

Varactor Diodes

MTV4030 Series



Chip



H20



CS37



CS75



CS85



DESCRIPTION

The Aeroflex / Metelics MTV4030 Series Tuning Varactors are silicon abrupt junction devices. They offer the highest Q and lowest resistance available in 30 volt tuning devices.

A unique silicon passivation process assures greater stability, reliability, and low leakage currents at higher temperatures.

Features

- Low Series Resistance
- High Q
- Extensive Selection of Capacitance Values

Maximum Ratings

Rating	Limits	Units
Operating Temperature	-55 to +150	°C
Storage Temperature	-65 to +200	°C
Device Dissipation	250	mW
ESD & MSL Ratings	Class 0 (Human Body Model) & MSL1	

Applications

The MTV4030 Series Tuning Varactors are used for both narrow and wide band tuning through X-band. These devices are used in circuits requiring a high Q voltage variable capacitance such as tunable filters and amplifiers, voltage controlled oscillators, frequency synthesizers, and continuous phase shifters. They are also useful as frequency and phase modulators in communications applications.



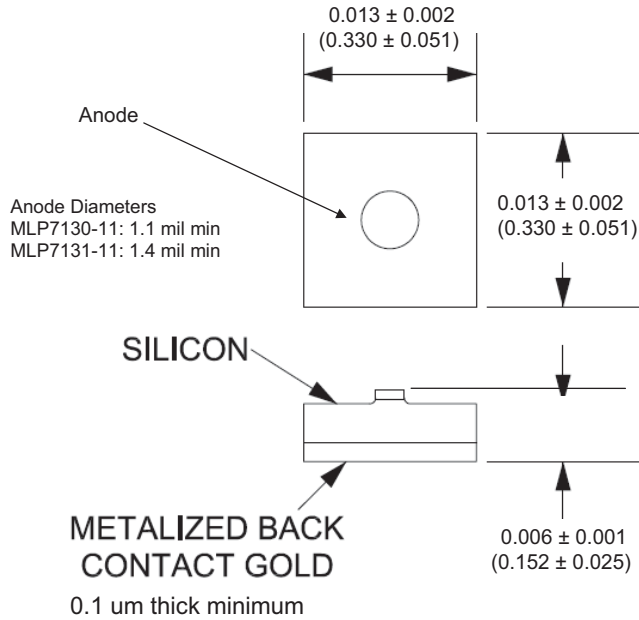
Electrical Characteristics $T_{CASE} = +25\text{ }^{\circ}\text{C}$

Part Number	Reverse Voltage VB $I_R = 10\text{ }\mu\text{A}$	Total Capacitance* CT $V_R = 4\text{ V}, f = 1\text{ MHz}$	Capacitance Ratio CR CT0 / CT30	Quality Factor Q $V_R = 4\text{ V}, f = 50\text{ MHz}$
	Minimum	Typical	Minimum	Minimum
MTV4030-01	30	0.4	5	5000
MTV4030-02	30	0.6	5	5000
MTV4030-03	30	0.8	5	4800
MTV4030-04	30	1	5	4800
MTV4030-05	30	1.2	5	4600
MTV4030-06	30	1.4	5	4400
MTV4030-07	30	1.6	5	4400
MTV4030-08	30	1.8	5	4200
MTV4030-09	30	2.2	5	4000
MTV4030-10	30	2.7	5	3800
MTV4030-11	30	3.3	5	3600
MTV4030-12	30	3.6	5	3400
MTV4030-13	30	3.9	5	3400
MTV4030-14	30	4.7	5	3200
MTV4030-15	30	5.6	5	3000
MTV4030-16	30	6.8	5	2800
MTV4030-17	30	8.2	5	2600
MTV4030-18	30	10	5	2400
MTV4030-19	30	12	5	2200
MTV4030-20	30	15	5	2000
MTV4030-21	30	18	5	1800
MTV4030-22	30	22	5	1600
MTV4030-23	30	27	5	1400
MTV4030-24	30	33	5	1400
MTV4030-25	30	39	5	1200
MTV4030-26	30	47	5	1000

* C_T value given in chip form and will vary depending upon the desired packaging type.

