SURFACE MOUNT SCHOTTKY BARRIER DIODE ARRAY

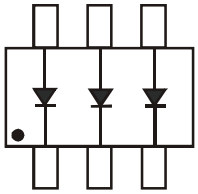
Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Fast Switching
- Low Leakage Current
- Three Fully Isolated Schottky Diodes
- **Lead Free/RoHS Compliant (Note 3)**
- **"Green" Device (Note 5 and 6)**

Mechanical Data

- Case: SOT-363
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Polarity: See Diagram
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.006 grams (approximate)

Top View



Device Schematic

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 1)	I_{FM}	350	mA
Average Rectified Current (Note 1)	I_O	175	mA
Non-Repetitive Peak Forward Surge Current (Note 1) @ t ≤ 10ms	I_{FSM}	1.0	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 4)	P_D	200	mW
Thermal Resistance, Junction to Ambient Air (Note 4)	$R_{\theta JA}$	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 2)	$V_{(BR)R}$	40	—	—	V	I_{RS} = 100μA (pulsed)
Forward Voltage Drop	V_F	— — — —	0.27 0.32 0.36 0.44	— — 0.37 0.50	V V V V	I_F = 1mA I_F = 5mA I_F = 20mA I_F = 100mA
Reverse Current (Note 2)	I_R	— —	0.2 0.4	2.0 5.0	μA μA	V_R = 10V 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 = 200mA, I_{rr} = 0.1 x I_R, R_L = 100Ω

Notes:
1. This is the maximum rating of single Diode (D_1 or D_2 or D_3). In the case of using two or three diodes, the maximum ratings per diode are 75% of the ratings for single diode operation.
2. Short duration pulse test used to minimize self-heating effect.
3. No purposefully added lead.
4. 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.
5. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
6. Product manufactured with Date Code UO (week 40, 2007) and newer are built with Green Molding Compound. Product manufactured prior to Date Code UO are built with Non-Green Molding Compound and may contain Halogens or Sb2O3 Fire Retardants.

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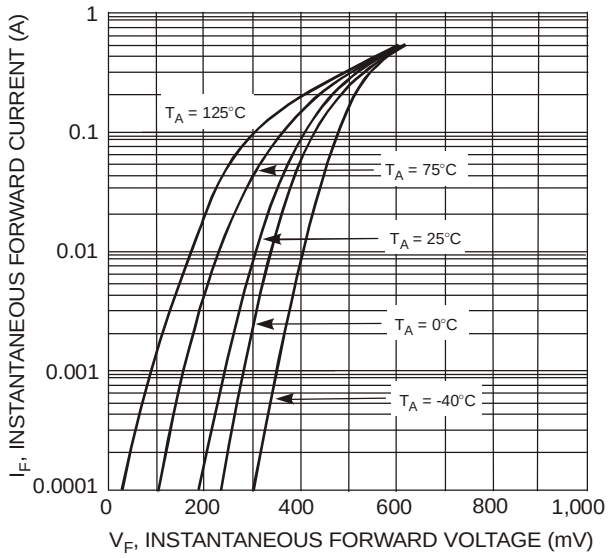


