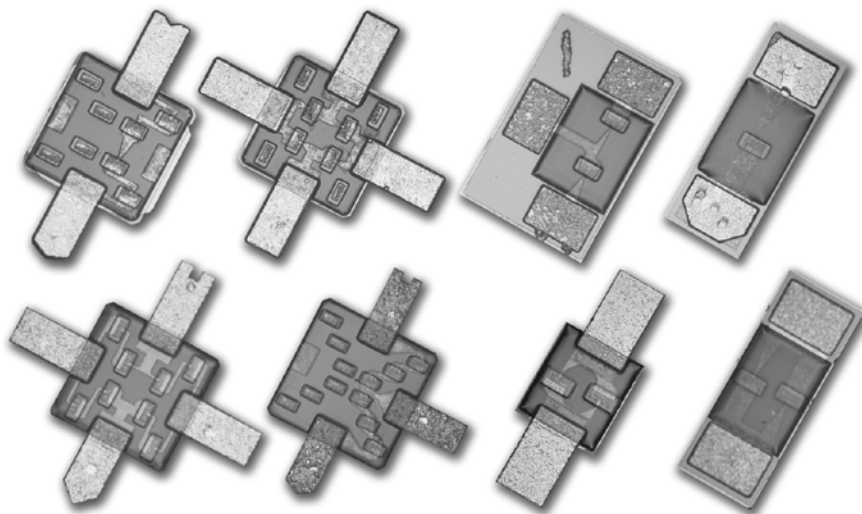


MGS800/900 Series GaAs Schottky Diodes



Description

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

Features

- Fourteen different configurations
- Beam lead, Flip Chip or packaged devices
- Hi-Rel screening per MIL-PRF-19500 and MIL-PRF-38534 available

Absolute Maximum Ratings

Parameters	Rating
Reverse Voltage	Rated V_{BR}
Forward Current	50 mA
Operation Temperature	-65 °C to +150 °C
Storage Temperature	-65 °C to +150 °C
DC Power Dissipation	75 mW per junction at $T_A = 25$ °C, derate linearly to zero at $T_A = +150$ °C
Soldering Temperature (Packaged)	+260 °C for 5 sec per JEDEC J-STD-20C
Beam Lead Pull Strength, Min	6 grams



Beam Lead

Electrical Specifications, $T_A = 25\text{ }^\circ\text{C}$

Model	Configuration	V_F		ΔV_F	V_{BR}	C_J	ΔC_J	R_S	Outline	
		MIN / MAX	MAX	MAX	MIN	MAX	MAX	MAX		
		mV		mV	V	pF	pF	Ω		
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		$I_F = 1\text{ mA}$			$I_R = 10\text{ }\mu\text{A}$	$V_R = 0\text{ V}$ $F = 1\text{ MHz}$		$I_F = 5\text{ mA}$		

