

Product Summary

V_{BO} (V) @ I_{BO} 10 μ A	$I_{T(RMS)}$ (A)	V_{TM} (V) @ $I_T = 1$ A	I_H (mA)
240	1	1.5	60

Mechanical Data

- Package: SMA
- Package Material: Plastic Material, UL Flammability Classification 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish – Matte Tin Plated Leads, Solderable Per MIL-STD-202, Method 208
- Polarity Indicator: As Marked on the Body
- Weight: 0.064 grams (Approximate)

SMA



Top View



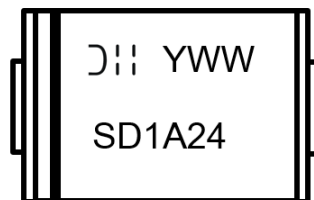
Bottom View

Ordering Information (Note 4)

Part Number	Package	Packing	
		Qty.	Carrier
SD1A240A-13	SMA	5000	Tape & Reel

- Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
 2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

Marking Information



SD1A24 = Product Type Marking Code
 DII = Manufacturer's Code Marking
 YWW = Date Code Marking
 Y = Last Digit of Year (ex: 2 = 2022)
 WW = Week Code (01 to 53)

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Test Conditions	Symbol	Value	Unit	
Peak Repetitive Off-State Voltage	T _J = -40 to +125°C, Sine Wave, 50 to 60Hz	V _{DRM}	210	V	
On-State RMS Current	T _L = +95°C	I _{T(RMS)}	1	A	
Pulse On-State Current	T _A = +25°C, Pulse Width = 10µs Sine Wave, Repetitive Peak Value	I _{TRM}	f = 5Hz	280	A
			f = 60Hz	120	
Operating Junction Temperature Range		T _J	-40 to +125	°C	
Storage Temperature Range		T _{STG}	-40 to +150	°C	

Off Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Max	Unit
Peak Repetitive Forward or Reverse Blocking Current (50 to 60Hz) V _{DRM} = 210V	I _{DRM}	10	µA

On Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Test Conditions	Symbol	Min	Typ.	Max	Unit
Peak On-State Voltage	I _T = 1A	V _{TM}	—	—	1.5	V
Breakover Voltage	I _{BO} = 10µA	V _{BO}	230	240	250	V
Breakover Current		I _{BO}	—	—	200	µA
Holding Current		I _H	—	—	60	mA
Switching Resistance		R _S	0.1	—	—	kΩ
Critical Rate of Rise of On-State Current		di/dt	—	—	80	A/µs

Thermal Characteristics

Characteristic	Symbol	Typ.	Unit
Typical Thermal Resistance to Case (Note 5)	R _{θJC}	23	°C/W

Note: 5. Thermal resistance junction to case (reference to similar die size). Unit mounted on PCB with 5mm x 7mm copper pad per pin.

