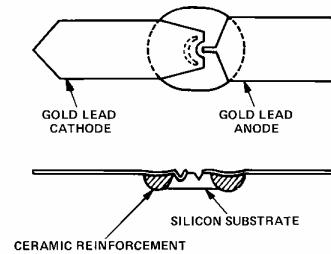


# Semiconductor Control Devices

## HIGH SPEED MESA BEAM LEAD PIN DIODES

- Wide Bandwidth / High Switching Speed
- 5 Gram Typical Pull Strength
- Very Low R/C (Insertion/Isolation) Products with Low Inductance
- High Quality, High Resistivity Epitaxy
- Stable Low Leakage Passivation with Hard Glass Coating



### DESCRIPTION

Semiconductor mesa beam lead PIN diodes are designed for very low inductance, low resistance and moderately low capacitance with ultra fast switching characteristics. The structural details include thermal oxide junction passivation thus providing reliable operation with stable junction parameters along with ceramic glass, which provides mechanical strength to the diode. These devices are designed with a narrow base width, a high quality intrinsic 'I' layer that provides low loss, high isolation and ultra high speed switching characteristics.

### APPLICATIONS

These high speed beam lead PIN diodes are designed for stripline and microstrip circuits and are primarily used in shunt/series and conventional series multithrow configurations as switching, attenuating and phase shifting elements with frequencies extending up to Ku band.

### ELECTRICAL SPECIFICATIONS at: $T_A=25^\circ\text{C}$

MODEL NUMBER	RF PERFORMANCE TYP		DC PERFORMANCE			
	Isol (dB) $V_R=10\text{V}$ F=2.2 GHz	$I_L$ (dB) $I_F=10\text{mA}$ F=2.2 GHz	$V_B$ (V) (MIN) $I_f=10\mu\text{A}$	$C_T$ (pF) (MAX) $V_R=10\text{V}$	$R_S$ (Ohms) (MAX) $I_F=10\text{mA}$ F=2.2GHz	$T_L$ (nS) (Typical) $I_F=10\text{mA}$ , $I_R=6\text{mA}$
GC4941	22.0	0.14	50	.06	1.5	50
GC4942	26.0	0.17	50	.04	2.0	45
GC4943	27.5	0.27	50	.030	3.0	40
GC4944	29.0	0.30	50	.025	3.5	35
GC4945	30.5	0.45	50	.022	5.5	40
GC4946	32.0	0.51	50	0.20	6.5	40