SDMP0340LT /LST /LCT /LAT

SURFACE MOUNT SCHOTTKY BARRIER DIODE

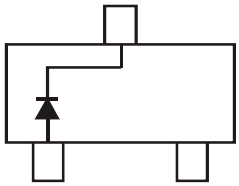
Features

- Low Forward Voltage Drop
- Guard Ring Die Construction for Transient Protection
- Ideal for Low Logic Level Applications
- Low Capacitance
- **Lead Free/RoHS Compliant (Note 3)**
- **"Green" Device (Note 4 and 5)**

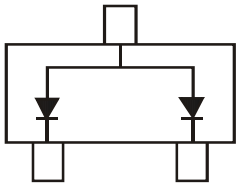
Mechanical Data

- Case: SOT-523
- Case Material: Molded Plastic. UL Flammability Classification Rating: 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Polarity: See Diagrams Below
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.002 grams (approximate)

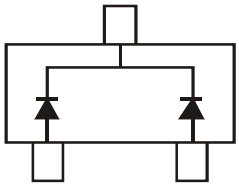
Top View



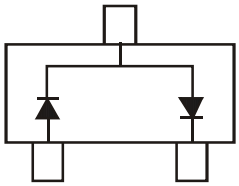
SDMP0340LT



SDMP0340LAT



SDMP0340LCT



SDMP0340LST

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}	30	mA
Non-Repetitive Peak Forward Surge Current @8.3ms Single half sine-wave superimposed on rated load	I_{FSM}	200	mA

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P_D	150	mW
Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	833	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-40 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_R = 10uA
Forward Voltage Drop	V_F	—	290	370	mV	I_F = 1mA
Leakage Current (Note 2)	I_R	—	—	1.0	μA	V_R = 10V
Total Capacitance	C_T	—	2	—	pF	V_R = 1V, f = 1.0 MHz

Notes:
1. Device mounted on FR-4 PC board with recommended pad layout, which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf.
2. Short duration pulse test used to minimize self-heating effect.
3. No purposefully added lead.
4. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
5. 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.

