

**DESCRIPTION**

The GC6000 series of RF/Microwave noise diodes represent the state of the art in noise device technology. By carefully controlling junction doping profiles and mesa geometry, these devices provide the broadest, most uniform noise response available. Outputs are true symmetrical Gaussian white noise with predictable thermal performance. Choose from dozens of case style, including glass, ceramic as well as EPSM<sup>®</sup> (enhanced performance surface mount) for commercial pick and place assembly and die form for hybrid systems.

**KEY FEATURES**

- Multi-Octave Bandwidth
- Wide Bias Window
- Uniform Power Output
- High Reliability
- RoHS Compliant<sup>1</sup>

**APPLICATIONS**

The GC6000 Series of devices are designed to generate white noise for test equipment and specialty ECM applications. These devices can be used in narrow and broadband noise sources for Noise Figure testing as well as RF Fuses.

**APPLICATIONS/BENEFITS**

- RF Fuses
- Noise Sources
- Noises Figure Calibration
- Spectrum Analyzers
- Signal Path Fade Test Sets

**ELECTRICAL PARAMETERS @ 25°C (unless otherwise specified)**

Model Number	V <sub>B</sub> (V) @I <sub>R</sub> =1mA	C <sub>J</sub> (pF) <sup>1</sup> @-6V (Typ.)	T <sub>L</sub> (ns) (Typ.)	Frequency Range	ENR (db) (Min)
GC6001	6-10	0.5	4	0.1-18	25
GC6002	8-14	1.0	7	0.1-12	28
GC6003	12-18	1.5	10	0.1-8	31

1. Junction Capacitance is measured at 1 MHz.

**ABSOLUTE MAXIMUM RATINGS AT 25° C**

(UNLESS OTHERWISE SPECIFIED)

RATING	SYMBOL	VALUE	UNIT
Maximum Leakage Current @80% of Minimum Rated V <sub>B</sub>	I <sub>R</sub>	0.5	uA
Storage Temperature	T <sub>STG</sub>	-65 to +150	°C
Operating Temperature	T <sub>OP</sub>	-55 to +150	°C

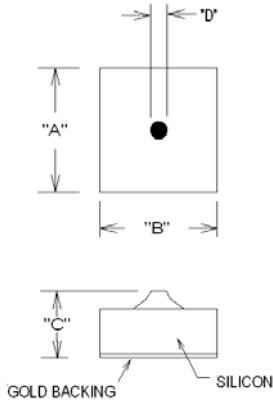
**IMPORTANT:**

For the most current data, consult our website: [www.MICROSEMI.com](http://www.MICROSEMI.com)  
 Specifications are subject to change, consult factory for further information.

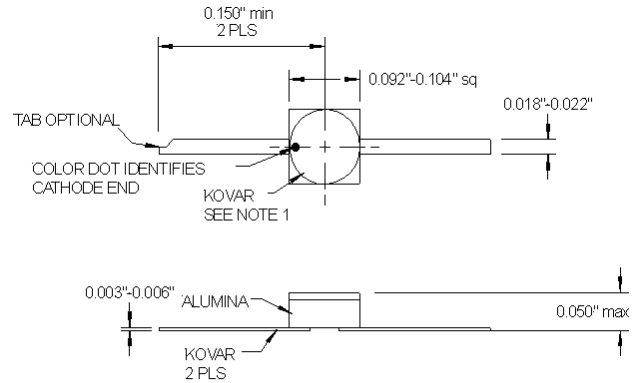
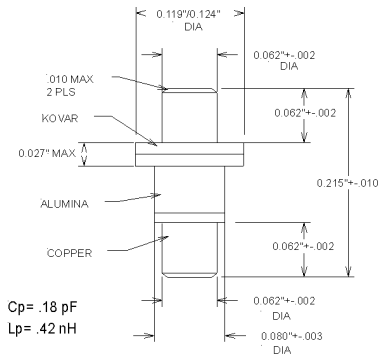
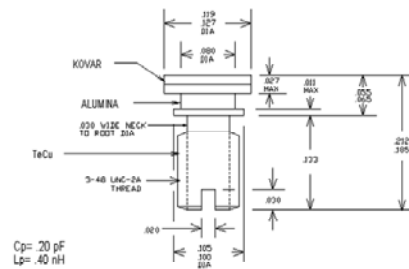


These devices are ESD sensitive and must be handled using ESD precautions.

<sup>1</sup>The GC6000 Series of products are supplied with a RoHS complaint Gold finish. Some packages can be supplied with a MIL grade Sn/Pb finish. Consult Factory for details.

**Typical Package Options**
**PACKAGE STYLE 00**

**Notes:**

- Dimensions vary by model number
- Consult factory for details
- Order as GC600X – 00

**PACKAGE STYLE 17**

**PACKAGE STYLE 30**

**PACKAGE STYLE 42**


**OTHER PACKAGE STYLES AVAILABLE ON REQUEST  
 CONSULT FACTORY**