NOT RECOMMENDED FOR NEW DESIGN
USE DFLS160

Green

SDM1U60P1

1.0A SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER
PowerDI123

Product Summary

V_{RRM} (V)	I_O (A)	V_F Max (V)	I_R Max (μA)
60	1	0.50	100

Features and Benefits

- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Leakage Current
- Patented Interlocking Clip Design for High Surge Current Capacity
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please contact us or your local Diodes representative. https://www.diodes.com/quality/product-definitions/**

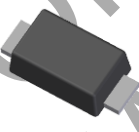
Applications

- Bridge Diodes
- Blocking Diodes
- Reverse Protection Diodes

Mechanical Data

- Case: PowerDI®123
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Polarity Indicator: Cathode Band
- Terminals: Matte Tin Finish Annealed over Copper Leadframe. Solderable per MIL-STD-202, Method 208 (e3)
- Weight: 0.018 grams (Approximate)

PowerDI123



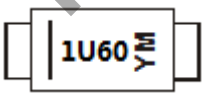
Top View

Ordering Information (Note 4)

Part Number	Case	Packaging
SDM1U60P1-7	PowerDI123	3,000/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



1U60 = Product Type Marking Code
YM = Date Code Marking
Y = Year (ex: G = 2019)
M = Month (ex: 5 = May)

Date Code Key

Year	2016	…	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Code	D	…	G	H	I	J	K	L	M	N	O	P

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

PowerDI is a registered trademark of Diodes Incorporated.

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

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	60	V
Average Forward Current	$I_{F(AV)}$	1.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	60	A

Thermal Characteristics

Characteristic	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient (Note 5)	$R_{\theta JA}$	60	°C/W
Thermal Resistance, Junction to Case (Note 5)	$R_{\theta JC}$	5	°C/W
Storage Temperature Range	T_{STG}	-55 to +150	°C

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	V_F	— —	0.45 0.40	0.50 —	V	I_F = 1.0A, T_A = +25°C I_F = 1.0A, T_A = +125°C
Leakage Current (Note 6)	I_R	— —	15 10	100 —	µA mA	V_R = 60V, T_A = +25°C V_R = 60V, T_A = +125°C
Total Capacitance	C_T	—	52	—	pF	V_R = 10V, f = 1.0MHz

Notes: 5. Device mounted on 1inch sq. copper pad, 2oz.
6. Short duration pulse test used to minimize self-heating effect.

