SDMG0340L /LA /LC /LS

SURFACE MOUNT SCHOTTKY BARRIER DIODE

Please click here to visit our online spice models database.

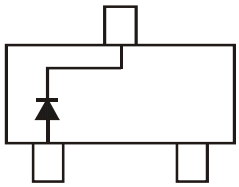
Features

- Low Forward Voltage Drop
- Fast Switching
- Ultra-Small Surface Mount Package
- PN Junction Guard Ring for Transient and ESD Protection
- **Lead Free/RoHS Compliant (Note 3)**
- **"Green" Device (Note 4 and 5)**

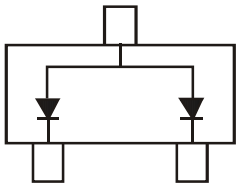
Mechanical Data

- Case: SOT-323
- Case Material: Molded Plastic, "Green" Molding Compound, Note 5. 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)
- Terminal Connections: See Diagram
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.006 grams (approximate)

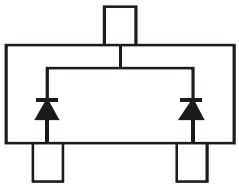
Top View



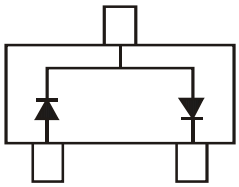
SDMG0340L



SDMG0340LA



SDMG0340LC



SDMG0340LS

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 @ t = 8.3ms	I_{FSM}	200	mA

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P_D	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625	°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 = 10μA
Forward Voltage	V_F	—	295	370	mV	I_F = 1.0mA
Leakage Current (Note 2)	I_R	—	150	1000	nA	V_R = 10V
Total Capacitance	C_T	—	2.0	—	pF	V_R = 1V, f = 1.0MHz

Notes:
1. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch; pad layout as shown on Diodes Inc. suggested pad layout document AP02001, 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 0627 (week 27, 2006) and newer are built with Green Molding Compound. Product manufactured prior to date code 0627 are built with Non-Green Molding Compound and may contain Halogens or Sb2O3 Fire Retardants.

