 50.11 | 51.10 | 600 | 23.87 | 30.60 | 2200 | 0.06 | 0.03 |
| 600 | 47.90 | 48.19 | 50.34 | 51.35 | 700 | 23.73 | 30.52 | 2400 | 0.03 | 0.03 |
| 650 | 48.50 | 48.80 | 51.18 | 52.39 | 800 | 23.78 | 30.45 | 2600 | 0.04 | 0.02 |
| 700 | 49.00 | 49.44 | 51.06 | 52.09 | 900 | 23.57 | 30.34 | 2800 | 0.05 | 0.03 |
| 750 | 48.30 | 48.59 | 50.48 | 51.59 | 1000 | 23.41 | 30.20 | 3000 | 0.04 | 0.03 |
| 800 | 46.96 | 47.26 | 49.21 | 50.01 | 1100 | 23.81 | 30.31 | 3100 | 0.04 | 0.02 |
| 850 | 46.26 | 46.60 | 48.80 | 49.28 | 1200 | 23.76 | 30.33 | 3200 | 0.04 | 0.03 |
| 900 | 46.38 | 46.65 | 49.09 | 49.57 | 1300 | 23.88 | 30.43 | 3300 | 0.05 | 0.03 |
| 950 | 46.22 | 46.57 | 49.39 | 50.23 | 1400 | 24.03 | 30.43 | 3400 | 0.07 | 0.04 |
| 1000 | 47.01 | 47.71 | 50.54 | 51.48 | 1500 | 24.24 | 30.64 | 3500 | 0.07 | 0.04 |
| 1250 | 45.16 | 45.75 | 48.62 | 49.35 | 1600 | 24.23 | 30.67 | 3600 | 0.06 | -0.04 |
| 1500 | 46.04 | 46.37 | 49.04 | 49.61 | 1700 | 24.46 | 30.79 | 3625 | 0.04 | 0.03 |
| 1750 | 45.22 | 45.78 | 48.69 | 49.15 | 1800 | 24.35 | 30.60 | 3650 | 0.06 | 0.03 |
| 2000 | 43.41 | 44.05 | 46.53 | 47.23 | 1900 | 24.30 | 30.48 | 3675 | 0.06 | 0.03 |
| 2250 | 43.00 | 43.88 | 46.43 | 47.21 | 2000 | 24.29 | 30.62 | 3700 | 0.04 | 0.03 |
| 2500 | 41.60 | 42.73 | 45.28 | 46.29 | | | | 3725 | 0.05 | 0.03 |
| 2750 | 42.22 | 42.86 | 45.72 | 46.54 | | | | 3750 | 0.07 | 0.03 |
| 3000 | 42.10 | 42.79 | 45.65 | 46.61 | | | | 3775 | 0.05 | 0.03 |
| 3250 | 40.72 | 41.34 | 44.19 | 45.24 | | | | 3800 | 0.04 | -0.03 |
| 3500 | 40.91 | 41.27 | 44.62 | 45.61 | | | | 3900 | 0.07 | 0.04 |
| 3750 | 41.21 | 40.94 | 45.35 | 45.62 | | | | 4000 | 0.09 | 0.06 |
| 4000 | 40.58 | 39.35 | 44.60 | 43.72 | | | | 4100 | 0.14 | 0.06 |
| 4250 | 40.61 | 40.00 | 44.58 | 44.15 | | | | 4200 | 0.09 | 0.05 |
| 4500 | 39.55 | 38.99 | 43.36 | 43.13 | | | | 4300 | 0.04 | 0.03 |
| 4750 | 38.62 | 38.58 | 42.49 | 42.76 | | | | 4400 | 0.04 | 0.04 |
| 5000 | 39.17 | 39.38 | 43.01 | 43.36 | | | | 4500 | 0.04 | 0.04 |
| 5250 | 38.69 | 38.86 | 43.10 | 43.11 | | | | 4600 | 0.09 | 0.06 |
| 5500 | 37.95 | 37.69 | 42.12 | 41.84 | | | | 4700 | 0.10 | 0.06 |
| 5750 | 37.84 | 37.60 | 41.68 | 41.62 | | | | 4800 | 0.06 | 0.04 |
| 6000 | 36.56 | 36.50 | 41.02 | 41.21 | | | | 4900 | 0.05 | 0.04 |
| | | | | | | | | 5000 | 0.14 | 0.10 |
| | | | | | | | | 5200 | 0.13 | 0.10 |
| | | | | | | | | 5400 | 0.11 | 0.08 |
| | | | | | | | | 5600 | 0.19 | 0.17 |
| | | | | | | | | 5800 | 0.24 | 0.24 |
| | | | | | | | | 6000 | 0.36 | 0.41 |

| DC Current vs Repetition Rate | | |
|-------------------------------|---------|---------|
| IDD (micro A) | | |
| Typ. | | |
| Rep Rate (MHz) | VDD=+3V | VDD=+5V |
| 0.0005 | 0.75 | 6.38 |
| 1 | 62.50 | 93.75 |
| 2 | 121.25 | 176.00 |
| 3 | 175.25 | 252.50 |
| 4 | 233.50 | 334.00 |
| 5 | 282.50 | 409.25 |
| 6 | 319.00 | 462.00 |
| 7 | 386.50 | 559.50 |
| 8 | 432.75 | 614.75 |
| 9 | 491.00 | 729.50 |
| 10 | 540.50 | 776.75 |