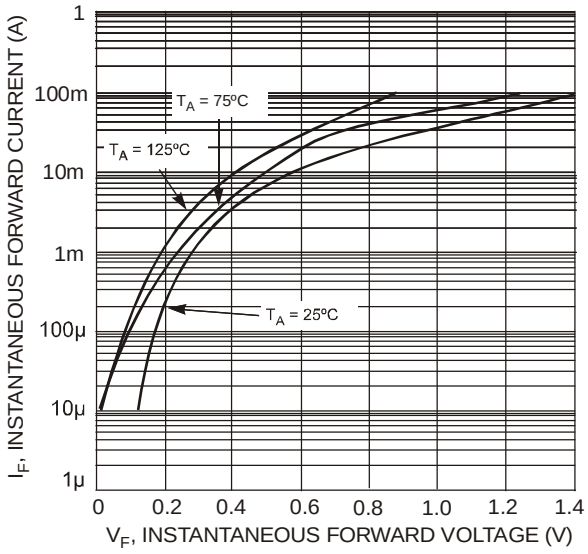


Fig. 1 Typical Forward Characteristics

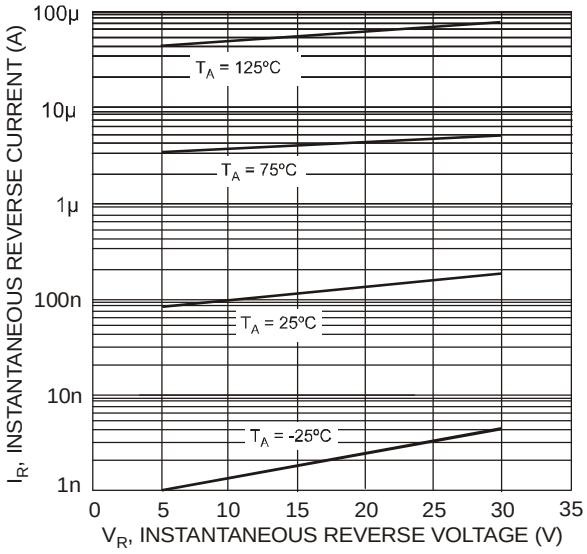


Fig. 2 Typical Reverse Characteristics

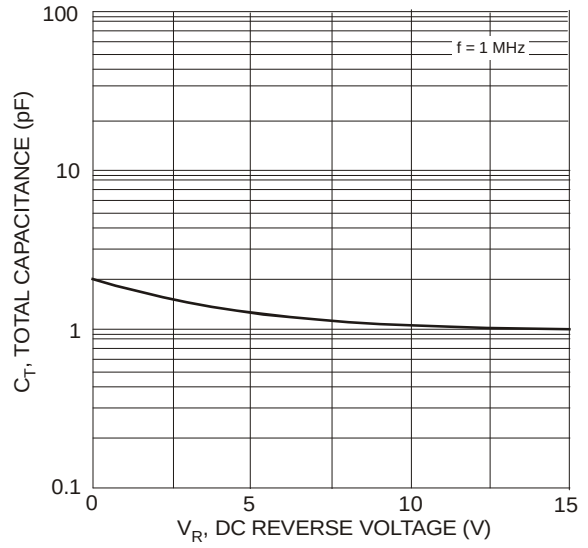


Fig. 3 Total Capacitance vs. Reverse Voltage

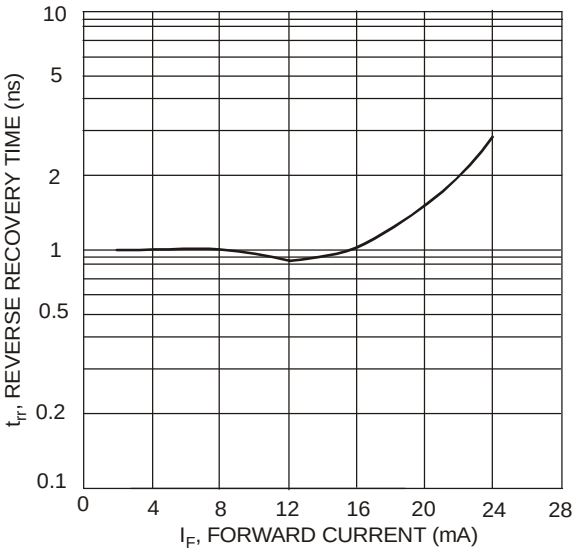


Fig. 4 Typical Reverse Recovery Time Characteristics

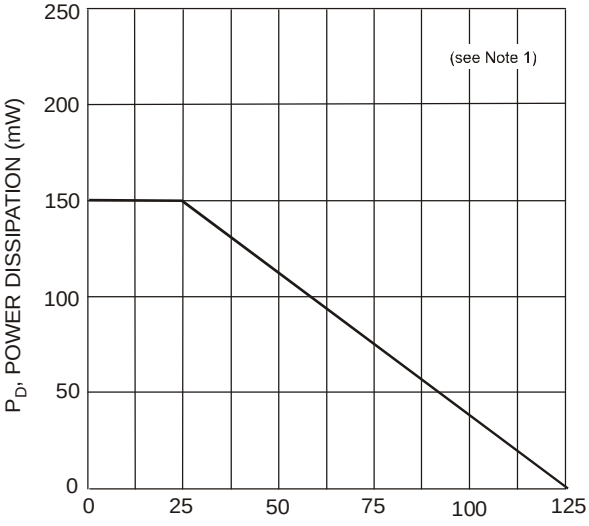


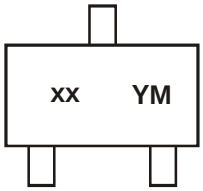
Fig. 5 Power Derating Curve

Ordering Information (Note 6)

Device	Packaging	Shipping
SDMP0340LT-7-F	SOT-523	3000/Tape & Reel
SDMP0340LST-7-F	SOT-523	3000/Tape & Reel
SDMP0340LCT-7-F	SOT-523	3000/Tape & Reel
SDMP0340LAT-7-F	SOT-523	3000/Tape & Reel

Notes: 6. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



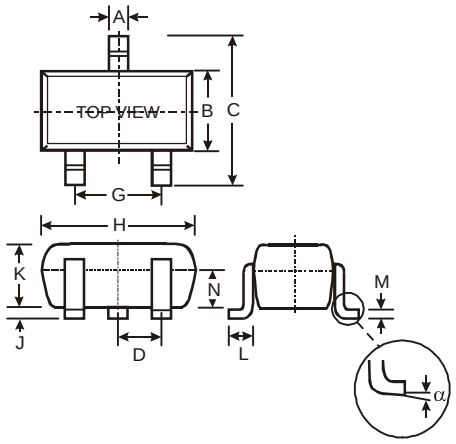
xx = Product Type Marking Code
SM = SDMP0340LT
SQ = SDMP0340LAT
SP = SDMP0340LCT
SN = SDMP0340LST
YM = Date Code Marking
Y = Year (ex: N = 2002)
M = Month (ex: 9 = September)

Date Code Key

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Code	M	N	P	R	S	T	U	V	W	X	Y	Z	A	B	C

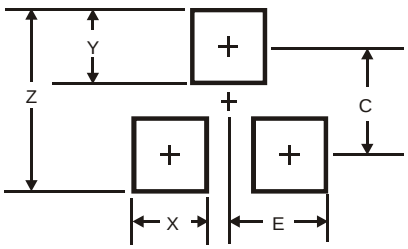
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

Package Outline Dimensions



SOT-523			
Dim	Min	Max	Typ
A	0.15	0.30	0.22
B	0.75	0.85	0.80
C	1.45	1.75	1.60
D	—	—	0.50
G	0.90	1.10	1.00
H	1.50	1.70	1.60
J	0.00	0.10	0.05
K	0.60	0.80	0.75
L	0.10	0.30	0.22
M	0.10	0.20	0.12
N	0.45	0.65	0.50
α	0°	8°	—
All Dimensions in mm			

Suggested Pad Layout



Dimensions	Value (in mm)
Z	1.8
X	0.4
Y	0.51
C	1.3
E	0.7