

MSS25-xxx-x Series

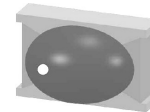


P-Type Silicon Schottky Detectors

Rev. V2

Features

- Close Matching of the Diode Characteristics
- Better Temperature Stability than Zero Bias
- Low Barrier Height
- Passivated with Silicon Nitride



Description

The MSS25-xxx-x Series of Schottky diodes are optimized for superior 1/f noise on P-type silicon epitaxial substrate with proprietary process. In general they require a small forward bias (5 ~ 50 μ A) for small power levels below -30 dBm when used as microwave detectors. At higher powers they can be used as a Zero Bias Detectors.

Chip & Beam Lead Electrical Specifications @ $T_A = 25^\circ\text{C}$

Forward Voltage @ 1 mA = 220 - 330 mV

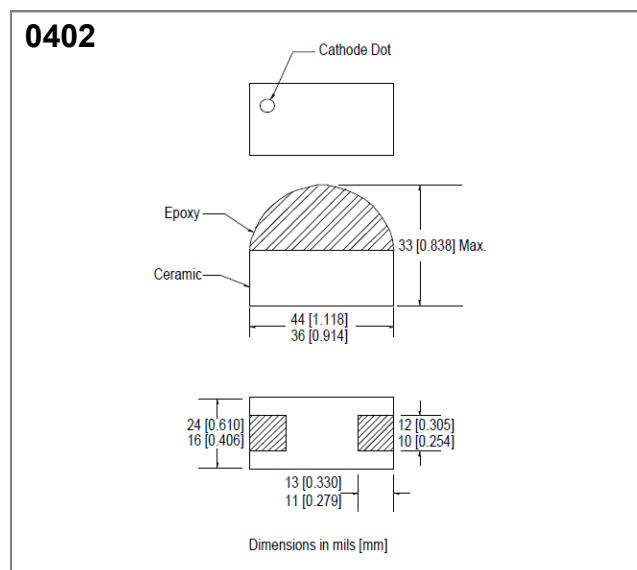
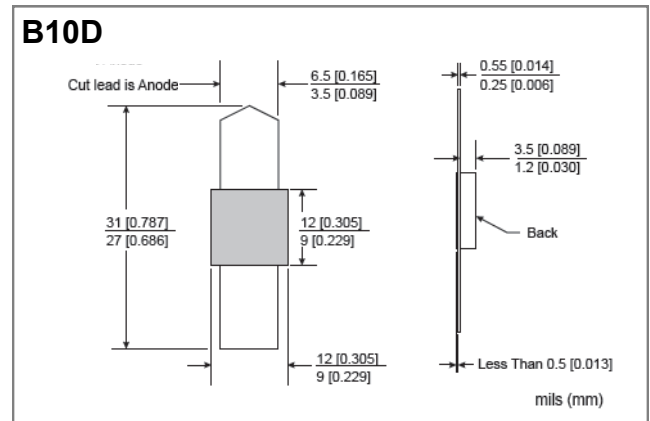
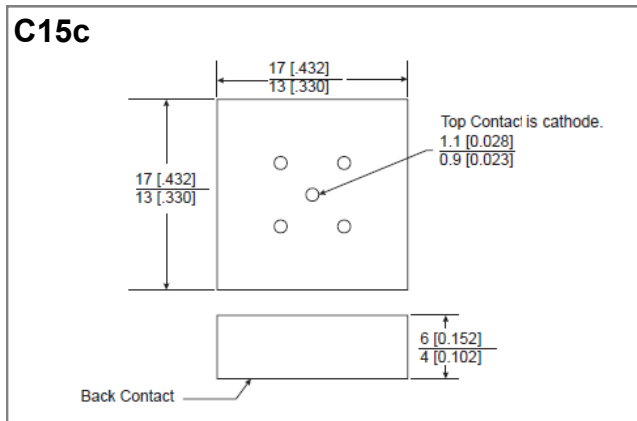
Breakdown Voltage @ 10 μ A = 3 V min.

Model	Forward Voltage (V_F)		Junction Capacitance (C_J)		Dynamic Resistance (R_D)	Frequency	Outline
	mV		pF		Ω	GHz	
	Typ.	Max.	Typ.	Max.	Max.	Max.	
Chip							
MSS25-047-C15c	260	300	0.08	0.10	65	18	C15c
MSS25-049-C15c	220	260	0.10	0.12	52	12	C15c
Beam Lead							
MSS25-141-B10D	280	330	0.06	0.08	65	40	B10D
MSS25-143-B10D	260	300	0.08	0.10	60	26	B10D
MSS25-145-B10D	220	260	0.10	0.12	52	18	B10D
Packaged							
MSS25-141-0402	280	330	0.06	0.08	65	40	0402
Test Conditions	$I_F = 1 \text{ mA}$		$V_R = 0.2 \text{ V}, 1 \text{ MHz}$		$I_F = 5 \text{ mA}$	—	—

Absolute Maximum Ratings

Parameters	Rating
Power Dissipation	150 mW per junction, derated linearly to 0 @ $T_A = +150^\circ\text{C}$
Operating & Storage Temperature	-65°C to $+150^\circ\text{C}$
Soldering Temperature	$+230^\circ\text{C}$ for 5 seconds

Outline Drawings



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