Typical Performance Data

| RF FREQ (MHz) | INSERTION LOSS (dB) @ VDD=+5V OVER TEMPERATURE | | | | | | RF FREQ (MHz) | ISOLATION (dB) @ VDD=+5V OVER TEMPERATURE | | | | | | | | | | | |
|---------------|--|-------|--------|------------|-------|--------|---------------|---|--------|--------|------------|-------|--------|--------------------|-------|--------|---------------------|--------|--------|
| | RF COM-RF1 | | | RF COM-RF2 | | | | RF COM-RF1 | | | RF COM-RF2 | | | RF1-RF2 State LOW* | | | RF1-RF2 State HIGH* | | |
| | -55°C | +25°C | +125°C | -55°C | +25°C | +125°C | | -55°C | +25°C | +125°C | -55°C | +25°C | +125°C | -55°C | +25°C | +125°C | -55°C | +25°C | +125°C |
| 0.3 | 0.89 | 0.99 | 1.12 | 0.90 | 1.06 | 1.28 | 0.3 | 114.58 | 103.24 | 109.08 | 91.98 | 94.71 | 96.46 | 92.44 | 85.71 | 92.70 | 88.38 | 82.51 | 84.99 |
| 1 | 0.82 | 0.94 | 1.07 | 0.84 | 1.01 | 1.20 | 1 | 112.53 | 99.44 | 92.55 | 97.40 | 99.53 | 94.85 | 101.27 | 97.14 | 98.18 | 99.06 | 104.32 | 91.86 |
| 5 | 0.77 | 0.89 | 1.05 | 0.83 | 0.98 | 1.17 | 5 | 80.75 | 80.86 | 81.87 | 86.35 | 87.84 | 87.65 | 80.66 | 80.99 | 83.16 | 86.43 | 87.41 | 88.37 |
| 10 | 0.75 | 0.88 | 1.04 | 0.83 | 0.97 | 1.14 | 10 | 76.31 | 75.90 | 75.89 | 85.30 | 84.87 | 90.57 | 76.57 | 76.84 | 76.96 | 85.61 | 90.90 | 85.91 |
| 20 | 0.75 | 0.88 | 1.04 | 0.85 | 0.97 | 1.12 | 20 | 66.49 | 67.28 | 67.74 | 73.27 | 76.05 | 78.36 | 67.09 | 68.04 | 68.99 | 73.24 | 76.27 | 78.92 |
| 30 | 0.75 | 0.88 | 1.04 | 0.84 | 0.96 | 1.12 | 30 | 67.50 | 66.64 | 66.26 | 74.99 | 79.13 | 83.09 | 68.67 | 68.14 | 68.17 | 74.96 | 78.59 | 81.17 |
| 40 | 0.75 | 0.88 | 1.04 | 0.85 | 0.97 | 1.12 | 40 | 66.54 | 64.89 | 64.28 | 79.18 | 86.24 | 86.24 | 67.97 | 66.57 | 66.29 | 78.27 | 81.96 | 84.90 |
| 50 | 0.75 | 0.88 | 1.04 | 0.86 | 0.98 | 1.13 | 50 | 63.94 | 62.72 | 62.69 | 85.33 | 85.77 | 82.63 | 65.34 | 64.39 | 64.50 | 81.44 | 84.63 | 83.64 |
| 60 | 0.75 | 0.88 | 1.04 | 0.87 | 0.98 | 1.13 | 60 | 62.25 | 61.47 | 61.69 | 86.80 | 82.89 | 80.30 | 63.58 | 63.12 | 63.47 | 83.09 | 83.61 | 81.89 |
| 70 | 0.75 | 0.88 | 1.04 | 0.87 | 0.98 | 1.14 | 70 | 61.04 | 60.57 | 61.02 | 84.02 | 80.55 | 78.46 | 62.42 | 62.08 | 62.75 | 82.63 | 81.07 | 80.59 |
| 80 | 0.74 | 0.88 | 1.04 | 0.87 | 0.98 | 1.14 | 80 | 60.20 | 59.95 | 60.63 | 80.80 | 78.70 | 77.11 | 61.56 | 61.49 | 62.34 | 81.68 | 80.87 | 79.40 |
| 90 | 0.74 | 0.88 | 1.04 | 0.87 | 0.99 | 1.14 | 90 | 59.77 | 59.72 | 60.41 | 79.07 | 77.29 | 76.51 | 60.99 | 61.11 | 62.18 | 79.78 | 79.02 | 78.36 |
| 100 | 0.74 | 0.88 | 1.04 | 0.87 | 0.99 | 1.14 | 100 | 59.31 | 59.42 | 60.36 | 77.82 | 75.92 | 75.62 | 60.44 | 60.71 | 61.92 | 78.70 | 78.07 | 77.66 |
| 200 | 0.74 | 0.88 | 1.05 | 0.86 | 0.99 | 1.14 | 200 | 59.56 | 60.44 | 61.92 | 72.92 | 72.70 | 72.81 | 60.25 | 61.24 | 62.90 | 74.49 | 74.71 | 75.13 |
| 300 | 0.72 | 0.88 | 1.06 | 0.85 | 0.98 | 1.15 | 300 | 60.94 | 61.95 | 63.62 | 71.03 | 71.19 | 71.68 | 61.05 | 62.22 | 64.00 | 73.06 | 73.07 | 73.88 |
| 400 | 0.71 | 0.88 | 1.07 | 0.83 | 0.98 | 1.16 | 400 | 62.11 | 63.27 | 64.53 | 69.65 | 69.79 | 70.66 | 61.64 | 62.88 | 64.81 | 71.41 | 72.04 | 72.77 |
| 500 | 0.71 | 0.88 | 1.07 | 0.82 | 0.98 | 1.16 | 500 | 62.94 | 63.88 | 64.85 | 68.68 | 68.95 | 69.73 | 62.21 | 63.51 | 65.21 | 70.24 | 70.77 | 71.92 |
| 600 | 0.70 | 0.88 | 1.07 | 0.82 | 0.98 | 1.17 | 600 | 63.27 | 64.01 | 64.80 | 67.49 | 67.75 | 68.67 | 62.55 | 63.76 | 65.53 | 69.07 | 69.64 | 70.75 |
| 700 | 0.69 | 0.88 | 1.08 | 0.80 | 0.97 | 1.17 | 700 | 63.41 | 63.90 | 64.54 | 66.44 | 66.87 | 67.46 | 62.80 | 63.91 | 65.67 | 67.92 | 68.53 | 69.59 |
| 800 | 0.69 | 0.88 | 1.09 | 0.80 | 0.98 | 1.18 | 800 | 63.03 | 63.51 | 63.91 | 65.42 | 65.91 | 66.56 | 62.85 | 64.04 | 65.75 | 66.72 | 67.52 | 68.46 |
| 900 | 0.69 | 0.89 | 1.10 | 0.80 | 0.99 | 1.19 | 900 | 62.71 | 63.04 | 63.29 | 64.53 | 64.86 | 65.64 | 63.01 | 64.43 | 65.85 | 65.54 | 66.38 | 67.37 |
| 1000 | 0.69 | 0.89 | 1.11 | 0.80 | 0.99 | 1.20 | 1000 | 62.10 | 62.32 | 62.55 | 63.58 | 63.95 | 64.73 | 62.87 | 64.11 | 65.81 | 64.73 | 65.38 | 66.55 |
| 1100 | 0.70 | 0.91 | 1.13 | 0.81 | 1.00 | 1.22 | 1100 | 61.35 | 61.50 | 61.90 | 62.77 | 63.11 | 63.81 | 62.91 | 63.94 | 65.67 | 63.95 | 64.50 | 65.49 |
| 1200 | 0.71 | 0.92 | 1.14 | 0.81 | 1.01 | 1.24 | 1200 | 60.71 | 61.00 | 61.30 | 61.80 | 62.40 | 63.01 | 62.62 | 63.71 | 65.17 | 62.90 | 63.58 | 64.69 |
| 1300 | 0.71 | 0.93 | 1.16 | 0.82 | 1.02 | 1.25 | 1300 | 60.09 | 60.31 | 60.66 | 60.85 | 61.51 | 62.35 | 62.33 | 63.42 | 65.08 | 62.09 | 62.72 | 64.07 |