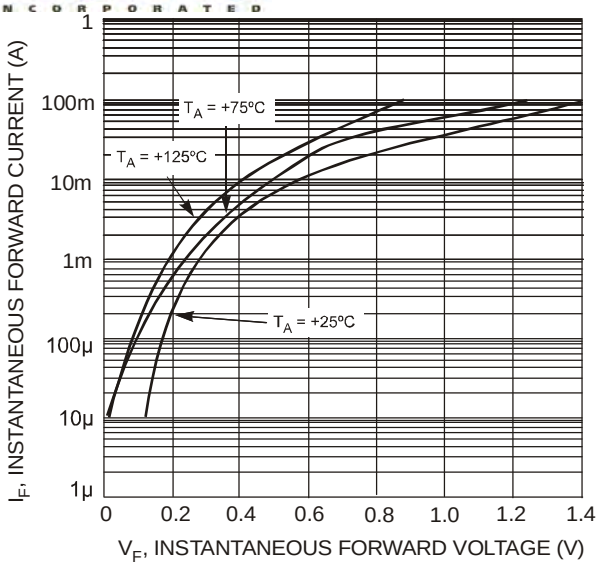


Fig. 1 Typical Forward Characteristics

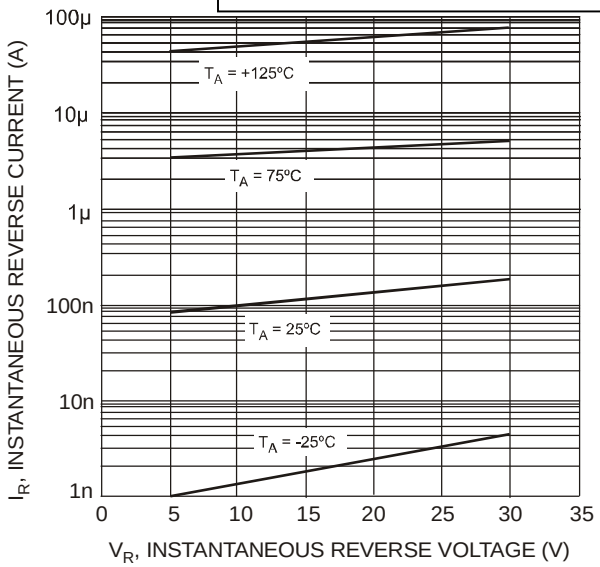


Fig. 2 Typical Reverse Characteristics

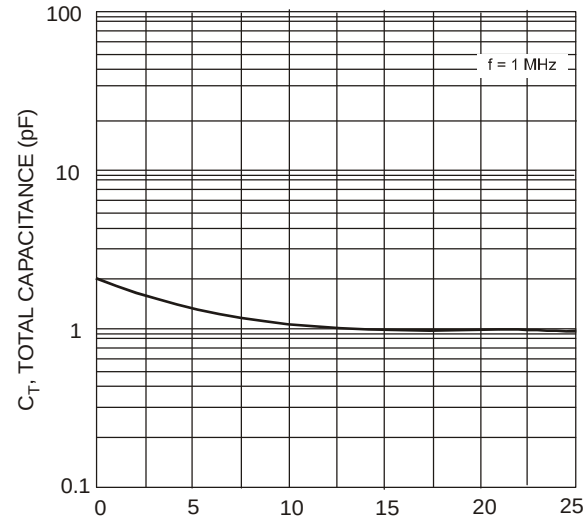


Fig. 3 Typical Total Capacitance, per Element

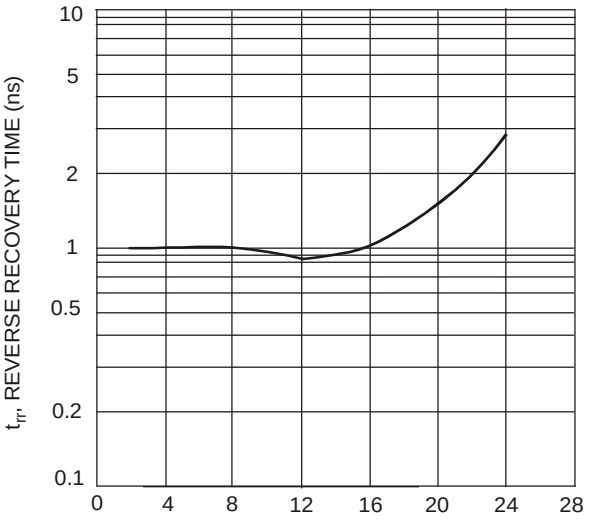


Fig. 4 Typical Reverse Recovery Time Characteristics

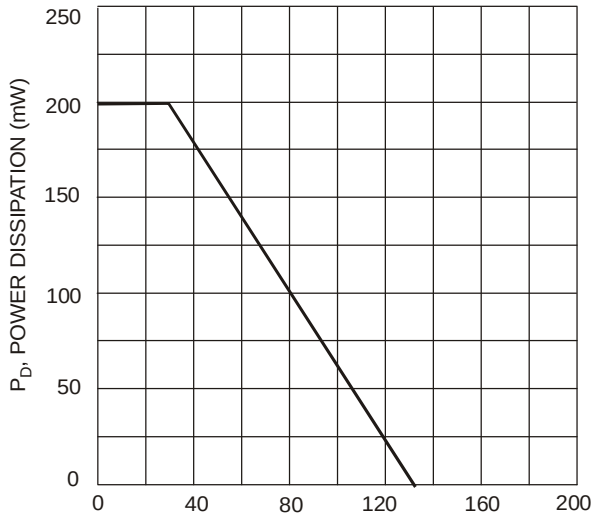


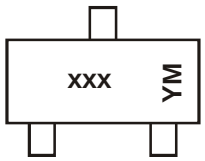
Fig. 5 Power Derating Curve, Total Package

Ordering Information (Notes 5 & 6)

Device	Packaging	Shipping
SDMG0340L-7-F	SOT-323	3000/Tape & Reel
SDMG0340LA-7-F	SOT-323	3000/Tape & Reel
SDMG0340LC-7-F	SOT-323	3000/Tape & Reel
SDMG0340LS-7-F	SOT-323	3000/Tape & Reel

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

Marking Information



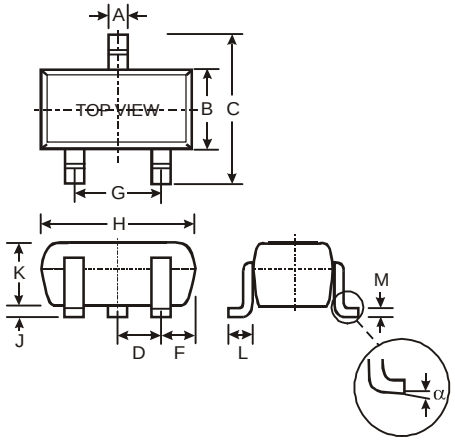
xxx = Product Type Marking Code
KSM = SDMG0340L
KSQ = SDMG0340LA
KSP = SDMG0340LC
KSN = SDMG0340LS
YM = Date Code Marking
Y = Year (ex: N = 2002)
M = Month (ex: 9 = September)

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

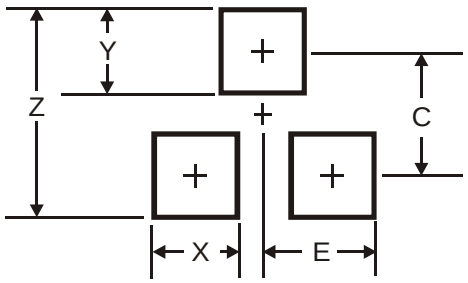
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

Package Outline Dimensions



SOT-323			
Dim	Min	Max	Typ
A	0.25	0.40	0.30
B	1.15	1.35	1.30
C	2.00	2.20	2.10
D	-	-	0.65
F	0.30	0.40	0.425
G	1.20	1.40	1.30
H	1.80	2.20	2.15
J	0.0	0.10	0.05
K	0.90	1.00	1.00
L	0.25	0.40	0.30
M	0.10	0.18	0.11
α	0°	8°	-
All Dimensions in mm			

Suggested Pad Layout



Dimensions	Value (in mm)
Z	2.8
X	0.7
Y	0.9
C	1.9
E	1.0