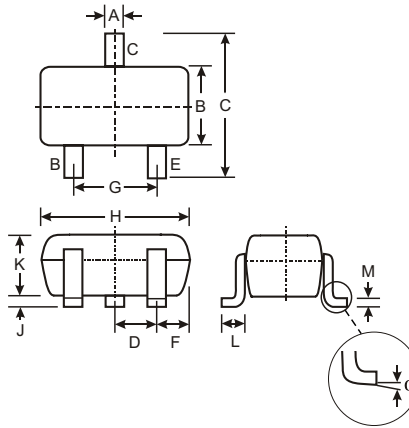


### Features

- Low Forward Voltage Drop
- Fast Switching
- Ultra-Small Surface Mount Package
- PN Junction Guard Ring for Transient and ESD Protection

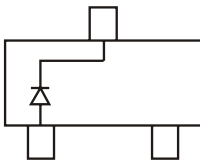
### Mechanical Data

- Case: SOT-323, Molded Plastic
- Case Material - UL Flammability Rating 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagrams Below
- Marking: Date Code and Marking Code (See Diagrams & Page 3)
- Weight: 0.006 grams (approx.)
- Ordering Information (See Page 3)

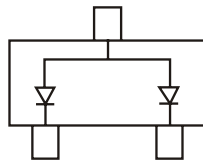


SOT-323		
Dim	Min	Max
A	0.25	0.40
B	1.15	1.35
C	2.00	2.20
D	0.65 Nominal	
E	0.30	0.40
G	1.20	1.40
H	1.80	2.20
J	0.0	0.10
K	0.90	1.00
L	0.25	0.40
M	0.10	0.18
$\alpha$	0°	8°
<b>All Dimensions in mm</b>		

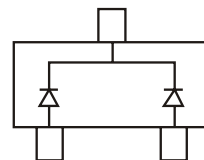
TOP VIEW



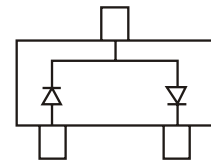
SDMG0340L Marking: KSM



SDMG0340LA Marking: KSQ



SDMG0340LC Marking: KSP



SDMG0340LS Marking: KSN

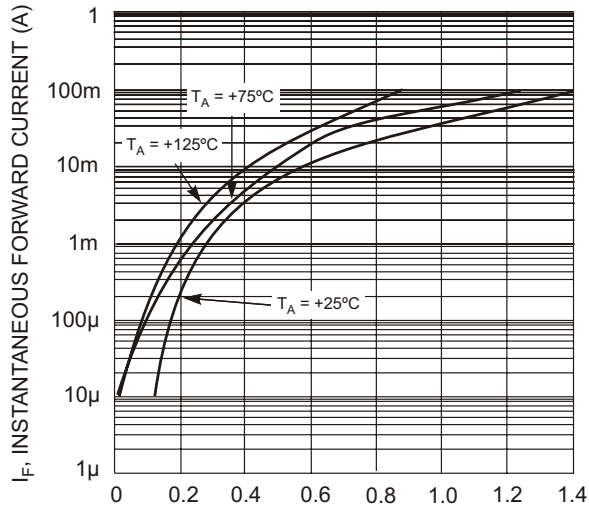
### Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

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 @ $t = 8.3\text{ms}$	$I_{FSM}$	200	mA
Power Dissipation (Note 1)	$P_d$	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Operating Temperature Range	$T_j$	-40 to +125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-40 to +125	$^\circ\text{C}$

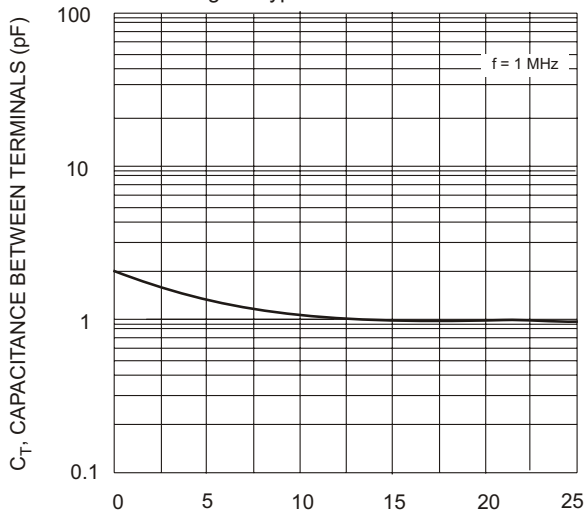
### Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	40	—	—	V	$I_R = 10\mu\text{A}$
Forward Voltage (Note 2)	$V_F$	—	295	370	mV	$I_F = 1.0\text{mA}$
Leakage Current (Note 2)	$I_R$	—	150	1000	nA	$V_R = 10\text{V}$
Total Capacitance	$C_T$	—	2.0	—	pF	$V_R = 1\text{V}, f = 1.0\text{MHz}$