| 1400 | 0.72 | 0.94 | 1.17 | 0.82 | 1.03 | 1.26 | 1400 | 59.42 | 59.70 | 60.20 | 60.31 | 60.78 | 61.59 | 62.13 | 63.09 | 64.67 | 61.38 | 61.95 | 63.19 |
| 1500 | 0.71 | 0.95 | 1.18 | 0.82 | 1.04 | 1.27 | 1500 | 58.79 | 59.06 | 59.56 | 59.38 | 59.96 | 60.76 | 61.60 | 62.54 | 63.97 | 60.18 | 61.03 | 62.07 |
| 1600 | 0.71 | 0.95 | 1.18 | 0.82 | 1.05 | 1.29 | 1600 | 58.07 | 58.43 | 58.96 | 58.63 | 59.29 | 60.35 | 60.94 | 61.99 | 63.33 | 58.77 | 59.99 | 60.82 |
| 1700 | 0.71 | 0.96 | 1.19 | 0.82 | 1.06 | 1.30 | 1700 | 57.63 | 58.13 | 58.61 | 57.85 | 58.65 | 59.56 | 60.86 | 61.78 | 63.05 | 58.30 | 59.18 | 60.50 |
| 1800 | 0.72 | 0.96 | 1.20 | 0.83 | 1.06 | 1.31 | 1800 | 57.02 | 57.70 | 58.09 | 57.95 | 58.60 | 59.74 | 59.98 | 61.19 | 61.84 | 58.19 | 58.92 | 60.22 |
| 1900 | 0.71 | 0.96 | 1.21 | 0.82 | 1.06 | 1.32 | 1900 | 57.05 | 57.56 | 58.13 | 58.35 | 58.73 | 59.11 | 59.71 | 60.49 | 61.64 | 58.33 | 58.71 | 59.73 |
| 2000 | 0.71 | 0.96 | 1.21 | 0.81 | 1.06 | 1.32 | 2000 | 56.35 | 57.07 | 57.39 | 57.10 | 58.12 | 58.46 | 58.69 | 59.70 | 60.48 | 57.79 | 58.53 | 59.59 |
| 2100 | 0.70 | 0.96 | 1.21 | 0.81 | 1.06 | 1.32 | 2100 | 56.25 | 56.82 | 57.46 | 56.35 | 57.43 | 57.65 | 58.78 | 59.11 | 60.43 | 56.37 | 57.43 | 58.41 |
| 2200 | 0.70 | 0.96 | 1.21 | 0.80 | 1.06 | 1.32 | 2200 | 56.07 | 56.61 | 57.23 | 57.37 | 57.86 | 58.63 | 57.72 | 58.20 | 59.14 | 55.85 | 56.51 | 57.32 |
| 2300 | 0.69 | 0.96 | 1.22 | 0.80 | 1.06 | 1.32 | 2300 | 55.68 | 56.31 | 57.01 | 56.48 | 57.02 | 58.05 | 56.96 | 57.70 | 58.40 | 55.46 | 55.90 | 56.89 |
| 2400 | 0.69 | 0.96 | 1.22 | 0.80 | 1.06 | 1.33 | 2400 | 55.32 | 55.92 | 56.63 | 55.90 | 56.51 | 57.61 | 56.44 | 57.03 | 57.85 | 54.91 | 55.53 | 56.47 |
| 2500 | 0.69 | 0.96 | 1.22 | 0.80 | 1.06 | 1.34 | 2500 | 55.24 | 55.69 | 56.97 | 55.05 | 56.10 | 56.59 | 55.98 | 56.46 | 57.15 | 54.05 | 54.88 | 54.88 |
| 2600 | 0.69 | 0.97 | 1.24 | 0.81 | 1.08 | 1.35 | 2600 | 54.85 | 55.74 | 56.46 | 54.67 | 55.44 | 56.20 | 55.29 | 55.90 | 56.53 | 53.89 | 54.04 | 54.97 |
| 2700 | 0.70 | 0.98 | 1.25 | 0.82 | 1.10 | 1.37 | 2700 | 54.90 | 55.55 | 56.53 | 54.17 | 55.02 | 55.75 | 55.11 | 55.55 | 56.24 | 52.87 | 53.61 | 54.34 |
| 2800 | 0.70 | 0.98 | 1.26 | 0.83 | 1.11 | 1.39 | 2800 | 54.84 | 55.47 | 56.76 | 54.29 | 54.79 | 55.14 | 54.44 | 54.97 | 56.01 | 52.01 | 53.08 | 53.47 |
| 2900 | 0.71 | 1.00 | 1.28 | 0.84 | 1.12 | 1.40 | 2900 | 54.49 | 55.55 | 56.13 | 54.03 | 55.34 | 55.07 | 53.84 | 54.25 | 54.81 | 52.53 | 52.28 | 53.45 |
| 3000 | 0.72 | 1.01 | 1.29 | 0.85 | 1.13 | 1.42 | 3000 | 54.03 | 55.30 | 55.79 | 53.30 | 54.68 | 54.83 | 53.25 | 53.71 | 54.26 | 51.72 | 51.75 | 52.87 |
| 3250 | 0.71 | 1.01 | 1.31 | 0.84 | 1.13 | 1.43 | 3250 | 53.49 | 55.06 | 55.35 | 52.70 | 54.01 | 55.22 | 51.74 | 52.22 | 52.17 | 50.17 | 50.34 | 50.74 |
| 3500 | 0.68 | 0.99 | 1.30 | 0.81 | 1.11 | 1.42 | 3500 | 53.25 | 54.53 | 56.00 | 51.60 | 53.05 | 53.54 | 50.57 | 51.13 | 51.65 | 48.45 | 49.25 | 49.02 |
| 3750 | 0.67 | 0.99 | 1.31 | 0.80 | 1.10 | 1.42 | 3750 | 52.79 | 53.70 | 54.41 | 50.92 | 52.40 | 53.34 | 49.53 | 50.06 | 50.28 | 46.60 | 48.20 | 48.13 |
| 4000 | 0.68 | 1.02 | 1.34 | 0.82 | 1.14 | 1.46 | 4000 | 52.41 | 53.89 | 54.69 | 51.69 | 51.39 | 51.66 | 48.98 | 49.60 | 49.90 | 46.94 | 47.61 | 48.02 |
| 4250 | 0.74 | 1.08 | 1.40 | 0.88 | 1.20 | 1.52 | 4250 | 52.42 | 54.19 | 53.50 | 50.41 | 51.64 | 50.87 | 48.84 | 49.51 | 49.11 | 47.41 | 47.48 | 47.13 |
| 4500 | 0.80 | 1.14 | 1.47 | 0.95 | 1.27 | 1.60 | 4500 | 54.19 | 53.65 | 56.77 | 51.93 | 51.28 | 52.12 | 49.12 | 48.67 | 50.16 | 46.30 | 46.20 | 46.77 |
| 4750 | 0.83 | 1.19 | 1.53 | 0.99 | 1.32 | 1.65 | 4750 | 50.93 | 51.46 | 51.05 | 51.01 | 50.15 | 50.11 | 47.26 | 46.91 | 46.85 | 45.22 | 44.92 | 45.00 |
| 5000 | 0.83 | 1.21 | 1.57 | 0.99 | 1.33 | 1.69 | 5000 | 49.30 | 50.55 | 51.03 | 48.47 | 48.48 | 48.25 | 45.86 | 45.97 | 46.32 | 43.43 | 43.78 | 44.06 |
| 5250 | 0.82 | 1.21 | 1.60 | 0.98 | 1.34 | 1.72 | 5250 | 49.53 | 49.47 | 49.40 | 46.56 | 47.42 | 46.86 | 45.84 | 45.17 | 45.33 | 42.93 | 42.98 | 42.83 |
| 5500 | 0.81 | 1.21 | 1.63 | 0.95 | 1.33 | 1.74 | 5500 | 47.21 | 47.87 | 48.06 | 45.55 | 46.65 | 46.78 | 43.67 | 43.87 | 43.32 | 41.21 | 41.85 | 41.85 |
| 5750 | 0.83 | 1.23 | 1.65 | 0.96 | 1.33 | 1.76 | 5750 | 46.11 | 46.79 | 46.34 | 45.57 | 45.46 | 45.85 | 43.52 | 42.87 | 42.25 | 41.49 | 41.17 | 40.82 |
| 6000 | 0.81 | 1.24 | 1.67 | 0.91 | 1.33 | 1.76 | 6000 | 44.91 | 45.51 | 47.31 | 44.45 | 44.92 | 44.64 | 41.93 | 41.64 | 42.35 | 40.40 | 40.13 | 40.59 |

