



## Surface Mount GaAs Tuning Varactor

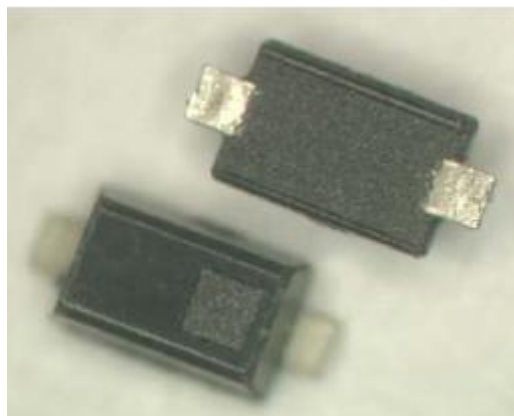
V1

### Features

- Hyperabrupt Tuning Varactor
- Small Profile Surface Mount Package
- RoHS Compliant Package
- Supplied on Tape and Reel

### Description

The MAVR-011005-12790T diode is a hyperabrupt tuning varactor with constant gamma from 2 to 12 volts. This device offers a large capacitance ratio and high quality factor. It is offered in the surface mount, RoHS compliant, plastic SC-79 package.



### Applications

In addition to the electrical characteristics of the MAVR-011005-12790T the small package size and minimal package parasitics (0.6nH package inductance) make these parts attractive for tuning applications where the optimum combination of very wide tuning range and high quality factor is required.

### Absolute Maximum Ratings <sup>1,2</sup>

@ T<sub>A</sub>=+25 °C (Unless Otherwise Noted)

Parameter	Absolute Maximum
Reverse Voltage	18 V
Forward Current	50 mA
Operating Temperature	-55 °C to +125 °C
Storage Temperature	-55 °C to +125 °C

1. Operation of this device above any one of these parameters may cause permanent damage.
2. Please refer to application note M538 for surface mounting

Part Number	Configuration	Package	Package Cp (pF)	Package Ls (nH)
MAVR-011005-12790T	Single	SC-79	0.10	0.6

### Electrical Specifications @ T<sub>A</sub> = +25 °C

**Breakdown Voltage @ I<sub>R</sub> = 10 μA, V<sub>b</sub> = 20 V Minimum**  
**Reverse Leakage Current @ V<sub>R</sub> = 10V, I<sub>R</sub> = 100 nA Maximum**

Part No.	C <sub>t</sub> (pF)		Capacitance Ratio
	V <sub>R</sub> = 4V	V <sub>R</sub> = 12.0 V	C <sub>t2V</sub> / C <sub>t12v</sub>
	Typ.	Typ.	Typ.
MAVR-011005-12790T	0.270	0.20	1.8

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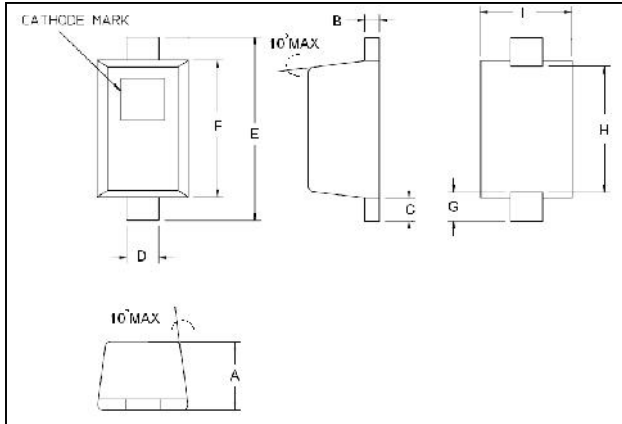
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## Surface Mount GaAs Tuning Varactor

V1

### Case Styles

#### SC-79 (Case Style 1279)



DIM.	INCHES		MILLIMETERS	
	MIN.	MAX.	MIN.	MAX.
A	.0197	.0276	0.50	0.70
B	0.003	0.008	0.07	0.20
C	0.006	0.010	0.15	0.25
D	0.010	0.014	0.25	0.35
E	0.059	0.067	1.50	1.70
F	0.043	0.051	1.09	1.30
G	.0098 nominal		0.250 nominal	
H	.0433 nominal		1.10 nominal	
I	.027	.035	0.68	0.89

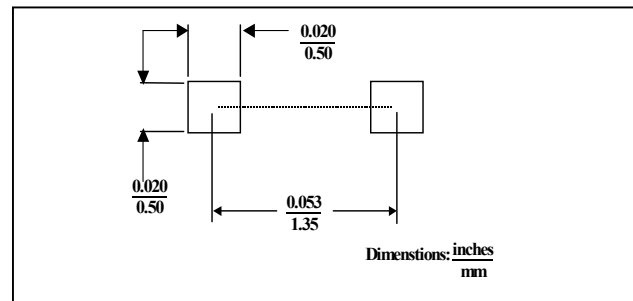
### Mounting Information

The illustration indicates the recommended mounting pad configuration for the SC-79 packages. Solder paste containing flux should be screened onto the pads to a thickness of 0.005- 0.007 inches. The plastic package is placed in position, firmly adhering to the solder paste.

Permanent attachment is performed by a reflow soldering procedure during which the tab temperature does not exceed +275 °C and the body temperature does not exceed +250 °C, for standard models and +260 °C for the RoHS compliant devices.

Please refer to Application Note M538 for surface mounting instructions.

#### SC-79 (Case Style 1279)



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