



**THE DATASHEET OF
SD103ATW-7**



Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Fast Switching
- Low Leakage Current
- Three Fully Isolated Schottky Diodes
- **Totally Lead-Free & Fully 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-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](https://www.diodes.com/quality/product-definitions/) or your local Diodes representative.**
<https://www.diodes.com/quality/product-definitions/>

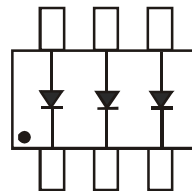
Mechanical Data

- Package: SOT363
- Package Material: Molded Plastic, "Green" Molding Compound; UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Polarity: See Diagram
- Terminals: Finish – Matte Tin Plated Leads, Solderable per MIL-STD-202, Method 208③
- Weight: 0.006 grams (Approximate)

SOT363 (Standard)



Top View



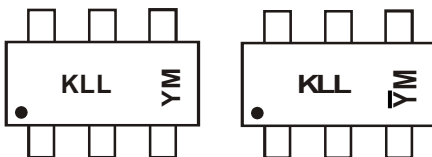
Device Schematic

Ordering Information (Note 4)

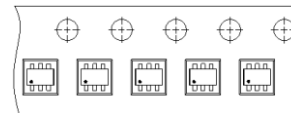
Part Number	Package	Packing	
		Qty.	Carrier
SD103ATW-7-F	SOT363 (Standard)	3,000	Tape & Reel

- Notes:
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
 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



KLL = Product Type Marking Code
 YM & YM = Date Code Marking
 Y = Year (ex: J = 2022)
 M = Month (ex: 9 = September)



Date Code Key

Year	2002	...	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Code	O	...	J	K	L	M	N	O	P	R	S	T

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

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

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	40	V
RMS Reverse Voltage	V _{R(RMS)}	28	V
Forward Continuous Current (Note 5)	I _{FM}	350	mA
Average Rectified Current (Note 5)	I _O	175	mA
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (Note 5)	I _{FSM}	1.0	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 6)	P _D	200	mW
Thermal Resistance, Junction to Ambient Air (Note 6)	R _{θJA}	500	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +125	°C

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 7)	V _{(BR)R}	40	—	—	V	I _R = 100μA
Forward Voltage Drop	V _F	—	0.27	—	V	I _F = 1mA
		—	0.32	—	V	I _F = 5mA
		—	0.36	0.37	V	I _F = 20mA
		—	0.44	0.50	V	I _F = 100mA
Leakage Current (Note 7)	I _R	—	0.2	2.0	μA	V _R = 10V
		—	0.4	5.0	μA	V _R = 30V
Total Capacitance	C _T	—	50	—	pF	V _R = 0V, f = 1.0MHz
Reverse Recovery Time	t _{RR}	—	10	—	ns	I _F = I _R = 10mA, I _{RR} = 0.1 x I _R , R _L = 100Ω

- Notes:
- This is the maximum rating of single Diode (D₁ or D₂ or D₃). In the case of using two or three diodes, the maximum ratings per diode are 75% of the ratings for single diode operation.
 - Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/package-outlines.html>.
 - Short duration pulse test used to minimize self-heating effect.