*Note:

| State of Control Voltage | RF Common to | |
|--------------------------|--------------|-----|
| | RF1 | RF2 |
| LOW | ON | OFF |
| HIGH | OFF | ON |

ON - Low insertion loss state
OFF - Isolation state



Typical Performance Data

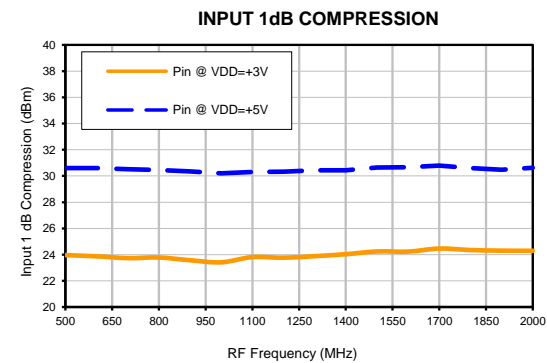
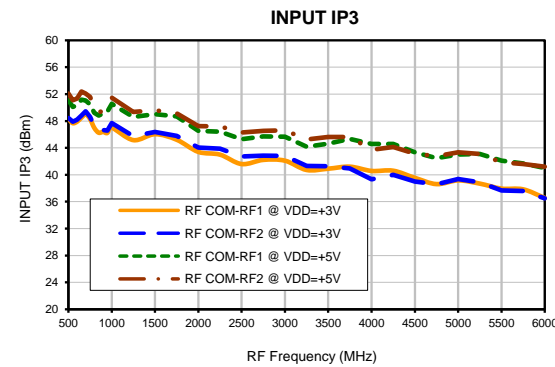
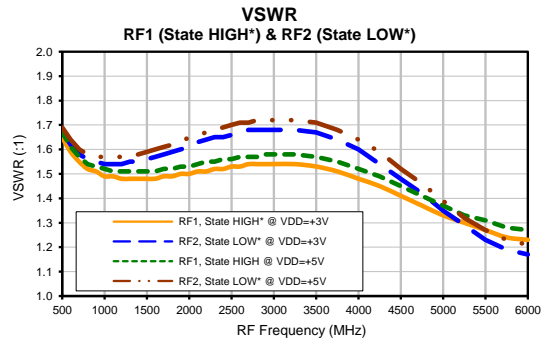
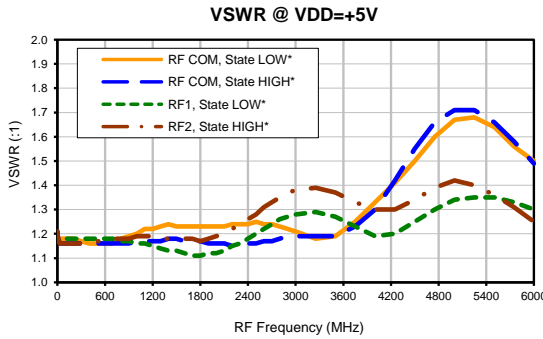
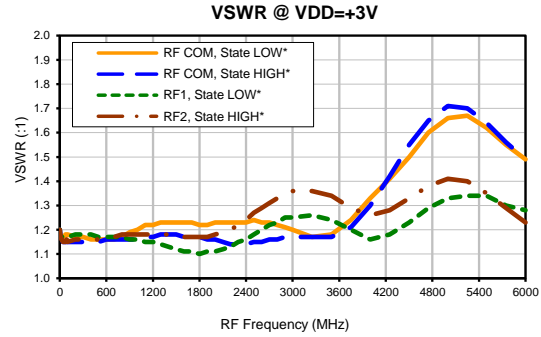
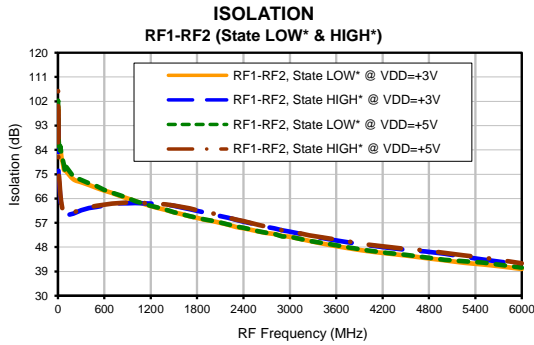
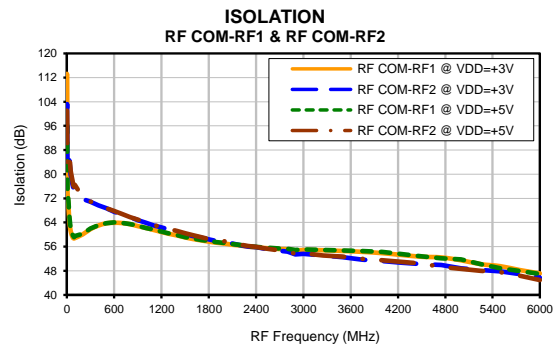
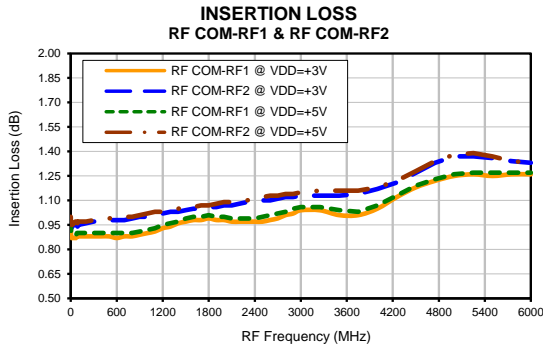
| RF FREQ (MHz) | VSWR (:1) @ VDD=+5V OVER TEMPERATURE | | | | | | | | | | | | RF FREQ (MHz) | VSWR (:1) @ VDD=+5V OVER TEMPERATURE | | | | | |
|---------------|--------------------------------------|-------|--------|-------------|-------|--------|------------|-------|--------|-------------|-------|--------|---------------|--------------------------------------|-------|--------|------------|-------|--------|
| | RF COM | | | | | | RF1 | | | RF2 | | | | RF1 | | | RF2 | | |
| | State LOW* | | | State HIGH* | | | State LOW* | | | State HIGH* | | | | State HIGH* | | | State LOW* | | |
| | -55°C | +25°C | +125°C | -55°C | +25°C | +125°C | -55°C | +25°C | +125°C | -55°C | +25°C | +125°C | | -55°C | +25°C | +125°C | -55°C | +25°C | +125°C |
| 0.3 | 1.16 | 1.19 | 1.22 | 1.16 | 1.20 | 1.25 | 1.17 | 1.20 | 1.22 | 1.17 | 1.21 | 1.26 | 500 | 1.59 | 1.67 | 1.86 | 1.62 | 1.70 | 1.89 |
| 1 | 1.16 | 1.19 | 1.22 | 1.16 | 1.20 | 1.25 | 1.16 | 1.18 | 1.22 | 1.16 | 1.20 | 1.25 | 600 | 1.51 | 1.62 | 1.82 | 1.55 | 1.64 | 1.84 |
| 5 | 1.15 | 1.18 | 1.22 | 1.16 | 1.20 | 1.24 | 1.14 | 1.17 | 1.21 | 1.16 | 1.19 | 1.23 | 700 | 1.46 | 1.57 | 1.80 | 1.50 | 1.60 | 1.83 |
| 10 | 1.14 | 1.18 | 1.22 | 1.15 | 1.18 | 1.22 | 1.14 | 1.17 | 1.21 | 1.15 | 1.18 | 1.22 | 800 | 1.43 | 1.55 | 1.78 | 1.47 | 1.59 | 1.83 |
| 20 | 1.15 | 1.18 | 1.22 | 1.14 | 1.17 | 1.21 | 1.14 | 1.17 | 1.21 | 1.13 | 1.17 | 1.21 | 900 | 1.41 | 1.54 | 1.78 | 1.46 | 1.58 | 1.82 |
| 30 | 1.15 | 1.18 | 1.22 | 1.14 | 1.17 | 1.21 | 1.14 | 1.17 | 1.22 | 1.13 | 1.16 | 1.21 | 1000 | 1.39 | 1.52 | 1.77 | 1.45 | 1.57 | 1.82 |
| 40 | 1.15 | 1.18 | 1.22 | 1.14 | 1.17 | 1.21 | 1.14 | 1.17 | 1.21 | 1.13 | 1.16 | 1.20 | 1100 | 1.38 | 1.51 | 1.76 | 1.44 | 1.57 | 1.83 |
| 50 | 1.14 | 1.18 | 1.22 | 1.13 | 1.16 | 1.21 | 1.14 | 1.17 | 1.21 | 1.13 | 1.16 | 1.20 | 1200 | 1.37 | 1.51 | 1.77 | 1.44 | 1.57 | 1.84 |
| 60 | 1.14 | 1.18 | 1.22 | 1.13 | 1.16 | 1.21 | 1.14 | 1.17 | 1.21 | 1.12 | 1.16 | 1.20 | 1300 | 1.37 | 1.51 | 1.78 | 1.43 | 1.57 | 1.84 |
| 70 | 1.15 | 1.18 | 1.22 | 1.13 | 1.16 | 1.21 | 1.14 | 1.18 | 1.21 | 1.12 | 1.16 | 1.20 | 1400 | 1.37 | 1.51 | 1.77 | 1.44 | 1.58 | 1.85 |
| 80 | 1.15 | 1.18 | 1.22 | 1.13 | 1.16 | 1.21 | 1.14 | 1.18 | 1.21 | 1.12 | 1.16 | 1.20 | 1500 | 1.36 | 1.51 | 1.77 | 1.44 | 1.59 | 1.87 |
| 90 | 1.15 | 1.18 | 1.22 | 1.13 | 1.16 | 1.21 | 1.14 | 1.18 | 1.21 | 1.12 | 1.16 | 1.20 | 1600 | 1.36 | 1.52 | 1.78 | 1.45 | 1.60 | 1.88 |
| 100 | 1.15 | 1.18 | 1.22 | 1.13 | 1.16 | 1.21 | 1.14 | 1.17 | 1.21 | 1.12 | 1.16 | 1.20 | 1700 | 1.37 | 1.52 | 1.79 | 1.45 | 1.60 | 1.88 |
| 200 | 1.15 | 1.18 | 1.22 | 1.12 | 1.16 | 1.21 | 1.15 | 1.17 | 1.21 | 1.12 | 1.16 | 1.20 | 1800 | 1.37 | 1.52 | 1.79 | 1.46 | 1.61 | 1.89 |
| 300 | 1.14 | 1.18 | 1.22 | 1.11 | 1.15 | 1.20 | 1.15 | 1.18 | 1.22 | 1.13 | 1.16 | 1.20 | 1900 | 1.37 | 1.53 | 1.80 | 1.47 | 1.63 | 1.92 |
| 400 | 1.14 | 1.17 | 1.22 | 1.11 | 1.15 | 1.19 | 1.14 | 1.17 | 1.21 | 1.13 | 1.16 | 1.21 | 2000 | 1.38 | 1.53 | 1.81 | 1.48 | 1.64 | 1.93 |
| 500 | 1.14 | 1.17 | 1.22 | 1.11 | 1.15 | 1.19 | 1.13 | 1.16 | 1.20 | 1.12 | 1.16 | 1.20 | 2100 | 1.38 | 1.53 | 1.79 | 1.48 | 1.64 | 1.92 |
| 600 | 1.13 | 1.17 | 1.22 | 1.11 | 1.15 | 1.20 | 1.13 | 1.16 | 1.20 | 1.12 | 1.16 | 1.20 | 2200 | 1.39 | 1.55 | 1.81 | 1.50 | 1.66 | 1.93 |
| 700 | 1.14 | 1.17 | 1.22 | 1.11 | 1.15 | 1.20 | 1.13 | 1.16 | 1.20 | 1.13 | 1.16 | 1.21 | 2300 | 1.40 | 1.56 | 1.82 | 1.51 | 1.68 | 1.95 |
| 800 | 1.15 | 1.18 | 1.23 | 1.12 | 1.16 | 1.21 | 1.13 | 1.15 | 1.19 | 1.13 | 1.17 | 1.22 | 2400 | 1.40 | 1.55 | 1.80 | 1.52 | 1.68 | 1.96 |
| 900 | 1.15 | 1.19 | 1.24 | 1.12 | 1.16 | 1.21 | 1.13 | 1.16 | 1.20 | 1.14 | 1.17 | 1.22 | 2500 | 1.40 | 1.55 | 1.80 | 1.53 | 1.69 | 1.95 |
