

### Features

- Designed for MRI Applications
- Anti-Parallel Self Bias Arrangement
- Low Magnetic Packaging
- RoHS\* Compliant

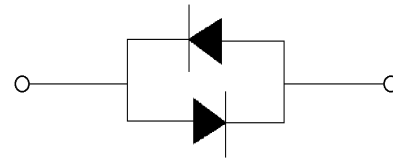
### Applications

- Multi Market

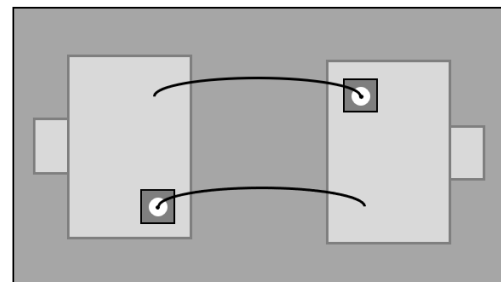
### Description

The MADP-047668-14630T device is a passive switch element using silicon PIN diodes arranged in an anti-parallel configuration to facilitate efficient RF power handling. The PIN diodes become a high Q, R-C network under small signal conditions and perform as an effective rectifier or short-circuit under high RF signal to tune and detune the resonant MRI tank circuit. This device is in a non-magnetic ceramic overmolded package.

### Functional Schematic



### Internal Construction



ODS-1463

### Electrical Specifications: $T_A = +25^\circ\text{C}$

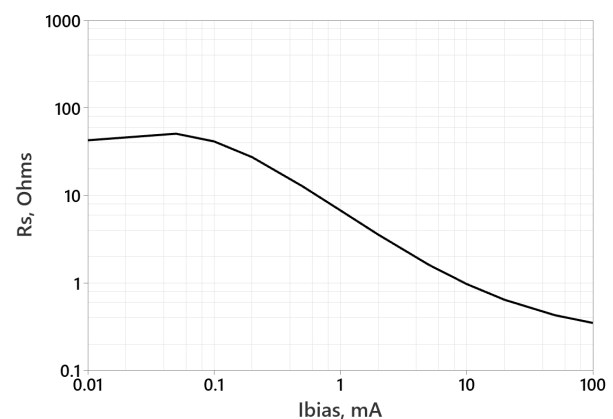
Parameter	Test Conditions	Units	Min.	Typ.	Max.
Breakdown Voltage <sup>1</sup>	$I_R = 10 \mu\text{A}$	V	50	—	—
Forward Voltage	$I_F = 100 \text{ mA}$	V	—	1.0	1.2
Junction Capacitance	$V_R = 0 \text{ V}, 1 \text{ MHz}$	pF	—	1.0	—
Total Capacitance	$V_R = 0 \text{ V}, 1 \text{ MHz}$	pF	—	2.1	—
Series Resistance	$I_F = 100 \text{ mA}, 100 \text{ MHz}$	$\Omega$	—	0.2	.6
Lifetime	$I_F = 10 \text{ mA}, I_R = 6 \text{ mA}, 90\%$	ns	—	20	30
Conductance	$V_R = 0 \text{ V}, f = 64 \text{ MHz}$	$\mu\text{S}$	—	—	15

1. Tested as single die only.

### Absolute Maximum Ratings

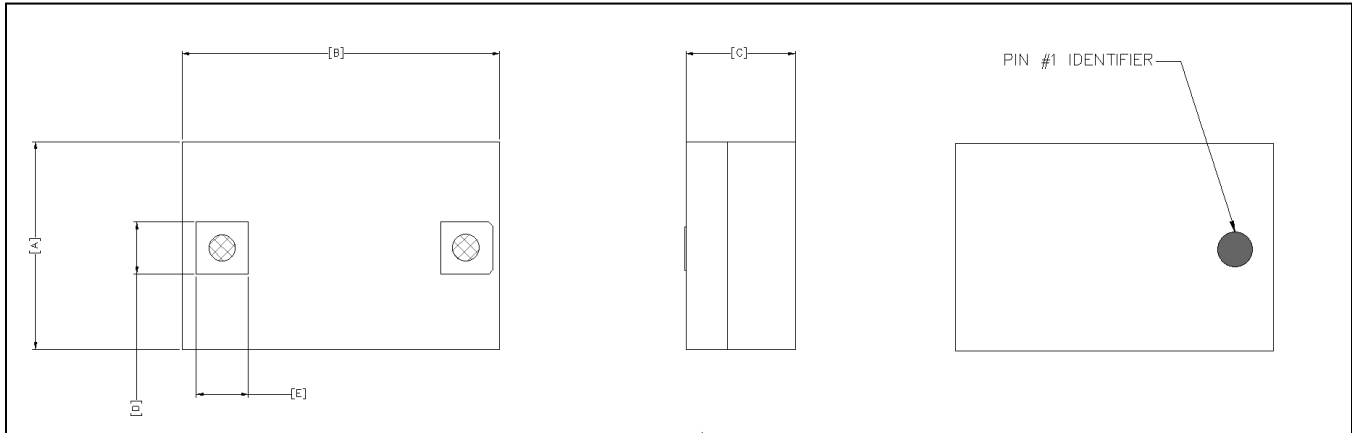
Parameter	Absolute Maximum
Breakdown Voltage	50 V
Forward Current	2 A
Junction Temperature	+175°C
Thermal Resistance	26°C/W
Storage Temperature	-55°C to +150°C
Solder Temperature	+260°C per JEDEC STD-J-20C

### Series Resistance vs. Current



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

Case Style 1463



Dimensions	Inches		mm	
	Min.	Max.	Min.	Max.
A	0.115	0.125	2.92	3.18
B	0.164	0.174	4.17	4.42
C	—	0.065	—	1.65
D	0.034	0.044	0.86	1.12
E	0.031	0.041	0.79	1.04

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