



HUM2010/HUM2015/HUM2020

PIN DIODE HIGH POWER STUD

DESCRIPTION

With high isolation, low loss, and low distortion characteristics, this Microsemi Power PIN diode is perfect for the high power switching applications where size and power handling capability are critical.

Its advantages also include the low forward bias resistance and high zero bias impedance that are essential for low loss, high isolation and wide bandwidth performance.

Hermetically sealed, SOGO passivated PIN chips with full-faced metallurgical bonds on both sides to achieve high reliability and high surge capability.

IMPORTANT: For the most current data, consult MICROSEMI's website: <http://www.microsemi.com>

KEY FEATURES

- High Power Stud Mount Package
- High Zero Bias Impedance
- Very Low Inductance and Capacitance
- No Internal Lead Straps
- Small Mechanical Outline

APPLICATIONS/BENEFITS

- MRI Applications
- High Power Antenna Switching

ABSOLUTE MAXIMUM RATINGS

Maximum Reverse Voltage	1000/1500/2000 V
Average Power Dissipation @ Stud = 50°C	13 W
Non-Repetitive Sinusoidal Surge Current (8.3 ms)	100 A
Storage Temperature Range	65°C to +175°C
Operating Temperature Range	55°C to +150°C
Thermal Resistance	7.5°C / W

Voltage Ratings [25°C]

Reverse Voltage (V _R) - Volts	Part type
I _R = 10μA	
1000V	HUM2010
1500V	HUM2015
2000V	HUM2020

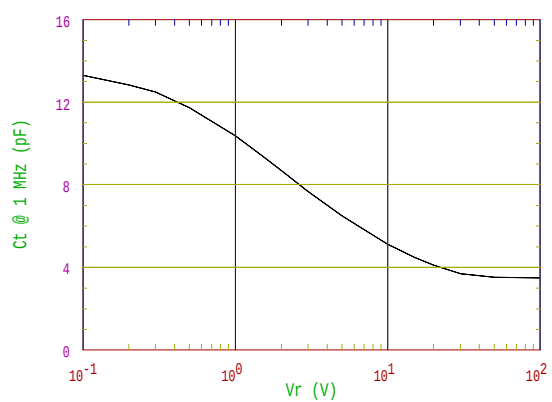
ELECTRICAL SPECIFICATIONS [25°C]

Test	Min	Typ	Max	Units	Conditions
Diode Resistance R _S		0.10	0.20	Ω	F = 4 MHz, I _f = 0.5 A
Capacitance C _T		3.4	4.0	pF	F = 1 MHz, 100 V
Reverse Current I _R			10	μA	V _R @ Rated Voltage
Carrier Lifetime τ	10	30		μs	I _f = 10 mA / 100 V
Parallel Resistance R _P	200			KΩ	F = 10 MHz, 100 V
Forward Voltage V _f		0.85	1.0	V	I _f = 0.5 A

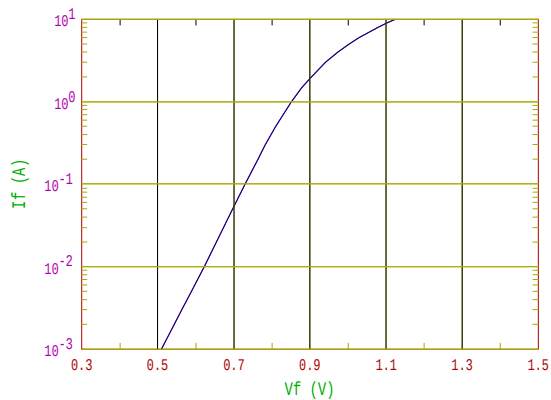
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TYPICAL



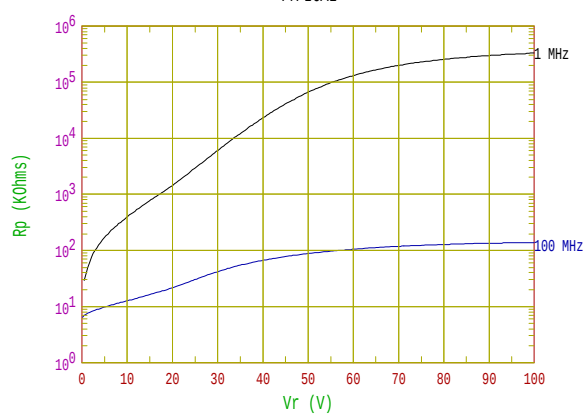
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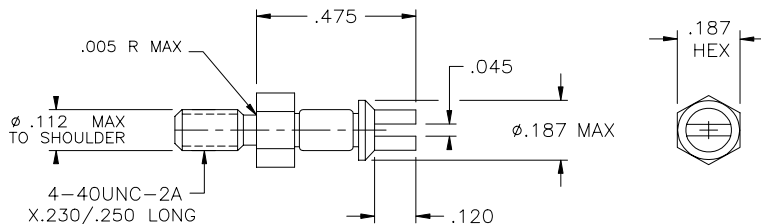


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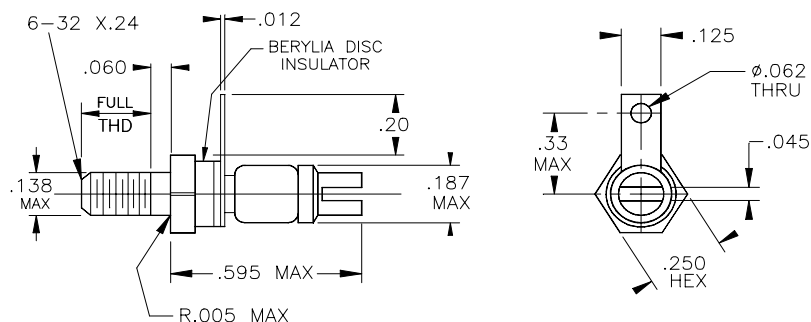




NOTES:

1. CATHODE-TO-STUD IS THE STANDARD PART; REVERSE POLARITY IS DENOTED BY THE SUFFIX "R".
2. METAL PARTS ARE GOLD PLATED PER MIL-G-45204, TYPE II.
3. INSTALLATION PRECAUTIONS INCLUDE:
UN-LUBRICATED STUD TORQUE = 28 1NCH OUNCES MAXIMUM.
DO **NOT** USE A SCREWDRIVER IN THE TURRET SLOT FOR ANY INSTALLATION PURPOSE * OR DAMAGE MAY RESULT*.
4. DIMENSIONS ARE IN INCHES.

V STYLE



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