| 1000 | 1.16 | 1.20 | 1.24 | 1.13 | 1.17 | 1.22 | 1.13 | 1.16 | 1.20 | 1.15 | 1.18 | 1.23 | 2600 | 1.41 | 1.57 | 1.82 | 1.54 | 1.70 | 1.96 |
| 1100 | 1.18 | 1.22 | 1.26 | 1.14 | 1.18 | 1.22 | 1.12 | 1.15 | 1.19 | 1.15 | 1.18 | 1.23 | 2700 | 1.42 | 1.57 | 1.82 | 1.55 | 1.71 | 1.98 |
| 1200 | 1.19 | 1.22 | 1.26 | 1.15 | 1.19 | 1.22 | 1.12 | 1.15 | 1.20 | 1.15 | 1.19 | 1.24 | 2800 | 1.42 | 1.56 | 1.80 | 1.56 | 1.71 | 1.97 |
| 1300 | 1.20 | 1.23 | 1.26 | 1.15 | 1.19 | 1.22 | 1.12 | 1.15 | 1.20 | 1.15 | 1.19 | 1.24 | 2900 | 1.43 | 1.59 | 1.82 | 1.55 | 1.71 | 1.95 |
| 1400 | 1.21 | 1.24 | 1.27 | 1.16 | 1.19 | 1.22 | 1.10 | 1.13 | 1.19 | 1.14 | 1.19 | 1.24 | 3000 | 1.43 | 1.58 | 1.80 | 1.56 | 1.71 | 1.95 |
| 1500 | 1.21 | 1.24 | 1.27 | 1.15 | 1.18 | 1.21 | 1.09 | 1.13 | 1.18 | 1.14 | 1.18 | 1.25 | 3250 | 1.43 | 1.58 | 1.80 | 1.57 | 1.71 | 1.93 |
| 1600 | 1.21 | 1.24 | 1.26 | 1.14 | 1.18 | 1.20 | 1.09 | 1.13 | 1.19 | 1.14 | 1.18 | 1.25 | 3500 | 1.44 | 1.57 | 1.77 | 1.57 | 1.71 | 1.93 |
| 1700 | 1.21 | 1.24 | 1.26 | 1.14 | 1.17 | 1.20 | 1.08 | 1.12 | 1.18 | 1.13 | 1.17 | 1.23 | 3750 | 1.43 | 1.54 | 1.74 | 1.56 | 1.67 | 1.86 |
| 1800 | 1.21 | 1.24 | 1.26 | 1.13 | 1.17 | 1.19 | 1.07 | 1.11 | 1.17 | 1.12 | 1.17 | 1.23 | 4000 | 1.39 | 1.51 | 1.70 | 1.55 | 1.65 | 1.81 |
| 1900 | 1.21 | 1.24 | 1.26 | 1.13 | 1.16 | 1.18 | 1.07 | 1.11 | 1.17 | 1.12 | 1.17 | 1.24 | 4250 | 1.37 | 1.48 | 1.67 | 1.50 | 1.59 | 1.74 |
| 2000 | 1.21 | 1.24 | 1.26 | 1.13 | 1.16 | 1.18 | 1.08 | 1.11 | 1.17 | 1.12 | 1.17 | 1.25 | 4500 | 1.37 | 1.45 | 1.64 | 1.46 | 1.53 | 1.66 |
| 2100 | 1.21 | 1.25 | 1.27 | 1.13 | 1.16 | 1.19 | 1.09 | 1.11 | 1.17 | 1.13 | 1.18 | 1.24 | 4750 | 1.33 | 1.41 | 1.57 | 1.41 | 1.47 | 1.59 |
| 2200 | 1.21 | 1.24 | 1.26 | 1.12 | 1.16 | 1.19 | 1.10 | 1.13 | 1.18 | 1.15 | 1.19 | 1.25 | 5000 | 1.30 | 1.39 | 1.53 | 1.35 | 1.39 | 1.52 |
| 2300 | 1.22 | 1.24 | 1.27 | 1.13 | 1.16 | 1.19 | 1.12 | 1.15 | 1.19 | 1.17 | 1.21 | 1.27 | 5250 | 1.27 | 1.34 | 1.50 | 1.29 | 1.33 | 1.45 |
| 2400 | 1.22 | 1.25 | 1.28 | 1.14 | 1.16 | 1.19 | 1.14 | 1.16 | 1.20 | 1.19 | 1.24 | 1.29 | 5500 | 1.25 | 1.31 | 1.44 | 1.23 | 1.27 | 1.39 |
| 2500 | 1.22 | 1.24 | 1.27 | 1.14 | 1.17 | 1.20 | 1.15 | 1.17 | 1.20 | 1.22 | 1.26 | 1.30 | 5750 | 1.24 | 1.29 | 1.42 | 1.19 | 1.22 | 1.35 |
| 2600 | 1.23 | 1.24 | 1.27 | 1.16 | 1.18 | 1.20 | 1.18 | 1.20 | 1.22 | 1.25 | 1.28 | 1.31 | 6000 | 1.21 | 1.27 | 1.41 | 1.14 | 1.21 | 1.35 |
| 2700 | 1.24 | 1.25 | 1.27 | 1.19 | 1.19 | 1.21 | 1.21 | 1.23 | 1.25 | 1.29 | 1.32 | 1.35 | | | | | | | |
| 2800 | 1.22 | 1.23 | 1.25 | 1.19 | 1.19 | 1.20 | 1.24 | 1.24 | 1.25 | 1.33 | 1.35 | 1.37 | | | | | | | |
| 2900 | 1.21 | 1.21 | 1.24 | 1.20 | 1.20 | 1.21 | 1.25 | 1.27 | 1.27 | 1.34 | 1.36 | 1.36 | | | | | | | |
| 3000 | 1.21 | 1.22 | 1.25 | 1.21 | 1.20 | 1.21 | 1.27 | 1.29 | 1.28 | 1.37 | 1.38 | 1.38 | | | | | | | |
| 3250 | 1.19 | 1.19 | 1.23 | 1.20 | 1.19 | 1.20 | 1.28 | 1.29 | 1.28 | 1.38 | 1.39 | 1.38 | | | | | | | |
| 3500 | 1.18 | 1.19 | 1.24 | 1.18 | 1.19 | 1.22 | 1.26 | 1.26 | 1.25 | 1.36 | 1.36 | 1.37 | | | | | | | |
| 3750 | 1.21 | 1.24 | 1.28 | 1.22 | 1.24 | 1.28 | 1.21 | 1.20 | 1.21 | 1.30 | 1.30 | 1.32 | | | | | | | |
| 4000 | 1.30 | 1.33 | 1.36 | 1.31 | 1.33 | 1.36 | 1.16 | 1.16 | 1.17 | 1.29 | 1.28 | 1.29 | | | | | | | |
| 4250 | 1.42 | 1.43 | 1.44 | 1.43 | 1.44 | 1.45 | 1.22 | 1.19 | 1.18 | 1.33 | 1.29 | 1.27 | | | | | | | |
| 4500 | 1.53 | 1.53 | 1.53 | 1.57 | 1.57 | 1.56 | 1.31 | 1.25 | 1.21 | 1.41 | 1.35 | 1.29 | | | | | | | |
| 4750 | 1.62 | 1.63 | 1.64 | 1.67 | 1.68 | 1.67 | 1.38 | 1.32 | 1.26 | 1.49 | 1.42 | 1.33 | | | | | | | |
| 5000 | 1.64 | 1.67 | 1.67 | 1.70 | 1.72 | 1.71 | 1.40 | 1.37 | 1.30 | 1.50 | 1.43 | 1.35 | | | | | | | |
| 5250 | 1.64 | 1.66 | 1.67 | 1.68 | 1.71 | 1.71 | 1.39 | 1.36 | 1.30 | 1.46 | 1.41 | 1.35 | | | | | | | |
| 5500 | 1.60 | 1.63 | 1.64 | 1.60 | 1.64 | 1.67 | 1.36 | 1.32 | 1.28 | 1.37 | 1.35 | 1.31 | | | | | | | |
| 5750 | 1.52 | 1.56 | 1.57 | 1.51 | 1.56 | 1.60 | 1.31 | 1.30 | 1.27 | 1.30 | 1.29 | 1.28 | | | | | | | |
| 6000 | 1.46 | 1.50 | 1.51 | 1.42 | 1.47 | 1.51 | 1.27 | 1.28 | 1.26 | 1.21 | 1.21 | 1.22 | | | | | | | |

