



SURFACE MOUNT SCHOTTKY BARRIER DIODE

Features

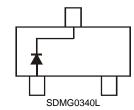
- Low Forward Voltage Drop
- Fast Switching
- Ultra-Small Surface Mount Package
- PN Junction Guard Ring for Transient and ESD Protection
- Lead Free/RoHS Compliant (Note 3)
- "Green" Device (Note 4 and 5)

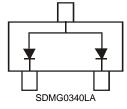
Mechanical Data

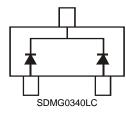
- Case: SOT-323
- Case Material: Molded Plastic, "Green" Molding Compound, Note 5. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Solderable Per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe)
- Terminal Connections: See Diagram
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.006 grams (approximate)

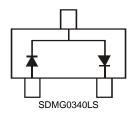


Top View









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	٧
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

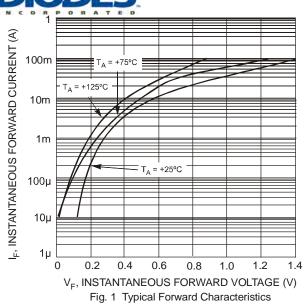
Characteristic	Symbol	Value	Unit	
Power Dissipation (Note 1)	P_{D}	200	mW	
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{ hetaJA}$	625	°C/W	
Operating and Storage Temperature Range	T _J , T _{STG}	-40 to +125	°C	

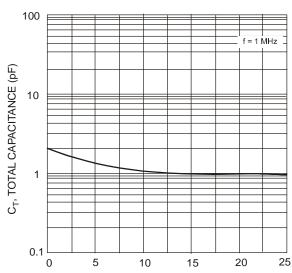
Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	40	_		V	$I_R = 10\mu A$
Forward Voltage	VF	_	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	$V_R = 1V, f = 1.0MHz$

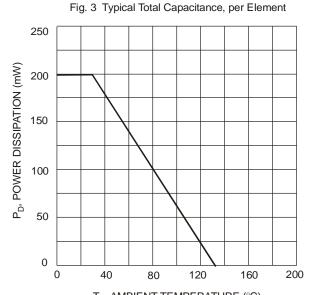
Notes

- 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.



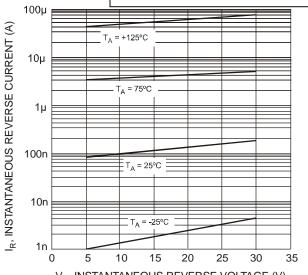


V_R, REVERSE VOLTAGE (V)



T_A, AMBIENT TEMPERATURE (°C) Fig. 5 Power Derating Curve, Total Package

SDMG0340L/LA/LC/LS



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

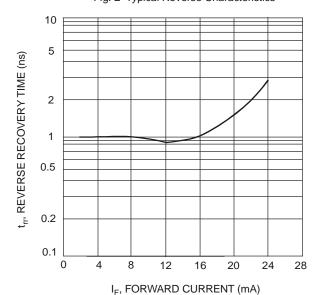


Fig. 4 Typical Reverse Recovery Time Characteristics

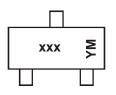


Ordering Information (Notes 5 & 6)

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

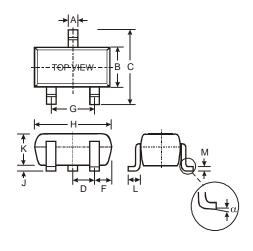
Y = Year (ex: N = 2002)

M = Month (ex: 9 = September)

Date Code Key

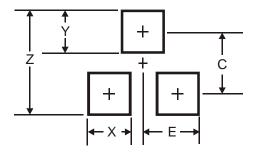
Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Code	М	N	Р	R	S	Т	U	V	W	Х	Υ	Z	Α	В	С
Month	Jan	Fe	b	Mar	Apr	May	Ju	n	Jul	Aug	Sep	Oc	t I	Nov	Dec
Code	1	2		3	4	5	6	i	7	8	9	0		N	D

Package Outline Dimensions



SOT-323						
Dim	Min	Max Typ				
Α	0.25	0.40	0.30			
В	1.15	1.35	1.30			
С	2.00	2.20	2.10			
D	-	(
F	0.30	0.40	0.425			
G	1.20	1.40	1.30			
Н	1.80	2.20	2.15			
7	0.0	0.0 0.10 0				
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
Х	0.7
Υ	0.9
С	1.9
E	1.0





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