

Part/Keyword Search



Detailed Drawing



Printer Friendly  
Datasheet

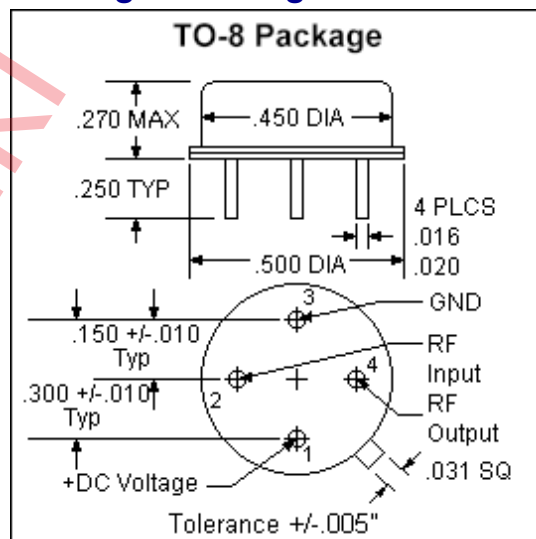
## TR3010 / SM3010\*

\* Part number for additional environmental screening.

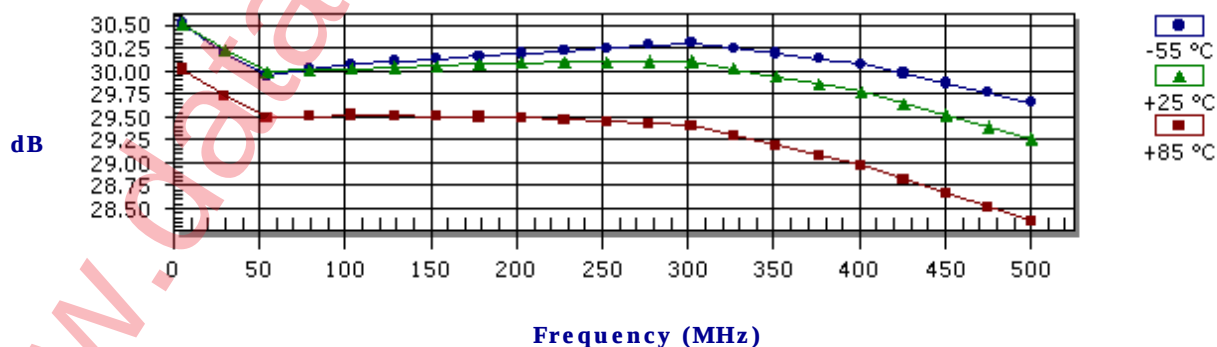
### Performance Data

|                                 |                                                 |
|---------------------------------|-------------------------------------------------|
| Frequency                       | 5.0 - 500.0 MHz                                 |
| Gain                            | 30.0 dB Typical<br>28.0 dB Min                  |
| Noise Figure                    | 3.5 dB Typical<br>5.0 dB Max                    |
| P <sub>1dB</sub>                | 21.5 dBm Typical<br>20.0 dBm Min                |
| 3 <sup>rd</sup> Order Intercept | 34.0 dBm Typical                                |
| 2 <sup>nd</sup> Order Intercept | 48.0 dBm Typical                                |
| VSWR                            | 1.2/2.0 Input Typ/Max<br>1.8/2.0 Output Typ/Max |
| Reverse Isolation               | -35.0 dB Typical<br>-33.0 dB Min                |
| Power Supply                    | 12.0 Volts<br>130.0 mA                          |
| Operating Temperature           | -55.0 - 85.0 °C                                 |