*Note:

| State of Control Voltage | RF Common to | |
|--|--------------|-----|
| | RF1 | RF2 |
| LOW | ON | OFF |
| HIGH | OFF | ON |
| ON - Low insertion loss state OFF - Isolation state | | |



Typical Performance Curves

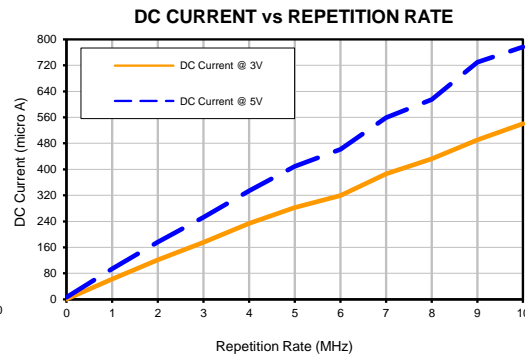
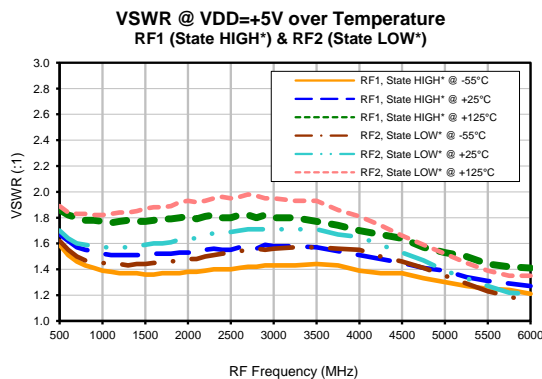
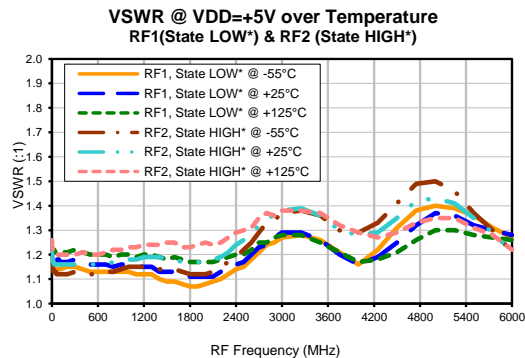
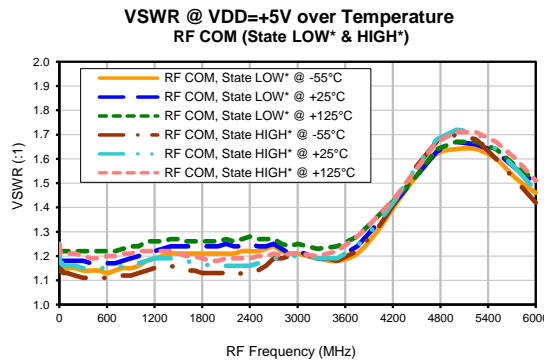
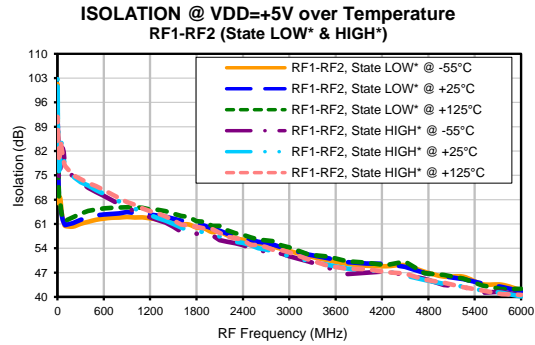
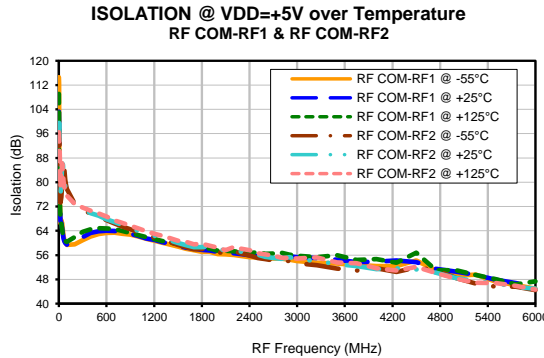
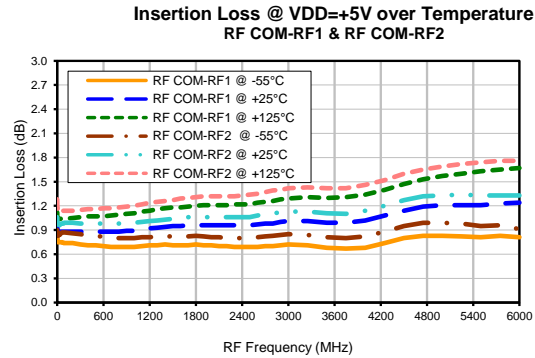
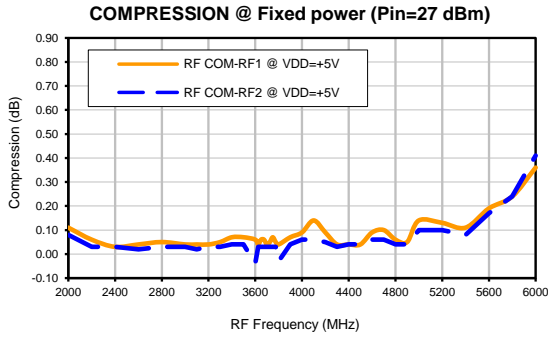


***Note:**

| State of Control Voltage | RF Common to | |
|--------------------------|--------------|-----|
| | RF1 | RF2 |
| LOW | ON | OFF |
| HIGH | OFF | ON |

