

Features

- Small Profile Surface Mount Packages
- Tape & Reel Deliverable
- RoHS* Compliant

Applications

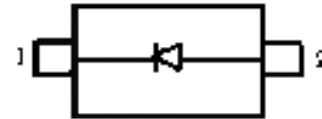
- Designed for High Volume, Low Cost Detector Applications

Description

The MADS-011082-12790T is a silicon zero bias P-type detector diode assembled in a low cost surface mount plastic package. This device is designed for usage in a wide variety of detector applications.

The small diode package size and moderate parasitics make these parts ideal for low leakage limiters and RF temperature compensated envelope detectors for RF ID tags applications up to 4 GHz.

Configurations (Top View)



Electrical Specifications @ +25°C

Parameter	Condition	Specification
Reverse Voltage Breakdown (V_B)	$I_R = 100 \mu\text{A}$	1 V min.
Forward Voltage (V_F)	$I_F = 1 \text{ mA}$	145 mV typ. 160 mV max.
Total Capacitance (C_T)	$V_R = 0.15 \text{ V}$	0.25 pF typ.
Video Resistance (R_V)	—	3000 Ω typ.

Ordering Information

Part Number	Package Style
MADS-011082-12790T	SC-79

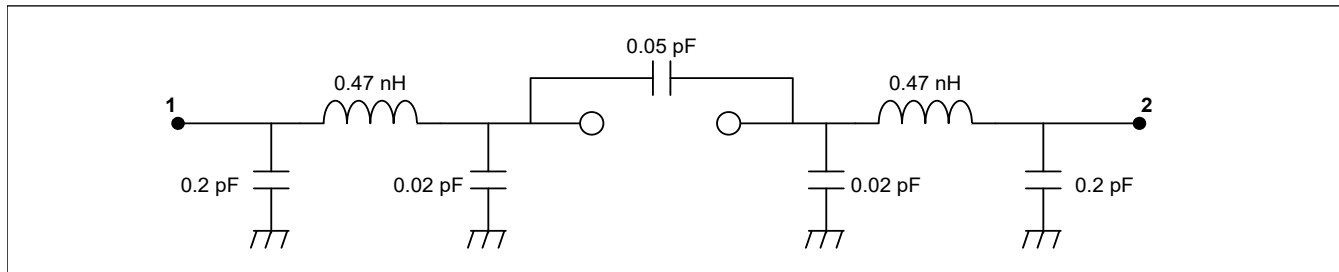
Maximum Ratings @ 25°C^{1,2}

Parameter	Values
CW RF Incident Power	75 mW
Reverse Voltage	1.0 V
Junction Temperature	+175°C
Operating Temperature	-65°C to +125°C
Storage Temperature	-65°C to +150°C

1. Operation of this device above any one of the Maximum Rated parameters may cause permanent damage.
2. Please refer to Application Note M538 for surface mounting instructions.

1 * Restrictions on Hazardous Substances, compliant to current RoHS EU directive.

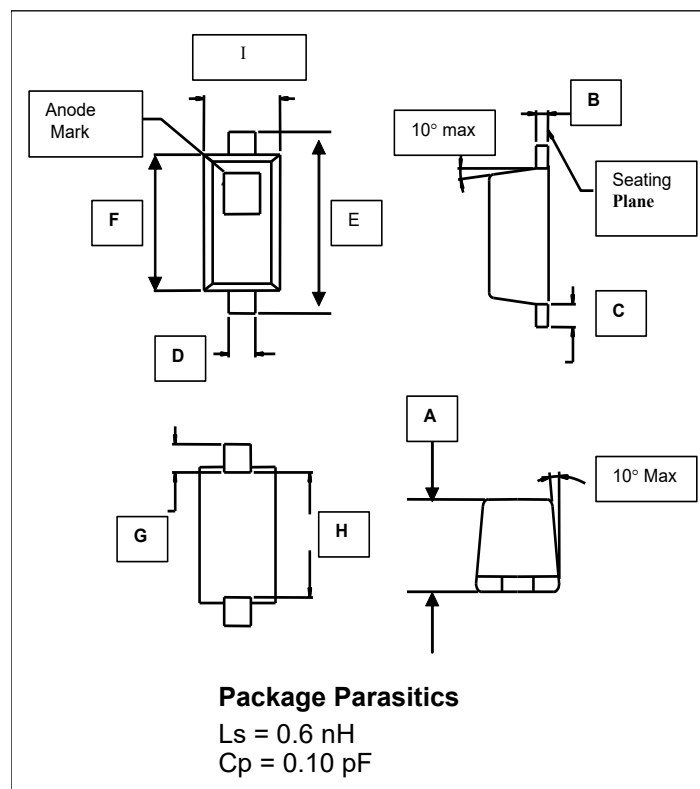
Circuit Model (SC-79)



Spice Model Parameters: MADS-011082-12790T Low Barrier P-Type Schottky Diode

I_s (A)	R_s (Ω)	N	C_T @ .15 V (pF)	M	I_k (mA)	$C_{par_C_J}$ (F)	V_J (V)	FC	BV (V)	IBV (μ A)
8.340E-06	22.495	1.292	0.231	0.209	1.36	1.9200E-15	1.48	0.5	2.15	10

Case Style SC-79



Dimensions

DIM.	INCHES		MILLIMETERS	
	MIN.	MAX.	MIN.	MAX.
A	0.020	0.028	0.50	0.71
B	0.003	0.008	0.08	0.20
C	0.006	0.010	0.15	0.25
D	0.010	0.014	0.25	0.36
E	0.059	0.067	0.08	0.15
F	0.043	0.051	1.10	1.30
G	0.011	0.012	0.28	0.30
H	0.037	0.043	0.94	1.09
I	0.027	0.035	0.68	0.96

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