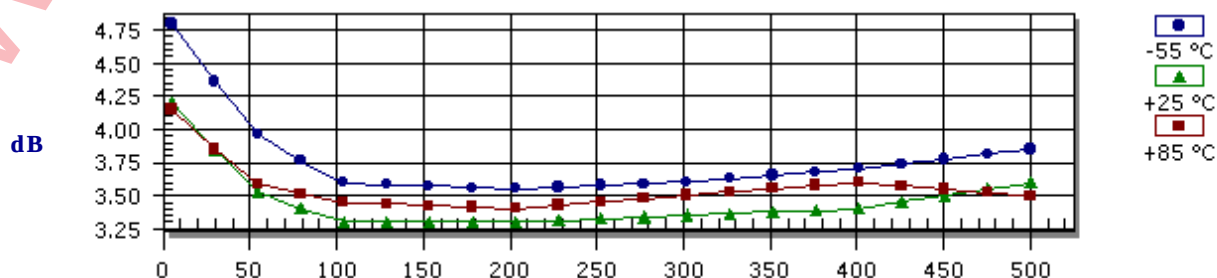
### Package Drawing



### Gain

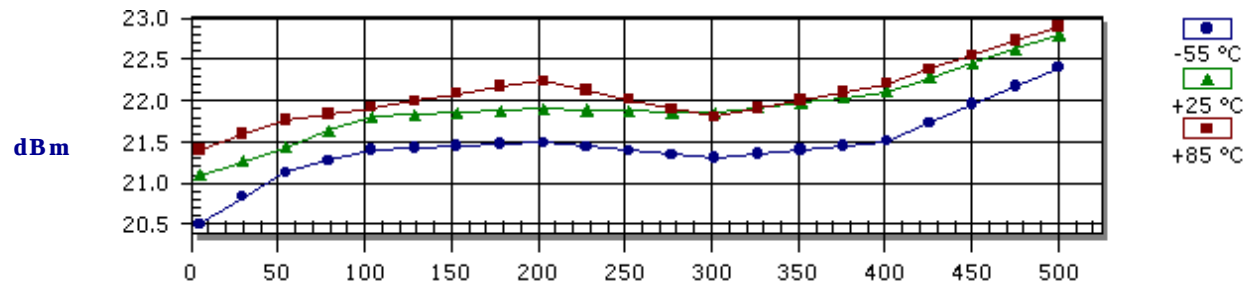


### Noise Figure



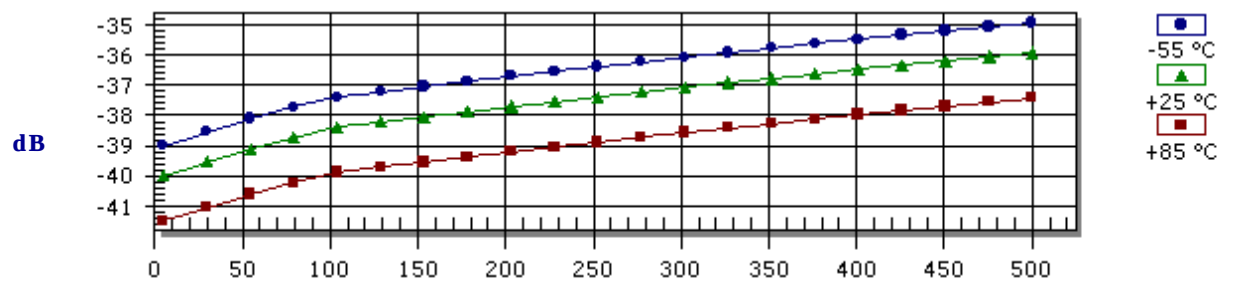
Frequency (MHz)

### $P_{1dB}$ Compression Point



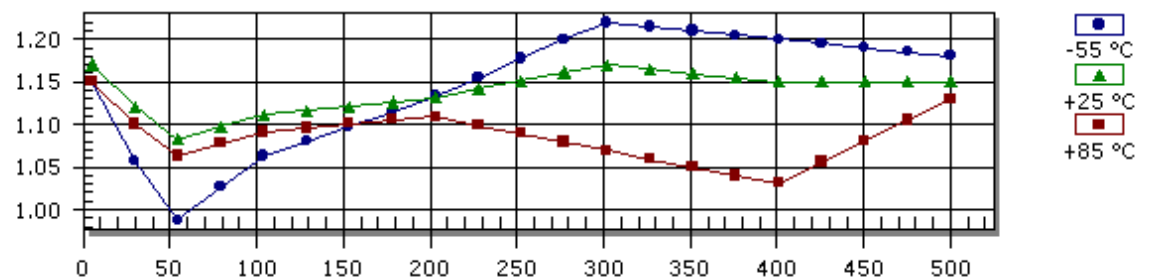
Frequency (MHz)

### Reverse Isolation



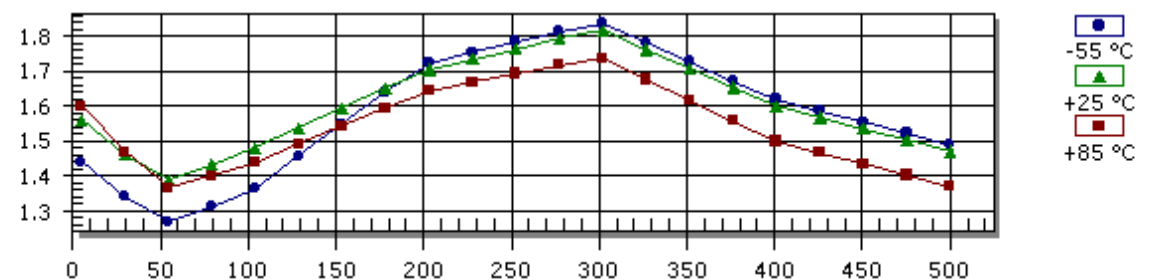
Frequency (MHz)

### Input VSWR



Frequency (MHz)

### Output VSWR



Frequency (MHz)

## S-Parameters

| Frequency | S11 Mag | S11 Ang | S21 Mag | S21 Ang | S12 Mag | S12 Ang | S22 Mag | S22 Ang |
|-----------|---------|---------|---------|---------|---------|---------|---------|---------|
| 5.0       | 0.080   | 105.00  | 33.560  | 15.00   | 0.010   | 13.00   | 0.220   | -162.00 |
| 50.0      | 0.040   | -30.00  | 31.600  | -21.00  | 0.011   | 7.00    | 0.160   | -165.00 |
| 100.0     | 0.050   | -76.00  | 31.690  | -44.00  | 0.012   | 9.00    | 0.190   | -162.00 |
| 200.0     | 0.060   | -149.00 | 31.970  | -90.00  | 0.013   | 3.00    | 0.260   | -176.00 |
| 300.0     | 0.080   | 148.00  | 32.040  | -138.00 | 0.014   | -1.00   | 0.290   | 163.00  |
| 400.0     | 0.070   | 78.00   | 30.840  | 172.00  | 0.015   | -2.00   | 0.230   | 140.00  |
| 500.0     | 0.070   | -45.00  | 29.030  | 121.00  | 0.016   | -18.00  | 0.190   | 123.00  |

## Absolute Maximum Conditions

|                                    |                  |                                             |                  |
|------------------------------------|------------------|---------------------------------------------|------------------|
| Maximum Operating Temperature      | -55.0 - 100.0 °C | Maximum Storage Temperature                 | -62.0 - 125.0 °C |
| Maximum Case Temperature           | 125.0 °C         | Maximum Supply Voltage                      | 18.0 Volts       |
| Continuous RF Input Power          | 13.0 dBm         | Short Term RF Input Power<br>(1 minute max) | 50.0 mW          |
| Maximum Peak Power<br>(3 µsec max) | 0.5 W            |                                             |                  |

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# i2 Technologies US, Inc.

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