

GaAs Abrupt Varactor Diodes 0.50 Constant Gamma

Rev. V1

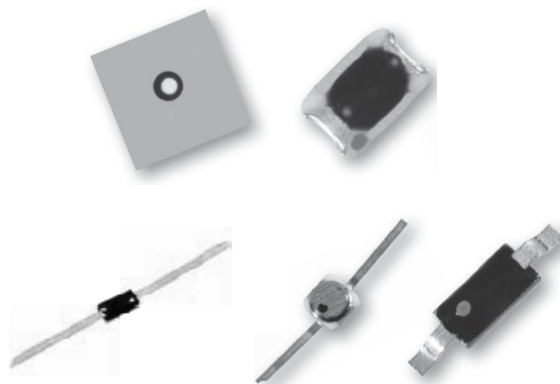
Features

- 0 to 22 V Tuning Voltage
- Screening Available per:
MIL-PRF-19500 and MIL-PRF-35834
- RoHS* Compliant

Description

The MGV series of abrupt varactor diodes feature passivated mesa construction for low leakage and excellent post tuning drift.

Optimum performance is obtained using die however packaged devices are available as well screened per MIL-PRF-19500 and MIL-PRF-38534.

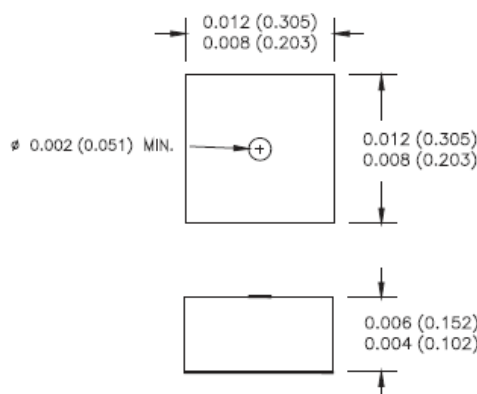


Chip (C01A)

Electrical Specifications: $T_A = +25^\circ\text{C}$, $V_B = 22\text{ V min.}$, $I_R = 100\text{ nA max.}$

Model	Total Capacitance (pF)			Tuning Ratio			Q
	$V_R = 4\text{ V, } 1\text{ MHz}$			$V_R = 0\text{ to } 22$			$V_R = 4\text{ V, } 50\text{ MHz}$
	Min.	Nom.	Max.	Min.	Typ.	Max.	Min.
MGV050-18	0.25	0.30	0.35	4.0	4.7	5.5	4,000
MGV050-20	0.50	0.55	0.61	4.0	4.7	5.5	4,000
MGV050-22	0.90	1.00	1.10	4.0	4.7	5.5	3,000
MGV050-24	1.35	1.50	1.65	4.0	4.7	5.5	3,000
MGV050-26	1.80	2.00	2.20	4.0	4.7	5.5	3,000

Chip Outline Drawings (C01A)



*Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

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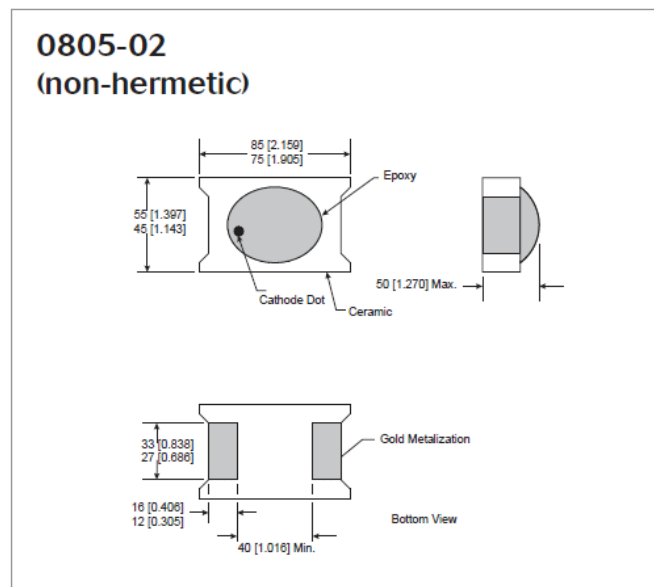
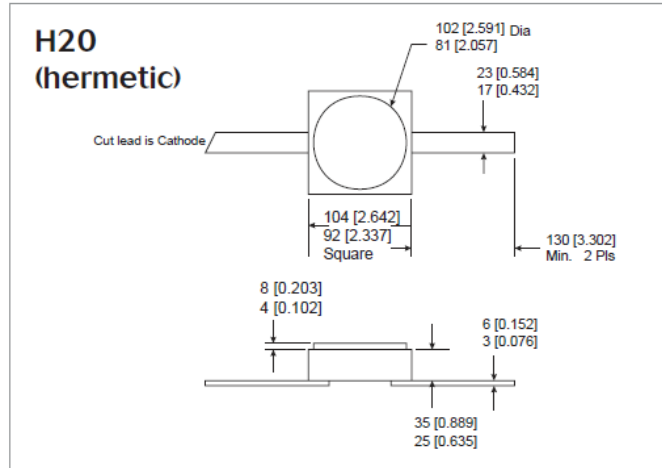
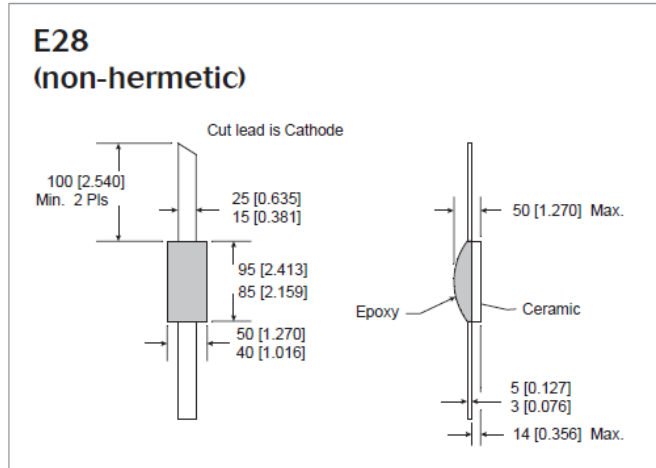
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Packaged (E28, 28X, H20, 0805-2)

Electrical Specifications: $T_A = +25^\circ\text{C}$, $V_B = 22\text{ V min.}$, $I_R = 100\text{ nA max.}$

Model	Total Capacitance (pF)			Tuning Ratio			Q
	$V_R = 4\text{ V, } 1\text{ MHz}$			$V_R = 0\text{ to } 22$			$V_R = 4\text{ V, } 50\text{ MHz}$
	Min.	Nom.	Max.	Min.	Typ.	Typ.	Min.
MGV050-18-E28 / 28X	0.31	0.38	0.45	3.0	3.4	3.9	4000
MGV050-18-H20	0.41	0.48	0.55	2.0	2.6	3.2	4000
MGV050-18-0805-2	0.29	0.36	0.43	3.0	3.6	4.2	4000
MGV050-20-E28 / 28X	0.55	0.63	0.71	3.3	3.9	4.5	4000
MGV050-20-H20	0.64	0.73	0.82	2.8	3.2	3.7	4000
MGV050-20-0805-2	0.53	0.61	0.69	3.4	4.0	4.8	4000
MGV050-22-E28 / 28X	0.95	1.08	1.21	3.6	4.2	5.0	3000
MGV050-22-H20	1.04	1.18	1.32	3.2	3.7	4.4	3000
MGV050-22-0805-2	0.93	1.06	1.19	3.7	4.3	5.1	3000
MGV050-24-E28 / 28X	1.40	1.58	1.76	3.7	4.2	5.3	3000
MGV050-24-H20	1.49	1.68	1.87	3.4	3.7	4.7	3000
MGV050-24-0805-2	1.38	1.56	1.74	3.8	4.3	5.3	3000
MGV050-26-E28 / 28X	1.85	2.08	2.31	3.8	4.4	5.3	3000
MGV050-26-H20	1.94	2.18	2.42	3.5	4.0	4.9	3000
MGV050-26-0805-2	1.83	2.06	2.29	3.8	4.5	5.4	3000

Packaged Outline Drawings



Package Style	Capacitance @ 1 GHz	Inductance @ 1 GHz
E28 / 28X	0.08	0.40
H20	0.18	0.50
0805-2	0.06	0.40

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