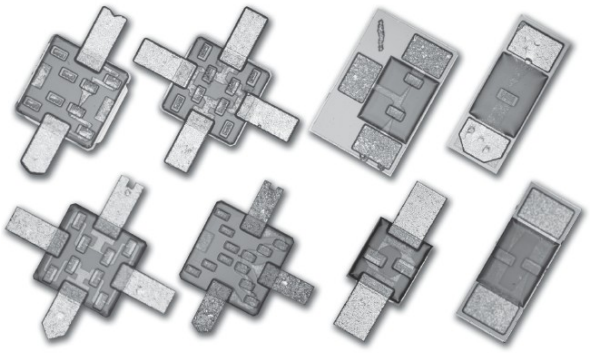
MGS8xx / MGS9xx Series

GaAs Schottky Diodes

Rev. V1

Features

- 14 Different Configurations
- Beam Lead, Flip Chip, or Packaged Devices
- Hi-Rel Screening per MIL-PRF-19500 and MIL-PRF-38534 Available



Description

The MGS series of GaAs Schottky diodes are designed for optimum performance in millimeter wave components operating to 60 GHz.

Beam Lead
Electrical Characteristics, T_A = +25°C

Model	Configuration	V_F mV		ΔV_F mV	V_{BR} V	C_J pF	ΔC_J pF	R_S	Outline
		Min.	Max.	Max.	Min.	Max.	Max.	Max.	
MGS901	Single Junction	650	750	—	5	0.06	—	7	GB110
MGS902	Anti-parallel Pair	650	750	20	5	0.10	—	7	GB210
MGS903	Series Tee	650	750	20	5	0.06	0.02	7	GB310
MGS904	4 Junction Ring-Quad	650	750	20	5	0.06	0.02	7	B85
MGS905	4 Junction Bridge-Quad	650	750	20	5	0.06	0.02	7	B86
MGS906	4 Junction Series-Tee	1300	1500	40	10	0.04	0.02	14	B91
MGS907	8 Junction Ring-Quad	1300	1500	40	10	0.04	0.02	14	B85
MGS907A	8 Junction Ring-Quad	1300	1500	40	10	0.06	0.02	12	B85
MGS907B	8 Junction Ring-Quad	1300	1500	40	10	0.08	0.02	10	B85
MGS908	8 Junction Quad	1300	1500	40	10	0.04	0.02	14	B86
MGS909	6 Junction Series-Tee	1800	2100	60	15	0.10	0.03	21	B90
MGS910	12 Junction Ring-Quad	1800	2100	60	15	0.10	0.03	21	B87
MGS911	12 Junction Bridge-Quad	1800	2100	60	15	0.10	0.03	21	B88
MGS912	Four Junction	2500	2900	—	20	0.03	—	28	B89
Test Conditions		I_F = 1 mA			I_R = 10 µA	V_R = 0 V, 1 MHz		I_F = 5 mA	

Flip Chip
Electrical Characteristics, T_A = +25°C

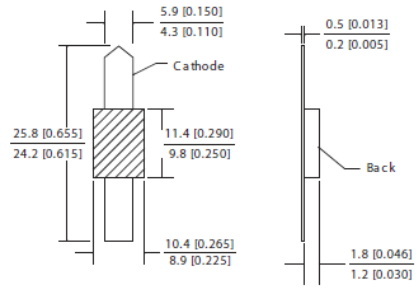
Model	Configuration	V_F mV		ΔV_F mV	V_{BR} V	C_J pF	ΔC_J pF	R_S	Outline
		Min.	Max.	Max.	Min.	Max.	Max.	Max.	
MGS801	Single Junction	650	750	—	5	0.05	—	7	GC110
MGS801A	Single Junction	650	750	—	5	0.075	—	5	GC110
MGS802	Anti-parallel Pair	650	750	20	5	0.10	—	7	GC210
MGS802A	Anti-parallel Pair	650	750	20	5	0.15	—	5	GC210
MGS803	Series Tee	650	750	20	5	0.06	0.02	7	GC310
Test Conditions		I_F = 1 mA			I_R = 10 µA	V_R = 0 V, 1 MHz		I_F = 5 mA	

Absolute Maximum Ratings

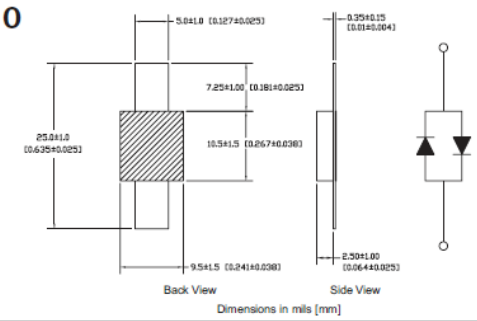
Rating	Limits
Reverse Voltage	Rated Vbr
Forward Current	50 mA
DC Power Dissipation	75 mW per junction @ T_A = 25°C
Operating Temperature	-65°C to +150°
Storage Temperature	-65°C to +150°
Soldering Temperature (packaged)	+260°C for 5 seconds per JEDEC J-STD-20C
Minimum Beam Lead Pull Strength	6 grams