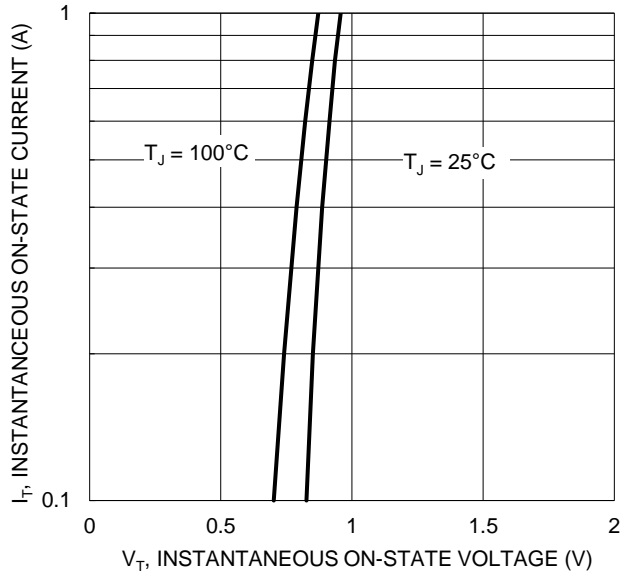


Figure 1. Typical Forward Voltage

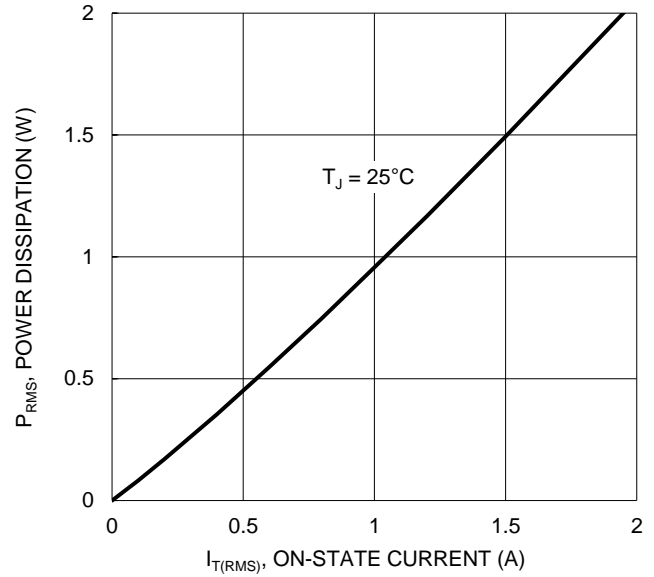


Figure 2. Typical Power Dissipation

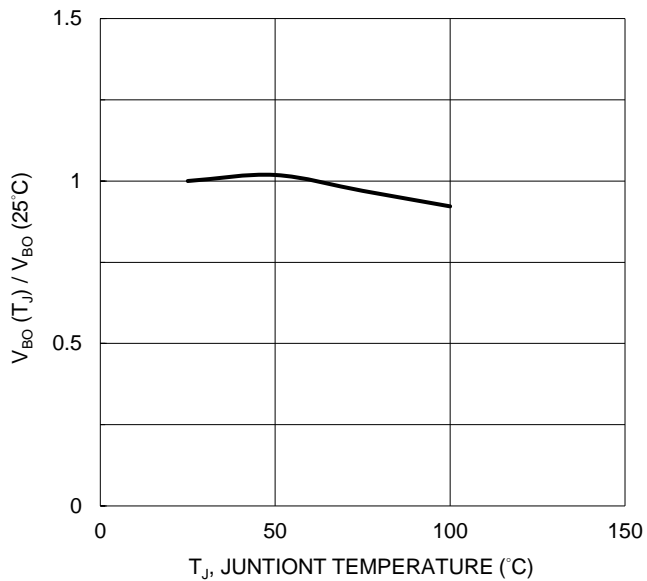


Figure 3. Typical Breakover Voltage

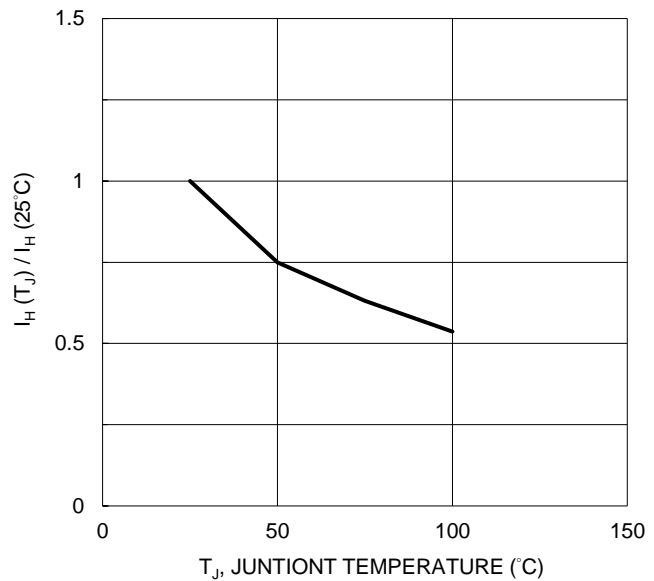
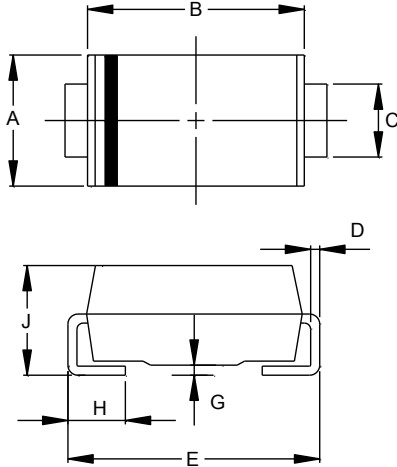


Figure 4. Typical Holding Current

Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

SMA

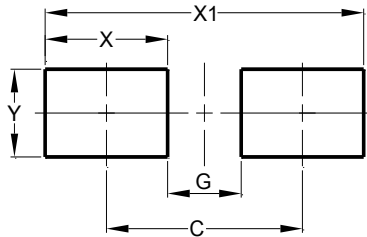


SMA		
Dim	Min	Max
A	2.29	2.92
B	4.00	4.60
C	1.27	1.63
D	0.15	0.31
E	4.80	5.59
G	0.05	0.20
H	0.76	1.52
J	1.96	2.40
All Dimensions in mm		

Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

SMA



Dimensions	Value (in mm)
C	4.00
G	1.50
X	2.50
X1	6.50
Y	1.70

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