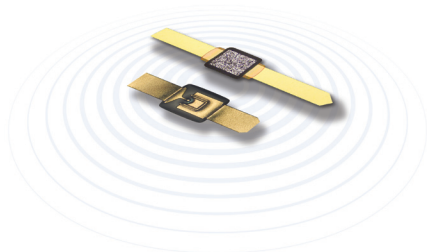


## Silicon PIN Beam-Lead Diodes for High Frequency Switch Applications

### Features

- Low capacitance
- Low resistance
- Fast switching
- Oxide-nitride passivated
- Durable construction
- High voltage
- Available lead (Pb)-free, RoHS-compliant, and Green<sup>1</sup>™



### Description


The DSM8100-000 silicon mesa beam-lead PIN diode is surrounded by a glass frame for superior strength and electrical performance that surpasses the standard beam-lead PINs. It is designed for low resistance, low capacitance and fast switching time. The oxide-nitride passivation layers provide reliable operation and stable junction parameters that provide complete sealing of the junction permitting use in assemblies with some degree of moisture sealing. A layer of glass provides increased mechanical strength.

The DSG9500-000 silicon planar beam-lead PIN diode is designed for low resistance, low capacitance and fast switching time. The oxide-nitride passivation layers protect the diode junction to provide excellent reliability and stable electrical performance, especially when the diode is housed in a hermetically sealed assembly to further protect the junction from moisture.


Both parts are ideal for microstrip or stripline circuits and for circuits requiring high isolation from a series-mounted diode such as broadband multi-throw switches, phase shifters, limiters, attenuators and modulators.

## Silicon PIN Beam-Lead Diodes

### Lowest Capacitance, Very Fast Switching for Applications Up To 30 GHz

Part Number	$V_B$ $I_R = 10 \mu A$ (V) Min.	$C_T$ $V_R = 10 V$ $F = 1 MHz$ (pF) Max.	$C_T$ $V_R = 50 V$ $F = 1 MHz$ (pF) Max.	$R_S$ $I_F = 10 mA$ $F = 100 MHz$ ( $\Omega$ ) Max.	$R_S$ [From Ins. Loss @ 3 GHz 50 mA] ( $\Omega$ ) Max.	$T_L$ (ns) Typ.	Package
 DSM8100-000	60	0.025	–	3.5	–	25	Beam-Lead (Mesa)

### Planar, Low Capacitance, Low Distortion for Switching Applications Up To 30 GHz

Part Number	$V_B$ $I_R = 10 \mu A$ (V) Min.	$C_T$ $V_R = 10 V$ $F = 1 MHz$ (pF) Max.	$C_T$ $V_R = 50 V$ $F = 1 MHz$ (pF) Max.	$R_S$ $I_F = 10 mA$ $F = 100 MHz$ ( $\Omega$ ) Max.	$R_S$ [From Ins. Loss @ 3 GHz 50 mA] ( $\Omega$ ) Max.	$T_L$ (ns) Typ.	Package
 DSG9500-000	100	–	0.02	–	4.0	250	Beam-Lead (Planar)

 Skyworks Green™ products are lead (Pb)-free, Restriction of Hazardous Substances (RoHS)-compliant, conform to the EIA/EICTA/JEITA Joint Industry Guide (JIG) Level A guidelines, and are free from antimony trioxide, and brominated flame retardants.