

Features

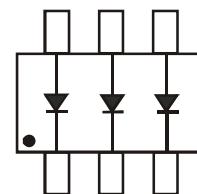
- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Fast Switching
- Low Leakage Current
- Three Fully Isolated Schottky Diodes
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

Mechanical Data

- Case: SOT-363
- Case Material: Molded Plastic, "Green" Molding Compound; UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Polarity: See Diagram
- Terminals: Matte Tin Finish Annealed over Alloy 42 Leadframe (Lead Free Plating); Solderable per MIL-STD-202, Method 208 (e3)
- Weight: 0.006 grams (Approximate)



Top View



Device Schematic

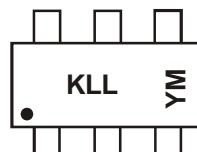
Ordering Information (Note 4)

Part Number	Case	Packaging
SD103ATW-7-F	SOT-363	3,000/Tape & Reel

Notes:

1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant.
2. See http://www.diodes.com/quality/lead_free.html 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 <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



KLL = Product Type Marking Code

YM = Date Code Marking

Y = Year (ex: C = 2015)

M = Month (ex: 9 = September)

Date Code Key

Year	2002	2003	2004	2005	2006	2007	2008	2015	2016	2017	2018	2019	2020
Code	N	P	R	S	T	U	V	C	D	E	F	G	H
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 (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}		
Working Peak Reverse Voltage	V_{RWM}	40	V
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(\text{RMS})}$	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

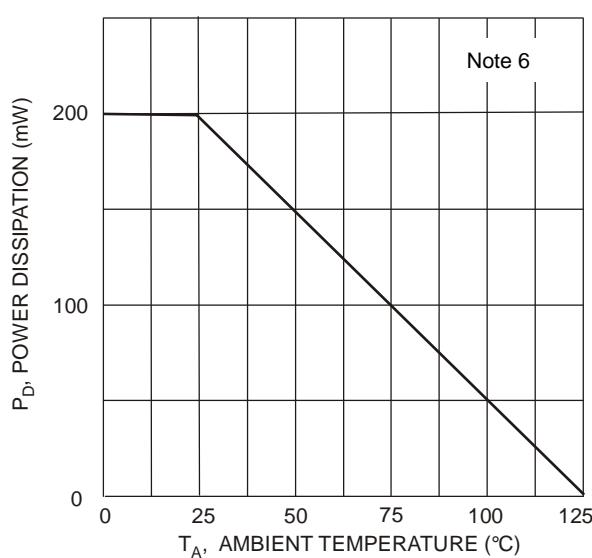
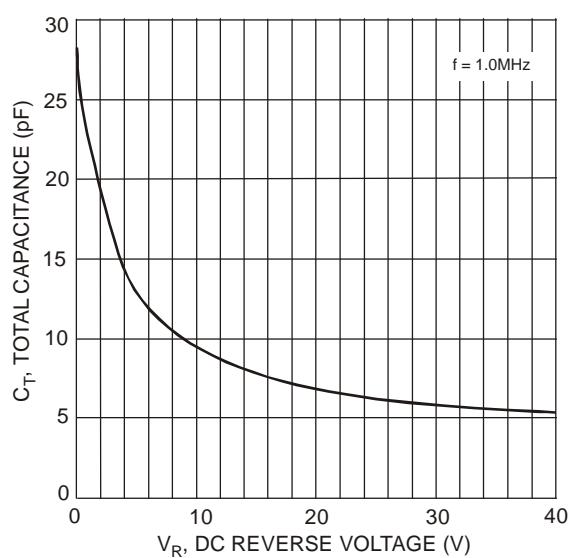
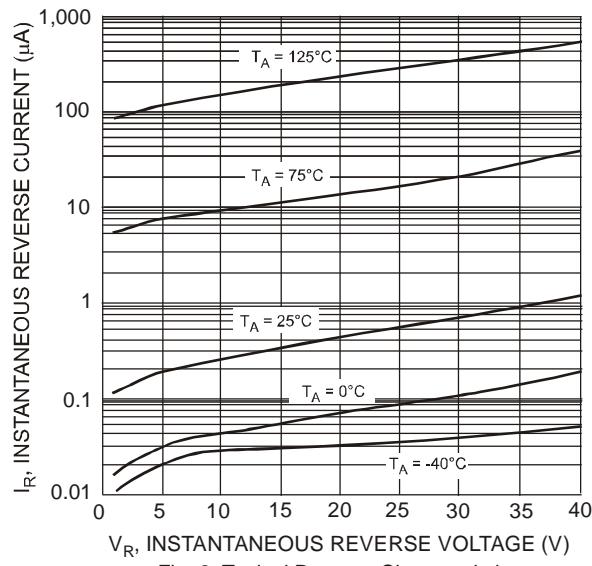
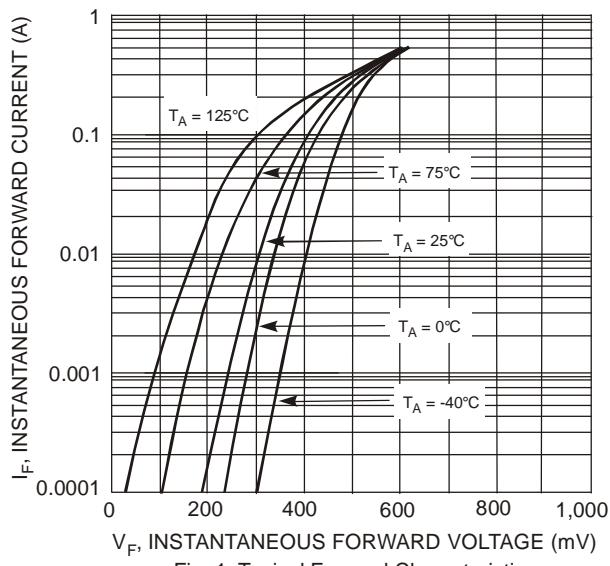
Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 6)	P_D	200	mW
Thermal Resistance, Junction to Ambient Air (Note 6)	$R_{\theta JA}$	500	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +125	°C