ON - Low insertion loss state
 OFF - Isolation state

Typical Performance Curves

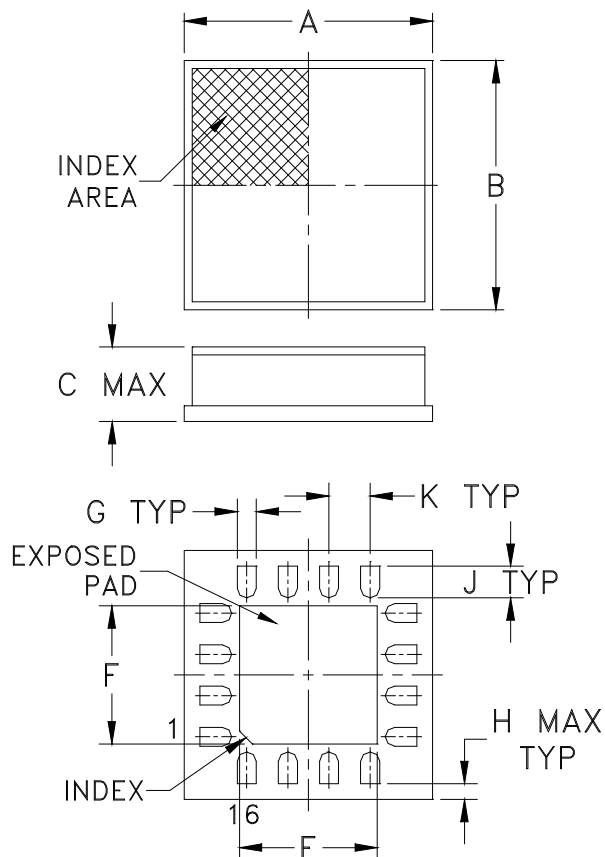


***Note:**

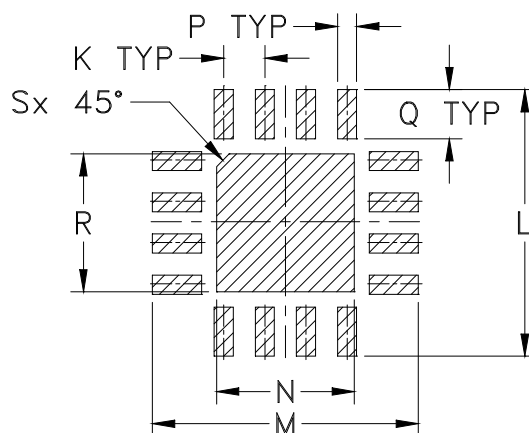
| State of Control Voltage | RF Common to | |
|--------------------------|--------------|-----|
| | RF1 | RF2 |
| LOW | ON | OFF |
| HIGH | OFF | ON |

ON - Low insertion loss state
OFF - Isolation state

Outline Dimensions



PCB Land Pattern



Suggested Layout,
Tolerance to be within ± 0.002

| CASE # | A | B | C | D | E | F | G | H | J | K |
|--------|----------------|----------------|----------------|--------|----------------|----------------|----------------|-----------------|----------------|----------------|
| DG1293 | .157 (4.00) | .157 (4.00) | .047 (1.20) | - - | .087 (2.20) | .087 (2.20) | .012 (0.30) | 0.010 (0.25) | .020 (0.50) | .026 (0.65) |

| CASE # | L | M | N | P | Q | R | S | WT. GRAM |
|--------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------|
| DG1293 | .169 (4.30) | .169 (4.30) | .087 (2.20) | .012 (0.30) | .031 (0.80) | .087 (2.20) | .008 (0.20) | .04 |

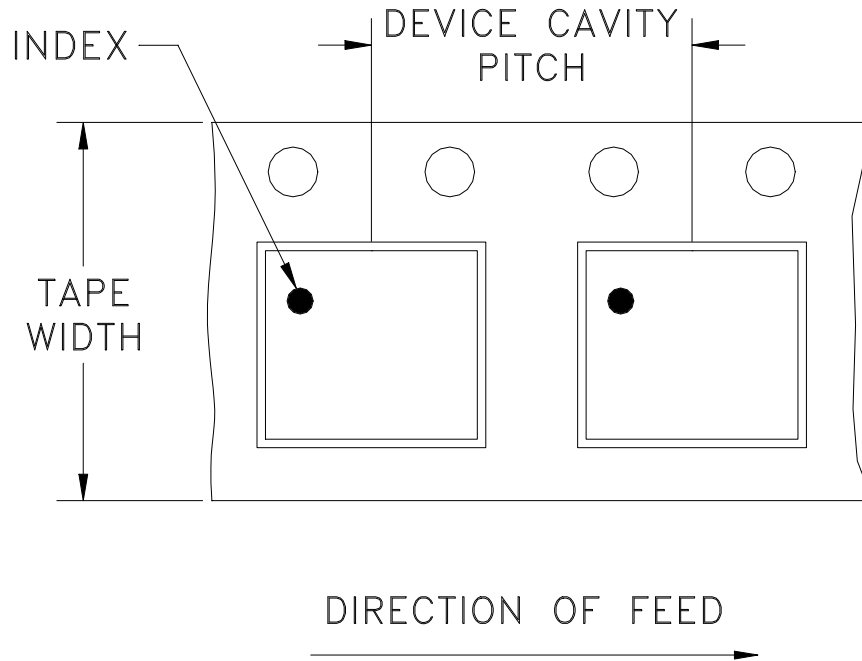
Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm .01$; 3 Pl. $\pm .005$

Notes:

1. Case material: Ceramic.
2. Termination finish: Nickel-Palladium-Gold plating.

Tape & Reel Packaging TR-F68

DEVICE ORIENTATION IN T&R



| Tape Width, mm | Device Cavity Pitch, mm | Reel Size, inches | Devices per Reel see note | |
|----------------|-------------------------|-------------------|---------------------------|------|
| 12 | 8 | 7 | Small quantity standard | 20 |
| | | | | 50 |
| | | | | 100 |
| | | | | 200 |
| | | | | 500 |
| | | 7 | Standard | 1000 |
| | | 13 | Standard | 2000 |
| | | | | 3000 |
| 4000 | | | | |

Mini-Circuits carrier tape materials provide protection from ESD (Electro-Static Discharge) during handling and transportation. Tapes are static dissipative and comply with industry standards EIA-481/EIA-541.

Go to: www.minicircuits.com/pages/pdfs/tape.pdf



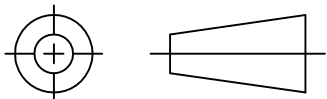
INTERNET <http://www.minicircuits.com>

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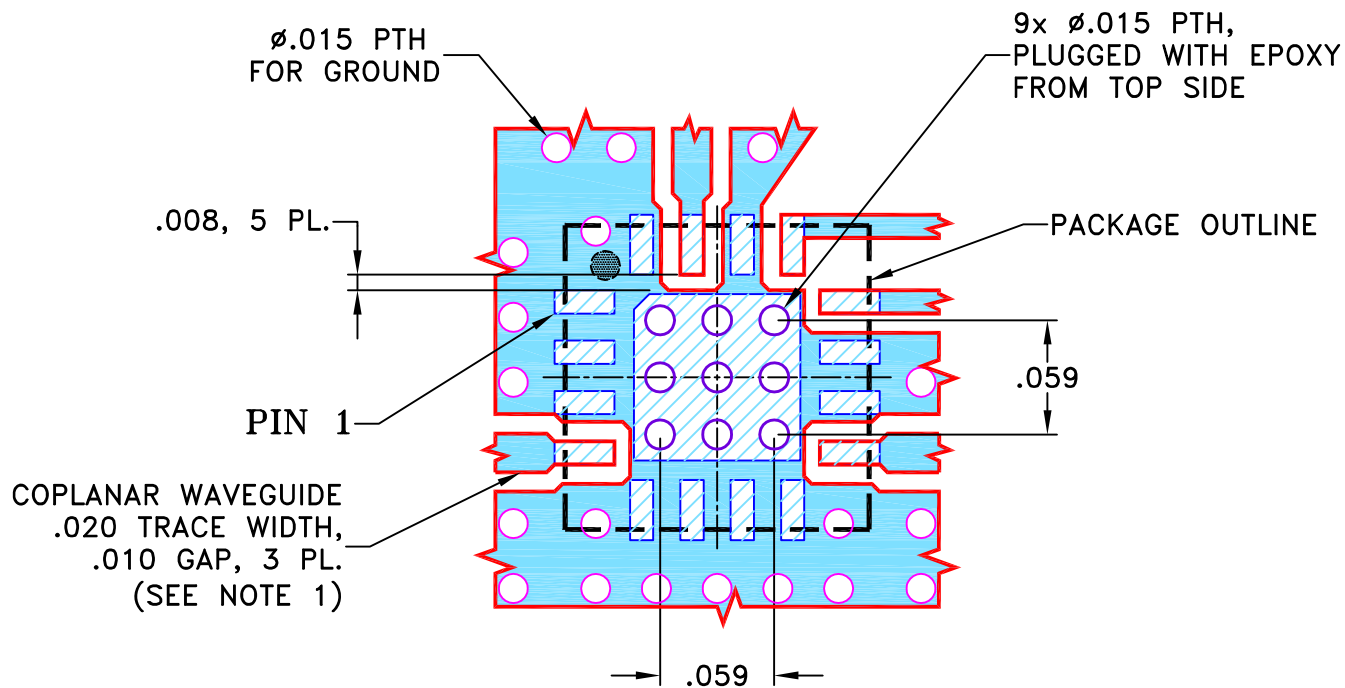
THIRD ANGLE PROJECTION