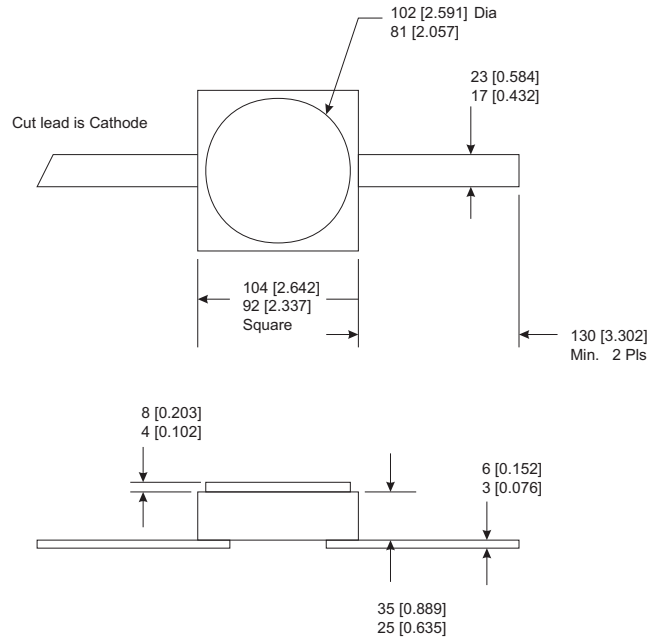
Outline Drawings

CS11 (c11)

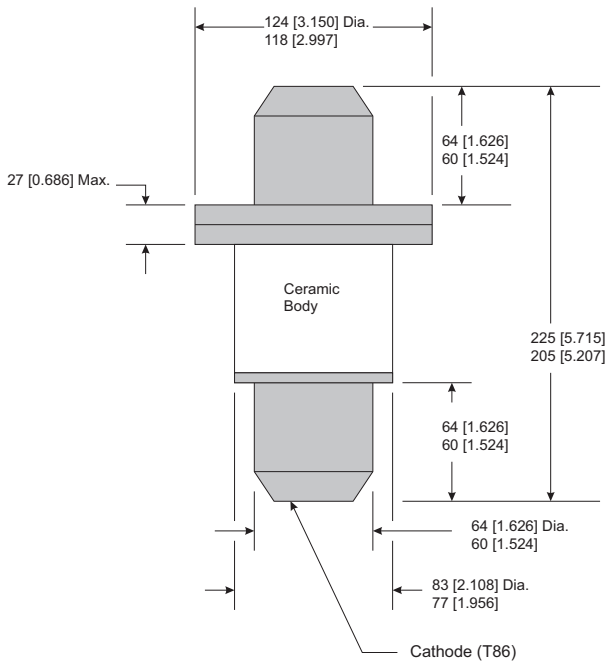


Dimensions are in inches (mm)

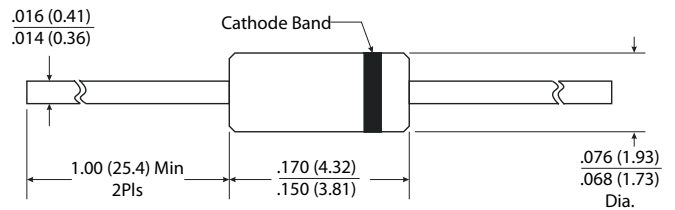
CS20 (H20)



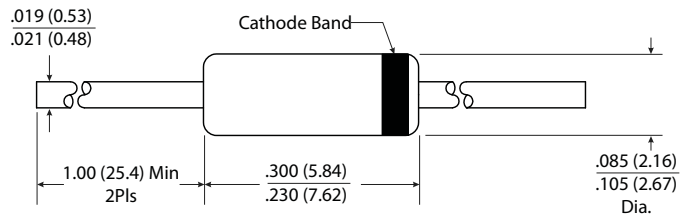
CS37 (T86)



CS75 (A15)



CS85



Note: Dimensions are in inches (mm)

Ordering Information

Example Part: MTV4030-01-XX, replace –XX with desired case style suffix	
-11	CS11 (C11), Silicon Die
-20	H20, Surface Mount, Ceramic Package
-37	CS37 (T86), Pill Package, Ceramic Body
-75	CS75 (A15), Glass Axial Leaded (Hermetic)
-85	CS85, Glass Axial Leaded

Aeroflex / Metelics, Inc.

54 Grenier Field Road, Londonderry, NH 03053
Tel: (603) 641-3800
Sales: (888) 641-SEMI (7364)
Fax: (603)-641-3500

975 Stewart Drive, Sunnyvale, CA 94085
Tel: (408) 737-8181
Fax: (408) 733-7645

www.aeroflex.com/metelics

metelics-sales@aeroflex.com

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