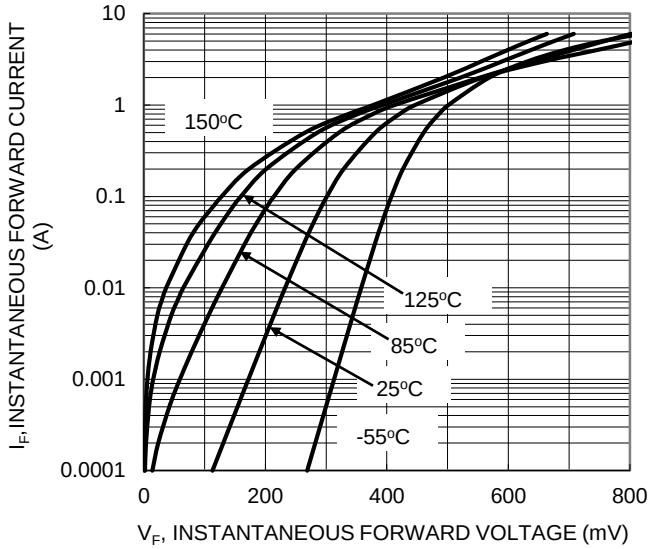


Figure 1. Typical Forward Characteristics

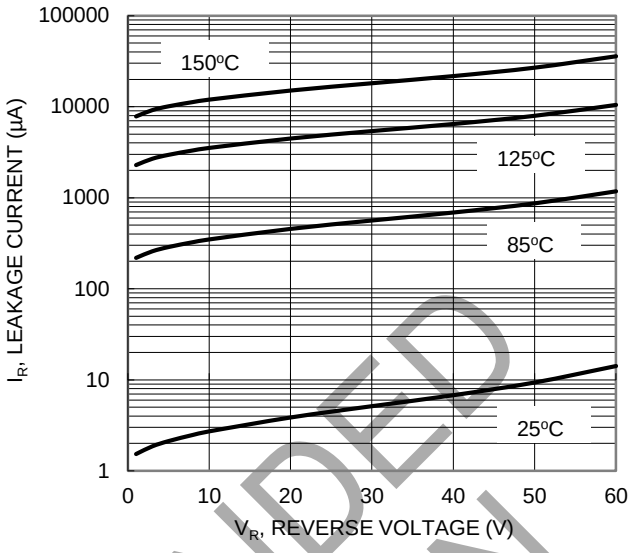


Figure 2. Typical Reverse Characteristics

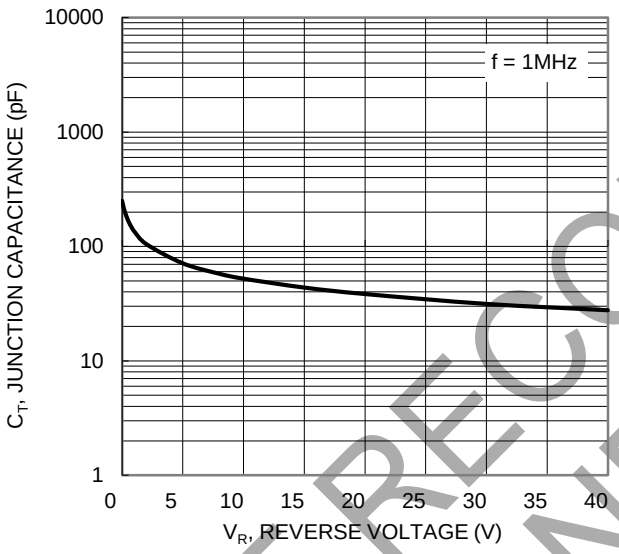


Figure 3. Typical Junction Capacitance

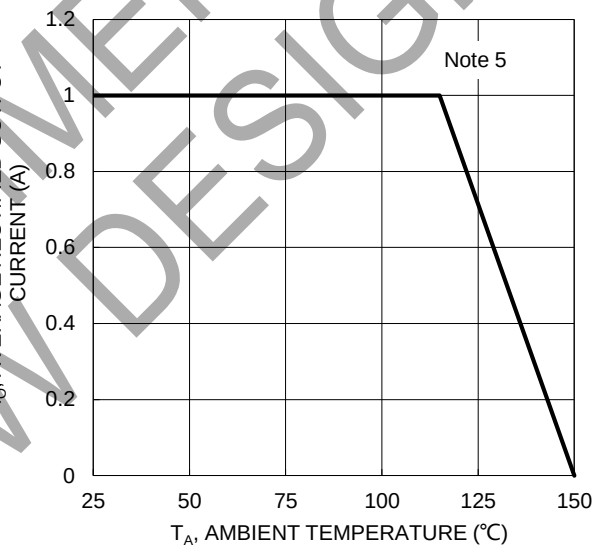
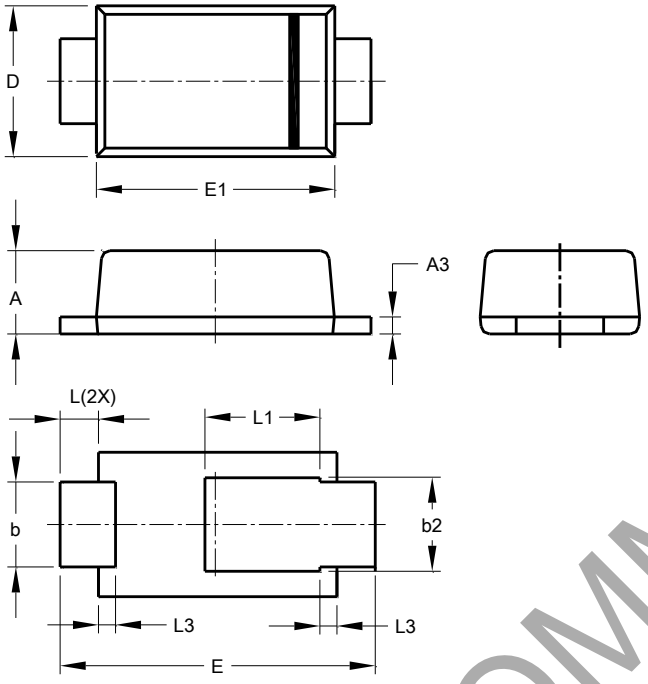


Figure 4. DC Forward Current Derating

Package Outline Dimensions

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

PowerDI123

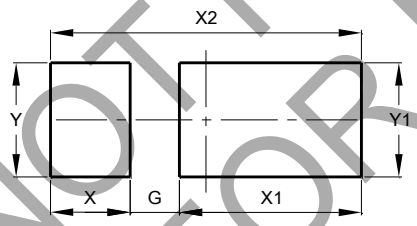


PowerDI123			
Dim	**Min**	**Max**	**Typ**
A	0.93	1.00	0.98
A3	0.15	0.25	0.20
b	0.85	1.25	1.00
b2	1.025	1.125	1.10
D	1.63	1.93	1.78
E	3.50	3.90	3.70
E1	2.60	3.00	2.80
L	0.40	0.50	0.45
L1	1.25	1.40	1.35
L3	0.125	0.275	0.20
All Dimensions in mm			

Suggested Pad Layout

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

PowerDI123



Dimensions	Value (in mm)
G	0.65
X	1.05
X1	2.40
X2	4.10
Y	1.50
Y1	1.50

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