REVISIONS

| REV | ECN No. | DESCRIPTION | DATE | DR | AUTH |
|-----|---------|-------------------------------|----------|-----|------|
| OR | M113105 | NEW RELEASE | 08/23/07 | PW | RD |
| A | M114290 | TB-461+ WAS TB-460+ IN TITLE | 10/31/07 | AV | WP |
| B | M155180 | REDESIGNED (NEW PIN CONNECT.) | 03/01/16 | ITG | BT |

SUGGESTED MOUNTING CONFIGURATION FOR
DG1293 CASE STYLE, "16SW01" PIN CONNECTION



NOTES:

1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS 0.010" ± 0.001". COPPER: 1/2 OZ. ON EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

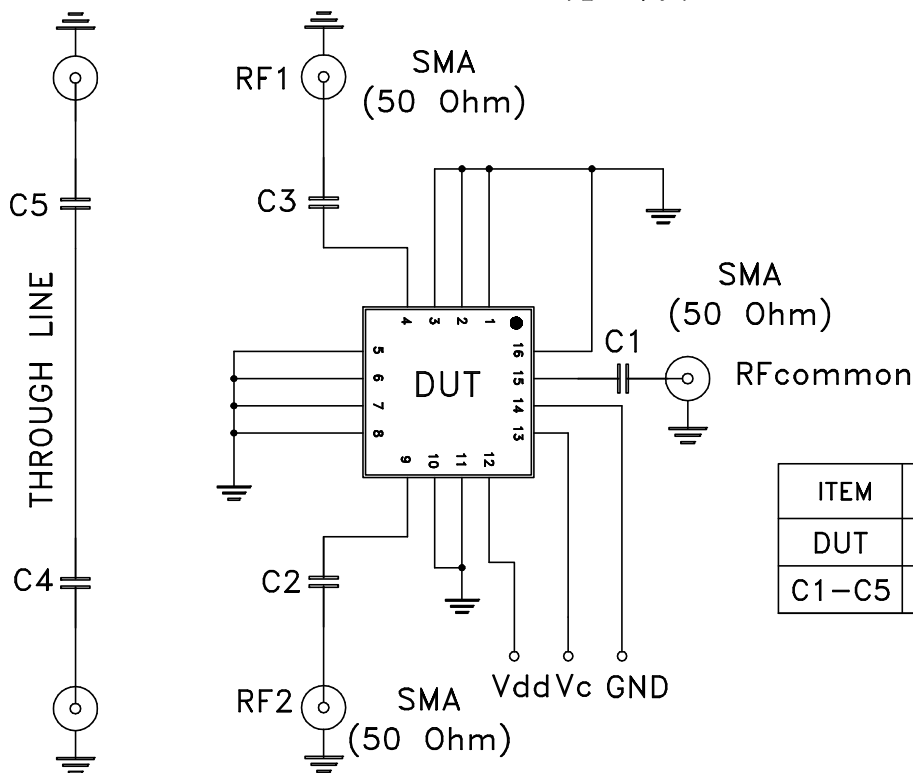
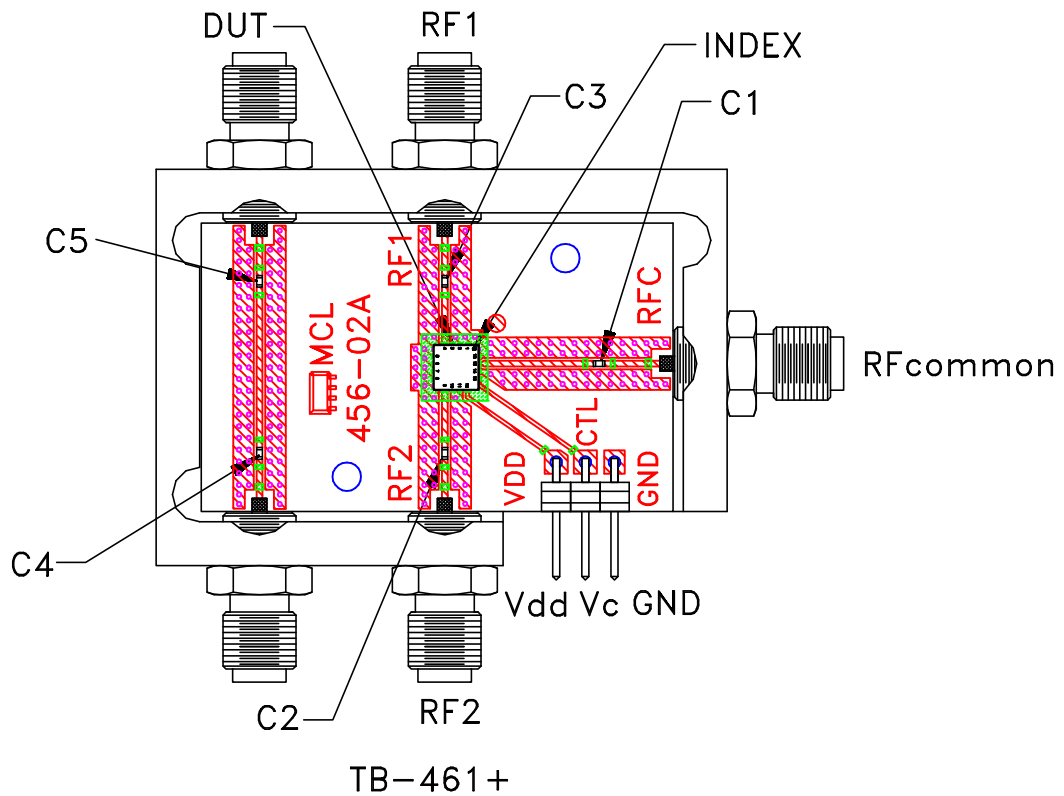
| UNLESS OTHERWISE SPECIFIED | INITIALS | | DATE |
|--|----------|----|----------|
| DIMENSIONS ARE IN INCHES TOLERANCES ON: 2 PL DECIMALS ± 3 PL DECIMALS ± .005 ANGLES ± FRACTIONS ± | DRAWN | PW | 08/16/07 |
| | CHECKED | AV | 08/22/07 |
| | APPROVED | RD | 08/23/07 |

Mini-Circuits® 13 Neptune Avenue
Brooklyn NY 11235

PL, 16SW01, DG1293, CSWA2, TB-461+

| | | | |
|---------------|---------------------|--------------------------|-----------|
| SIZE A | CODE IDENT 15542 | DRAWING NO: 98-PL-279 | REV: B |
| FILE: 98PL279 | SCALE: 10:1 | SHEET: 1 OF 1 | |

Evaluation Board and Circuit



| ITEM | DESCRIPTION | SIZE |
|-------|-------------|--------|
| DUT | CSWA2-63DR+ | 4X4 MM |
| C1-C5 | CAP, 47 pF | 0402 |

Schematic Diagram

Notes:

1. SMA Female connectors.
2. PCB Material: Rogers R04350 or equivalent,
Dielectric Constant=3.5, Thickness=.010 inch.

Mini-Circuits®



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

| Specification | Test/Inspection Condition | Reference/Spec |
|--------------------------------|---|---|
| Operating Temperature | -55° to 125° C Ambient Environment | Individual Model Data Sheet |
| Storage Temperature | -65° to 150° C Ambient Environment | Individual Model Data Sheet |
| Temperature Cycling | -65° to 150°C, 500 cycles | JESD22-A104, condition C |
| Autoclave | 121°C, 100% RH, 30 PSIA, 96 hours, unbiased | JESD22-A102 |
| High Temp Storage | 150°C 1008 hours | JESD22-A103 |
| Solderability | Per Reference Spec | JESD22-B102 |
| Resistance to Solvent | Per Reference Spec | MIL-STD-202F Method 215J |
| Fine and Gross Leak Test | Per Reference Spec | MIL-STD-202F, Method 112 Test, Conditions C, D |
| Constant Acceleration | Y1 plane only, 5 Kg | MIL-STD-883, Method 2001, Condition A, except Y1 plane only |
| Mechanical Shock | 0.5 ms, 5 shock pulses, Y1 direction only, 1.5 Kg | MIL-STD-883, Method 2002, Condition B, except Y1 direction only, 1.5 Kg |
| Vibration (Variable Frequency) | 50g peak | MIL-STD-883, Method 2007, Condition B |