Flip Chip

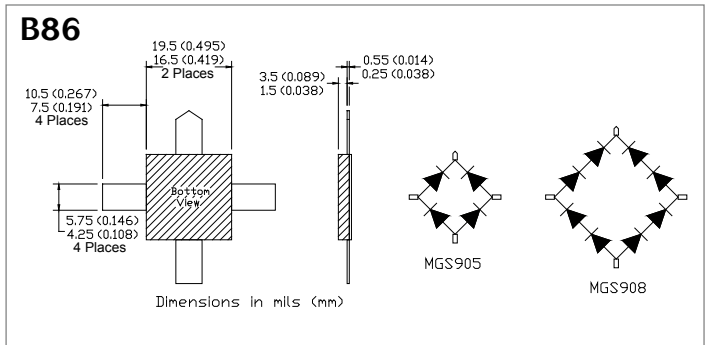
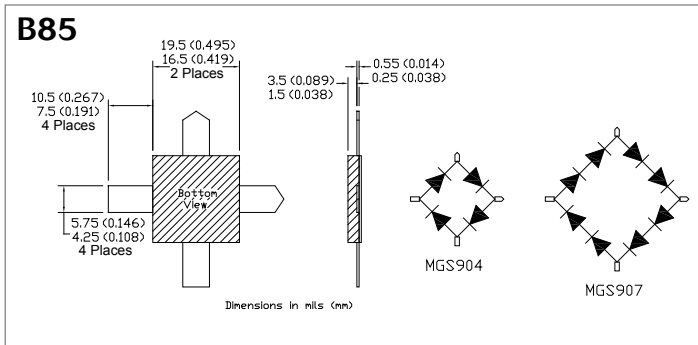
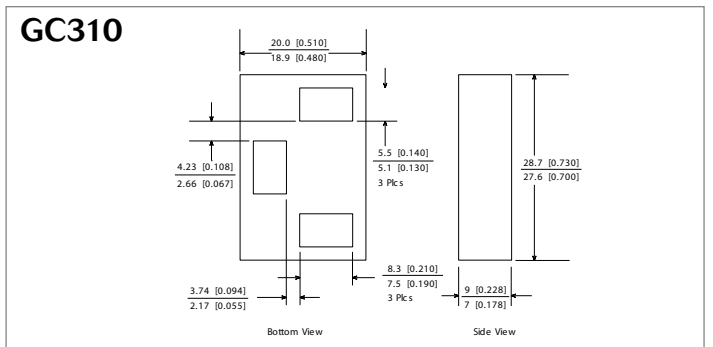
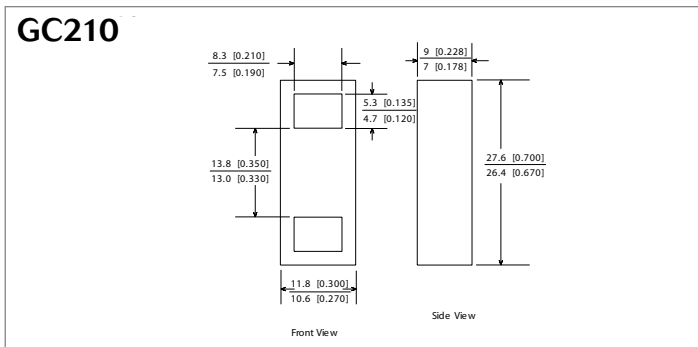
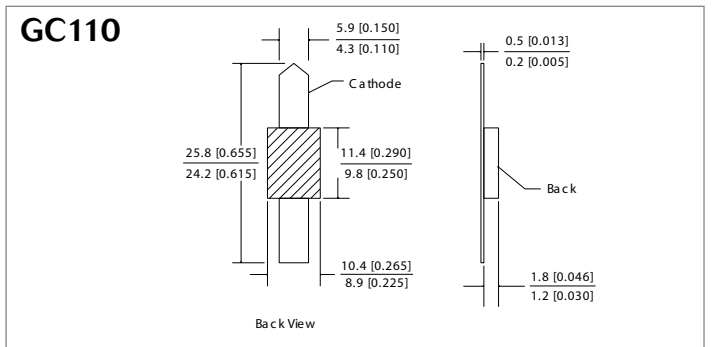
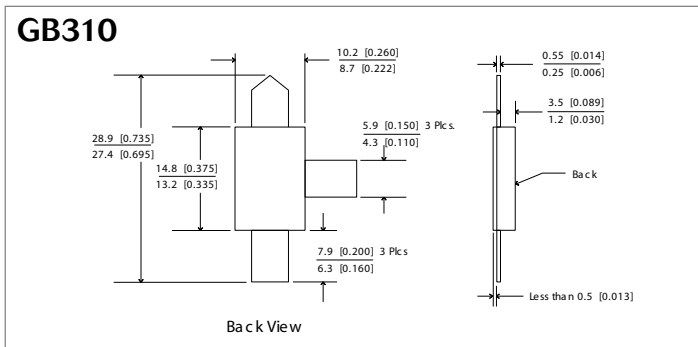
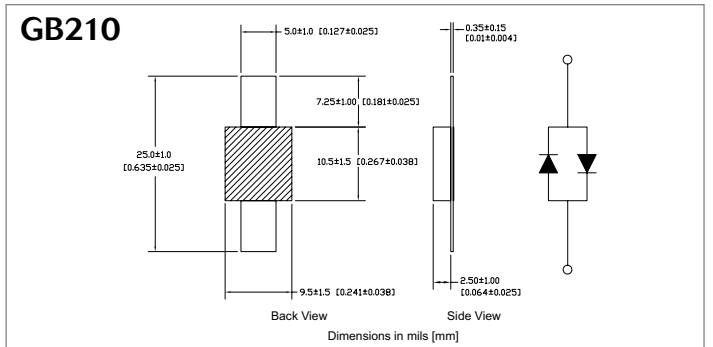
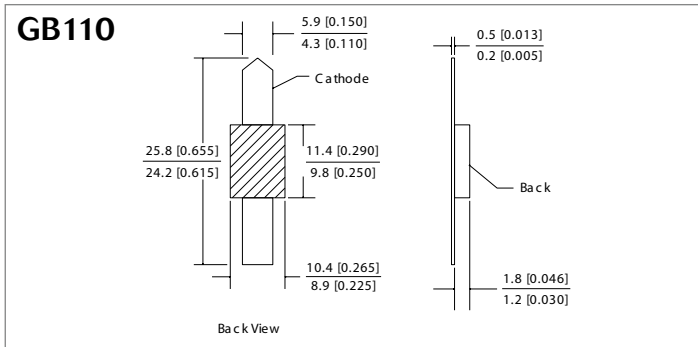
Electrical Specifications, $T_A = 25\text{ }^\circ\text{C}$