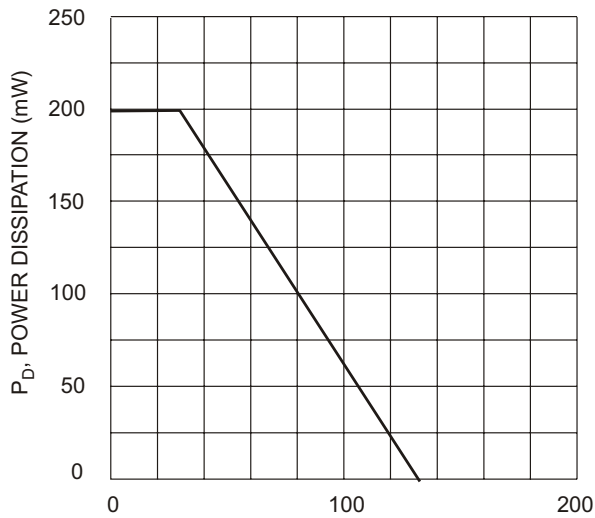
- Notes:
1. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch; pad layout as shown on Diodes Inc. suggested pad layout document AP02001, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
  2. Short duration test pulse used to minimize self-heating effect.



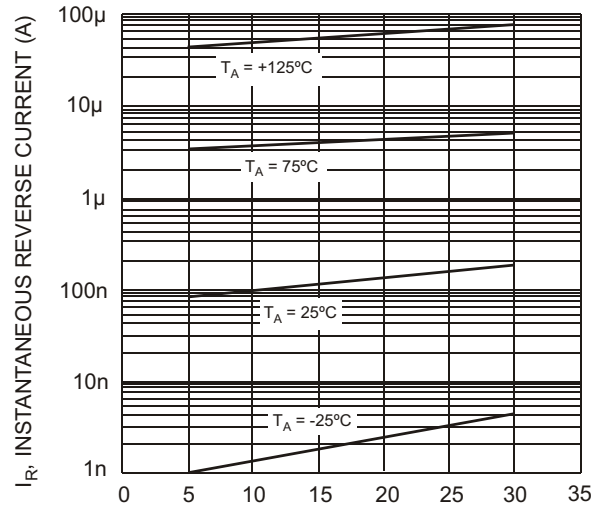
$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 1 Typical Forward Characteristics



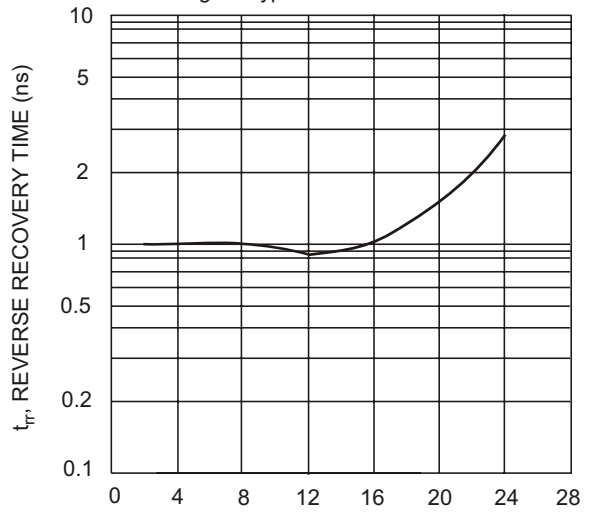
$V_R$ , REVERSE VOLTAGE (V)  
Fig. 3 Typical Capacitance Between Terminals Characteristics



$T_A$ , AMBIENT TEMPERATURE ( $^{\circ}$ C)  
Fig. 5 Power Derating Curve, Total Package



$V_R$ , INSTANTANEOUS REVERSE VOLTAGE (V)  
Fig. 2 Typical Reverse Characteristics



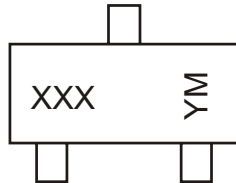
$I_F$ , FORWARD CURRENT (mA)  
Fig. 4 Typical Reverse Recovery Time Characteristics

**Ordering Information** (Note 3)

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

Notes: 3. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

**Marking Information**



XXX = Product Type Marking Code (See Page 1)  
 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
Code	M	N	P	R	S	T	U	V	W

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