Electrical Characteristics (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

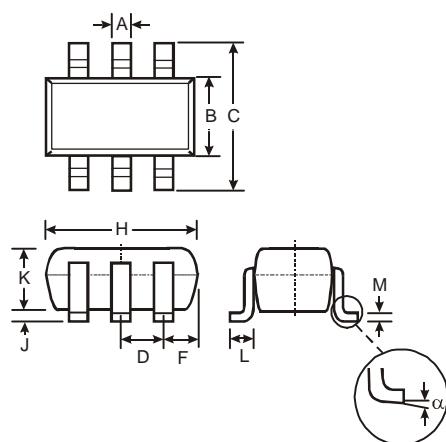
Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 7)	$V_{(BR)R}$	40	—	—	V	$I_R = 100\mu\text{A}$
Forward Voltage Drop	V_F	— — — —	0.27 0.32 0.36 0.44	— — 0.37 0.50	V V V V	$I_F = 1\text{mA}$ $I_F = 5\text{mA}$ $I_F = 20\text{mA}$ $I_F = 100\text{mA}$
Leakage Current (Note 7)	I_R	— —	0.2 0.4	2.0 5.0	μA μA	$V_R = 10\text{V}$ $V_R = 30\text{V}$
Total Capacitance	C_T	—	50	—	pF	$V_R = 0\text{V}, f = 1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	—	10	—	ns	$I_F = I_R = 10\text{mA}$, $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$

- Notes:
5. 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.
 6. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 7. Short duration pulse test used to minimize self-heating effect.



Package Outline Dimensions

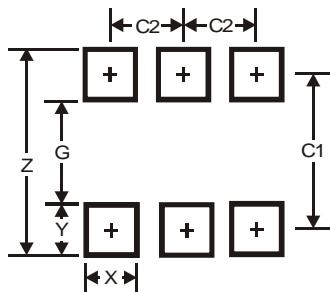
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.



SOT363			
Dim	Min	Max	Typ
A	0.10	0.30	0.25
B	1.15	1.35	1.30
C	2.00	2.20	2.10
D	0.65	Typ	
F	0.40	0.45	0.425
H	1.80	2.20	2.15
J	0	0.10	0.05
K	0.90	1.00	1.00
L	0.25	0.40	0.30
M	0.10	0.22	0.11
α	0°	8°	-
All Dimensions in mm			

Suggested Pad Layout

Please see AP02001 at <http://www.diodes.com/datasheets/ap02001.pdf> for the latest version.



Dimensions	Value (in mm)
Z	2.5
G	1.3
X	0.42
Y	0.6
C	1.9
E	0.65

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