Model	Configuration	V_F		ΔV_F	V_{BR}	C_J	ΔC_J	R_S	Outline	
		MIN / MAX	MAX	MAX	MIN	MAX	MAX	MAX		
		mV		mV	V	pF	pF	Ω		
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		$I_F = 1\text{ mA}$			$I_R = 10\text{ }\mu\text{A}$	$V_R = 0\text{ V}$ $F = 1\text{ MHz}$		$I_F = 5\text{ mA}$		

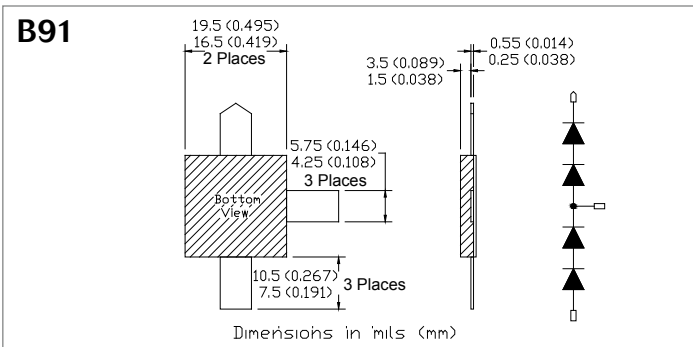
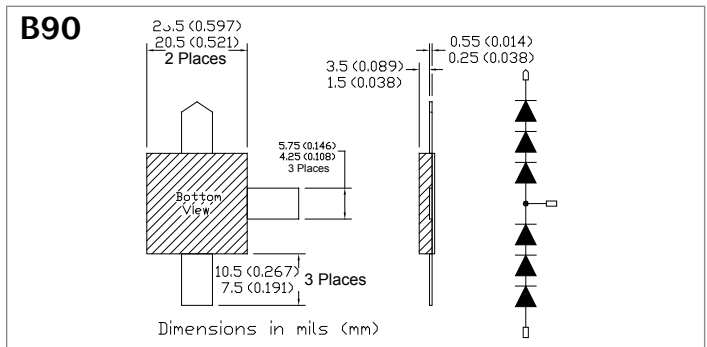
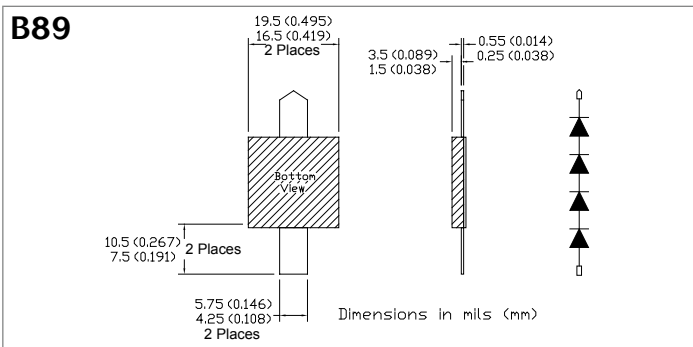
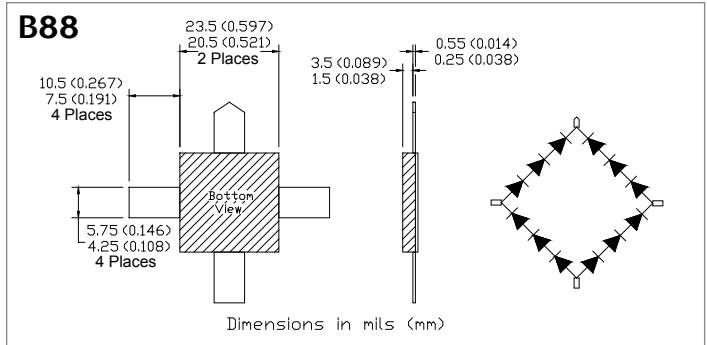
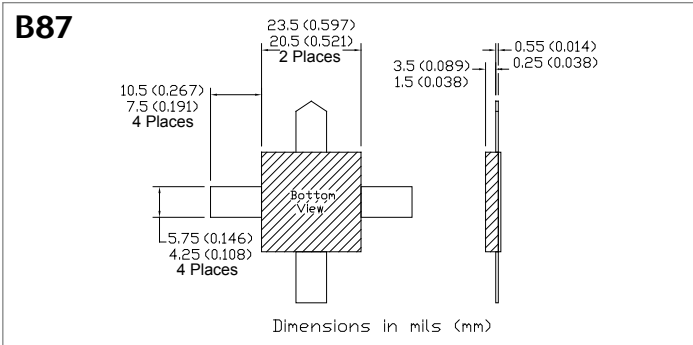
MGS800/900 Series GaAs Schottky Diodes



Outline Drawings



Outline Drawings



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