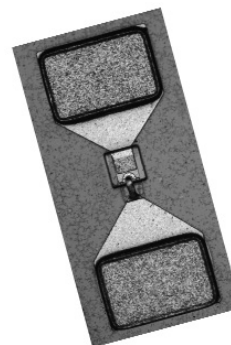


### Dimensions

Size: 27.5 x 15 x 5 mils

### Features

- High Q GaAs Material
- 1.0 and 1.25 Constant Gamma Varactors
- Low Parasitic Capacitance (0.02 pF)
- Large Gold Bond Pads (3.5 x 8.4 mils)
- Silicon Nitride Protective Coating



### Maximum Ratings

Reverse Voltage	18 V
Power Dissipation	50 mW @ 25°C
Operating Temperature	-65°C to +150°C
Storage Temperature	-65°C to +150°C

### Description

Microsemi's Flip Chip GaAs Varactors are designed for use as tuning elements in VCOs, modulators and tunable filters at microwave and millimeter wave frequencies.

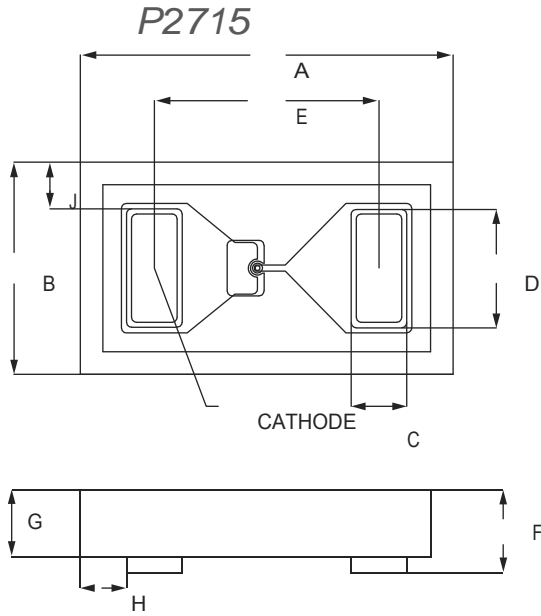
These Flip Chip Varactors incorporate our expertise in GaAs material processing, silicon nitride protective coating and high temperature metallization. This flip chip design maintains the high frequency performance of a beam lead structure in a more rugged configuration.

### Specifications @ 25°C

Part Number	Gamma ±10%	C <sub>T</sub> @ 4 V (pF)	C <sub>T</sub> @2 V / C <sub>T</sub> @12 V	Min. Q @ 4 V 50 MHz	Min. Breakdown Voltage	Max. Reverse Current
MV39001-P2715	1.00	0.4–0.6	3.3–4.1	4000	18 V @ 10 μA	100 nA @ 14.4 V
MV39002-P2715	1.25	0.25–0.4	4.3–5.3	4000	18 V @ 10 μA	100 nA @ 14.4 V
MV39003-P2715	1.25	0.4–0.6	4.5–5.6	3500	18 V @ 10 μA	100 nA @ 14.4 V

### SPICE Model Parameters

I <sub>S</sub> (A)	R <sub>S</sub> (Ω)	N	C <sub>P</sub> (pF)	C <sub>JO</sub> (pF)			m			E <sub>G</sub> (eV)	V <sub>J</sub> (V)	B <sub>V</sub> (V)	I <sub>BV</sub> (A)
				MV39001	MV39002	MV39003	MV39001	MV39002	MV39003				
1E-14 A	0	1.0	0.02	2.0	1.8	2.8	1.0	1.25	1.25	1.42	1.2	18	1E-5 A



DIM	INCHES		MM	
	MIN.	MAX.	MIN.	MAX.
A	0.0270	0.0280	0.686	0.711
B	0.0145	0.0155	0.368	0.393
C	0.0030	0.0040	0.076	0.102
D	0.0079	0.0089	0.201	0.226
E	0.0170	0.0180	0.432	0.457
F	0.0060	0.0070	0.152	0.178
G	0.0047	0.0057	0.119	0.145
H	0.0035	0.0045	0.089	0.114
J	0.0035	0.0045	0.089	0.114

**IMPORTANT:** For the most current data, consult our website: [www.MICROSEMI.com](http://www.MICROSEMI.com)  
 Specifications are subject to change. Consult factory for the latest information.



These devices are ESD sensitive and must be handled using ESD precautions.

<sup>1</sup> The MV39000 Series of products are supplied with a RoHS compliant Gold finish.

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