Outlines

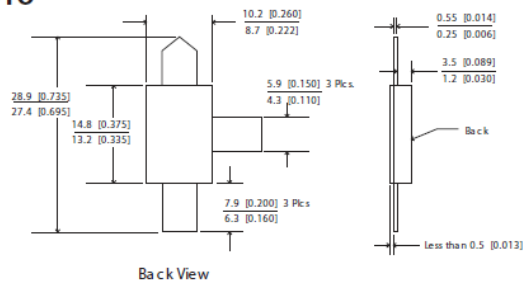
GB110



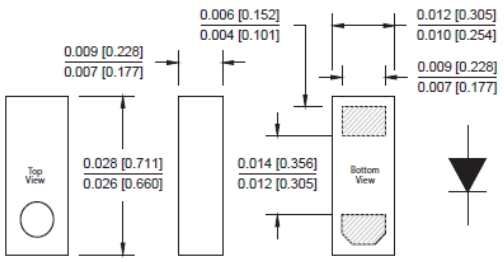
GB210



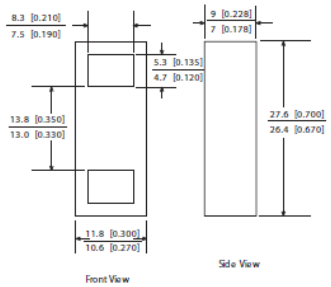
GB310



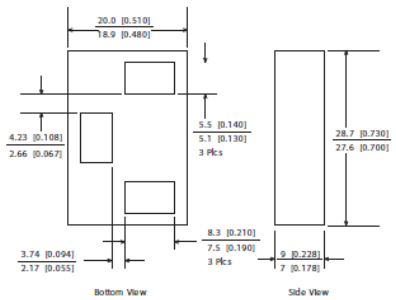
GC110



GC210

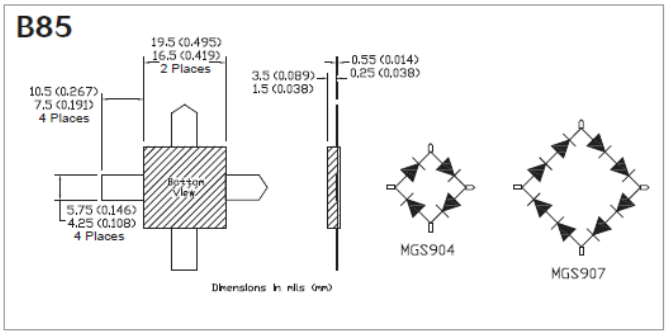


GC310

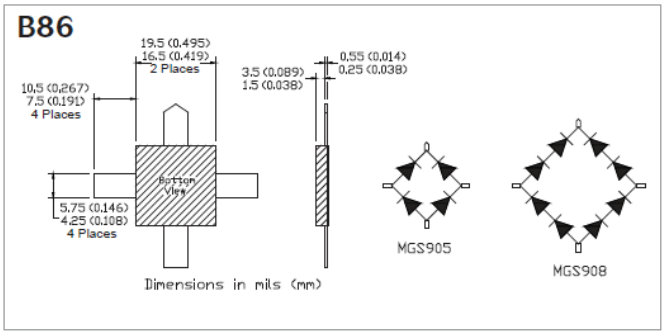


Outlines

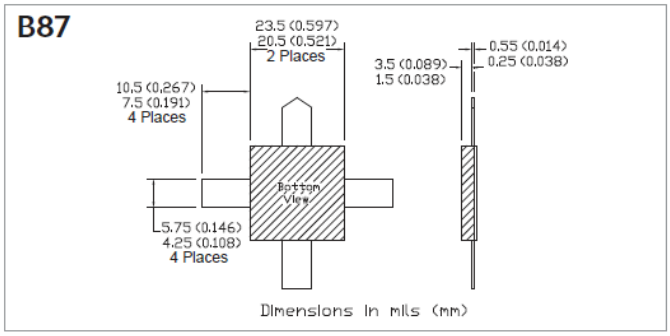
B85



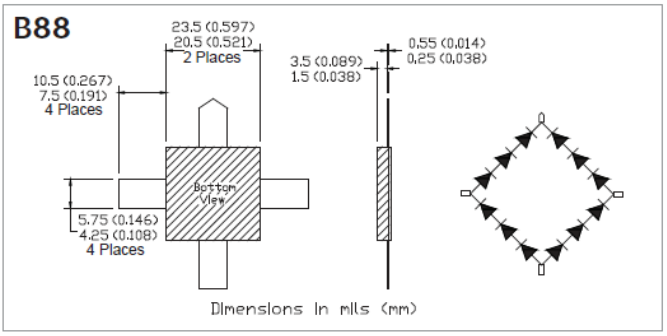
B86



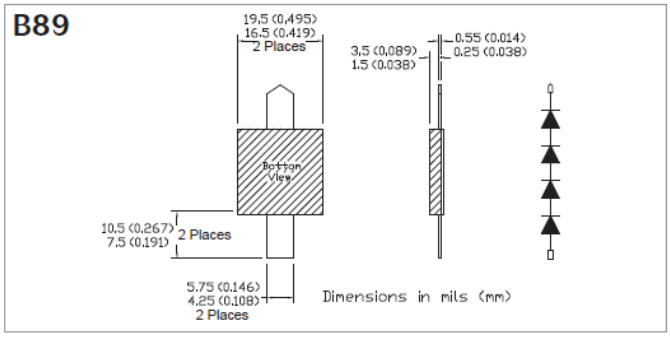
B87



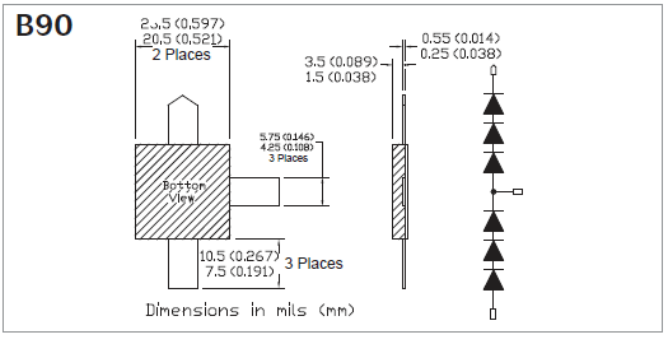
B88



B89



B90



B91