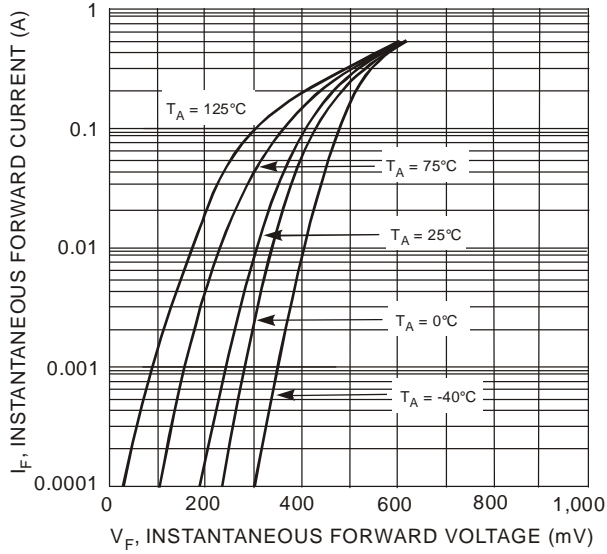


Fig. 1 Typical Forward Characteristics

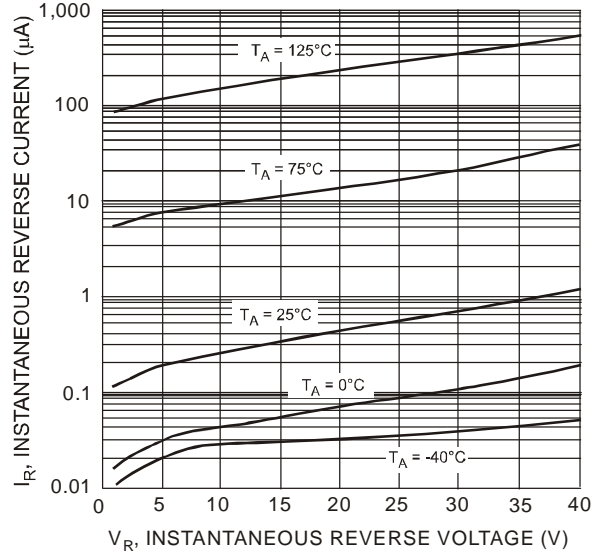


Fig. 2 Typical Reverse Characteristics

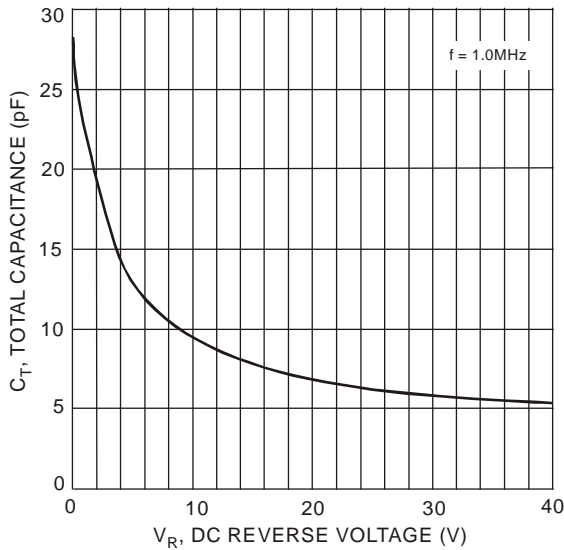


Fig. 3 Total Capacitance vs. Reverse Voltage

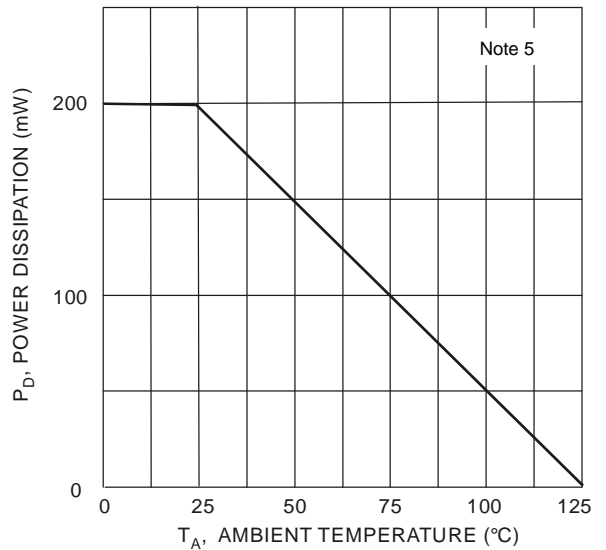
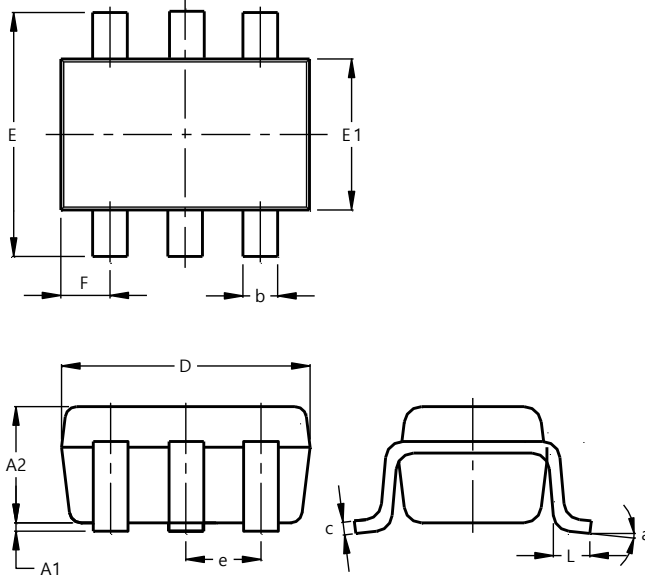


Fig. 4 Power Derating Curve

Package Outline Dimensions

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

SOT363 (Standard)

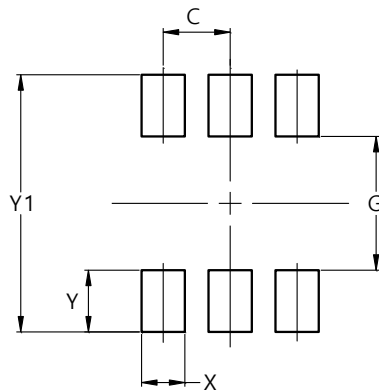


SOT363 (Standard)			
Dim	Min	Max	Typ
A1	0.00	0.10	0.05
A2	0.80	1.00	0.90
b	0.10	0.35	0.225
c	0.08	0.22	0.15
D	1.80	2.20	2.00
E	2.00	2.45	2.225
E1	1.15	1.35	1.25
e	--	--	0.65
F	0.25	0.45	0.35
L	0.25	0.46	0.355
a	0°	8°	--
All Dimensions in mm			

Suggested Pad Layout

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

SOT363 (Standard)



Dimensions	Value (in mm)
C	0.650
G	1.300
X	0.420
Y	0.600
Y1	2.500

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