

## HIGH POWER PIN DIODE SERIES

- Power Rating up to Multi Kilowatts
- Voltage Rating up to 2.5 Kilovolts
- Low Loss, Low Distortion through HF Band
- Very Low Thermal Impedance and High Dissipation Capabilities
- Surface Mount Stud and Insulated Stud Packages
- Non-Magnetic Packaging Available



### DESCRIPTION

The high power PIN diode series is available in surface mount stud and insulated stud packages. These PIN diode chips utilize high resistivity material and an intrinsic float zone process technology thus ensuring low loss and low distortion characteristics through HF band. Due to a thick base width of the "I" layer, these diodes have very high reverse voltage characteristics with very low thermal impedance. These PIN chips are passivated with a proprietary high voltage glassivation process yielding low leakage stable devices.

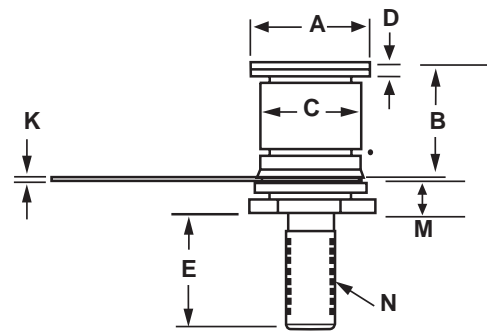
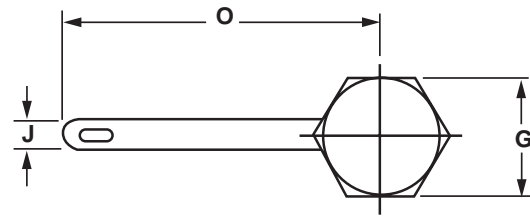
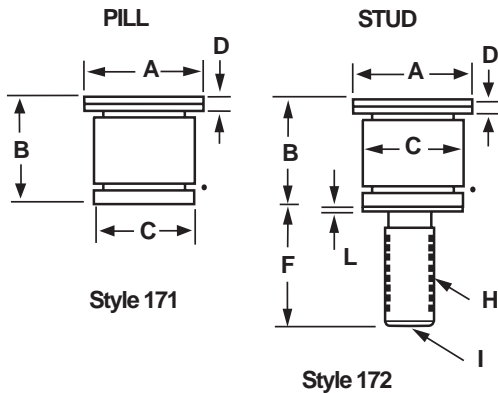
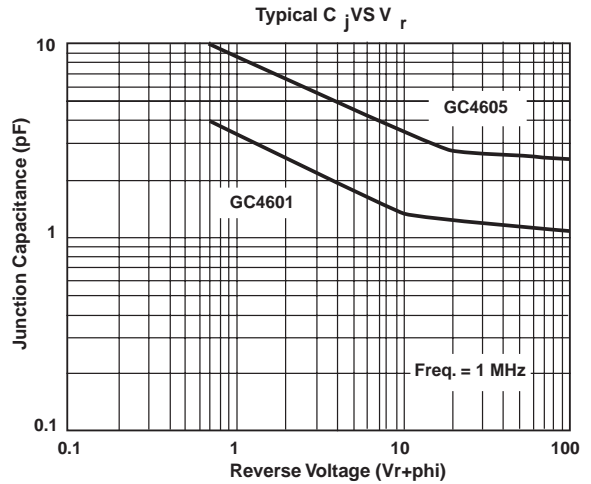
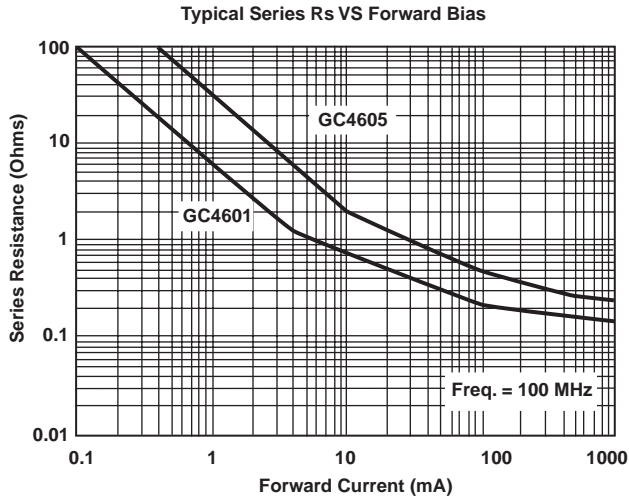
### APPLICATIONS

High power PIN diodes are designed as switching elements with frequencies through UHF band. Applications for these devices include antenna coupler, high power filter switches and Magnetic Resonance Imaging (MRI) switches. These devices are designed to withstand very large CW and pulse power environments where CW and peak RF voltages are in the kilovolt range and are offered in rugged low thermal impedance, stud and insulated stud packages.

### GUARANTEED SPECIFICATIONS at 25°C (TYPICAL)

MODEL NUMBER	BREAKDOWN VOLTAGE ( $I_R=10\mu A$ ) $V_B$ (MIN) (Volts)	JUNCTION CAPACITANCE ( $V_R=50V$ ) $C_J$ (MAX) (pF)	SERIES RESISTANCE (500mA, 100 MHz) $R_S$ (MAX) (Ohms)	CARRIER LIFETIME ( $I_R=6mA$ , $I_F=10mA$ ) $T_L$ (TYP) ( $\mu$ Sec)	THERMAL RESISTANCE (MAX) (°C/W)
GC4600	1500	0.75	0.3	5	5
GC4601	1500	1.5	0.25	8	4
GC4602	2000	1.0	0.25	10	3
GC4603	2000	2.0	0.20	15	3
GC4604	2500	2.0	0.20	20	2
GC4605	2500	3.0	0.15	25	1

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Style 173

DIM.	INCHES		
	MIN.	MAX.	
A	0.304	0.316	
B	0.254	0.270	
C	0.245	0.255	
D	0.023	0.031	
E	0.221	0.252	
F	0.281	0.350	
G	0.245	0.255	
H			#6-40 UNF-3A
I			0.072 SPLINE * 0.07 DP OR SLOT
J	0.120	0.130	
K	0.007	0.009	
L	0.025	0.035	
M	0.128	0.137	
N			
O	0.078	0.790	

### SEMICONDUCTOR OPERATION

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