Fig. 1 Typical Forward Characteristics

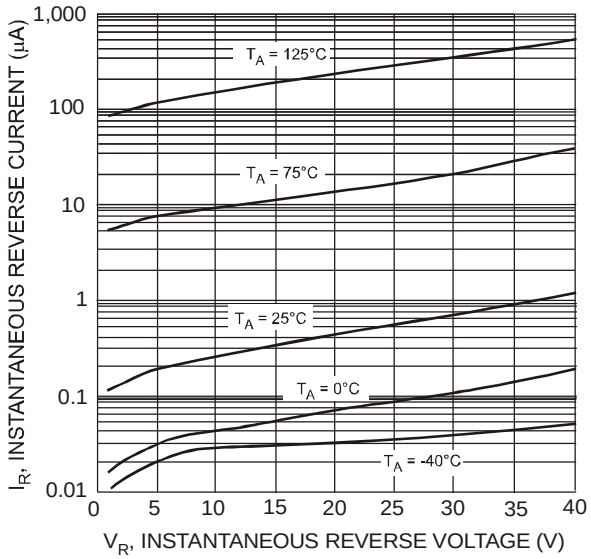


Fig. 2 Typical Reverse Characteristics

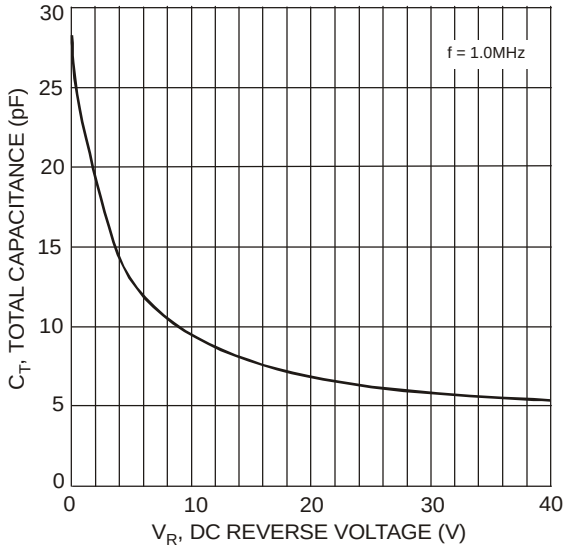


Fig. 3 Total Capacitance vs. Reverse Voltage

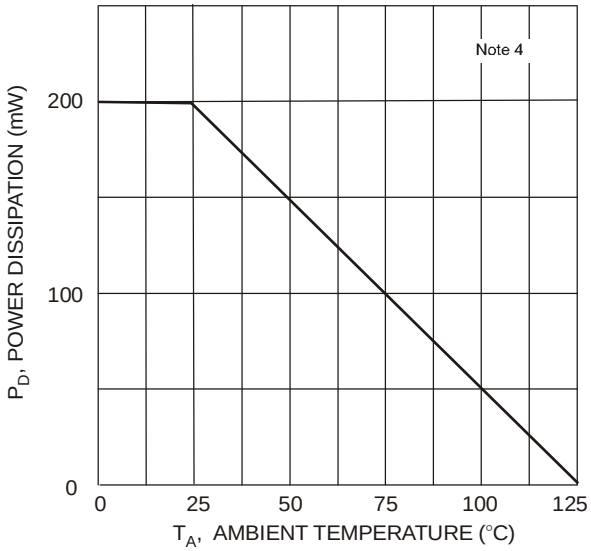


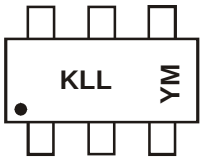
Fig. 4 Power Derating Curve

Ordering Information (Note 7)

Part Number	Case	Packaging
SD103ATW-7-F	SOT-363	3000/Tape & Reel

Notes: 7. 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: N = 2002)
M = Month (ex: 9 = September)

Date Code Key

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Code	N	P	R	S	T	U	V	W	X	Y	Z	A	B	C

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

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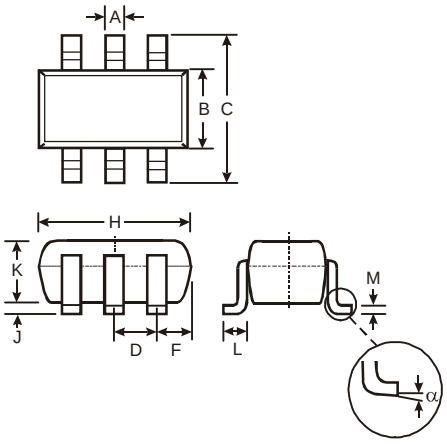
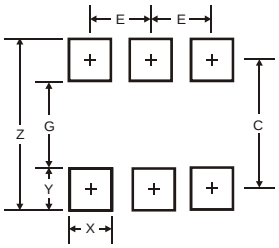
Package Outline Dimensions



SOT-363		
Dim	**Min**	**Max**
A	0.10	0.30
B	1.15	1.35
C	2.00	2.20
D	0.65 Nominal	
F	0.40	0.45
H	1.80	2.20
J	0	0.10
K	0.90	1.00
L	0.25	0.40
M	0.10	0.22
α	0°	8°
All Dimensions in mm		

Suggested Pad Layout



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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