



## SDMP0340LT /LST /LCT /LAT

#### SURFACE MOUNT SCHOTTKY BARRIER DIODE

### **Features**

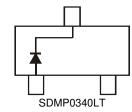
- Low Forward Voltage Drop
- Guard Ring Die Construction for Transient Protection
- Ideal for Low Logic Level Applications
- Low Capacitance
- Lead Free/RoHS Compliant (Note 3)
- "Green" Device (Note 4 and 5)

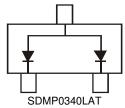
# **Mechanical Data**

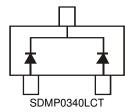
- Case: SOT-523
- Case Material: Molded Plastic. UL Flammability Classification Rating: 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- · Polarity: See Diagrams Below
-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

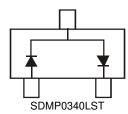


Top View









# **Maximum Ratings** @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic		Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		V <sub>RRM</sub> V <sub>R</sub> WM V <sub>R</sub>	40	V
RMS Reverse Voltage		V <sub>R(RMS)</sub>	28	V
Forward Continuous Current (No	te 1)	I <sub>FM</sub>	30	mA
Non-Repetitive Peak Forward Surge Current @8.3ms Single half sine-wave superimposed on rated load		I <sub>FSM</sub>	200	mA

### **Thermal Characteristics**

Characteristic		Symbol	Value	Unit
Power Dissipation	(Note 1)	P <sub>D</sub>	150	mW
Thermal Resistance, Junction to Ambient	(Note 1)	$R_{ hetaJA}$	833	°C/W
Operating and Storage Temperature Range		T <sub>J</sub> , T <sub>STG</sub>	-40 to +125	°C

### **Electrical Characteristics** @TA = 25°C unless otherwise specified

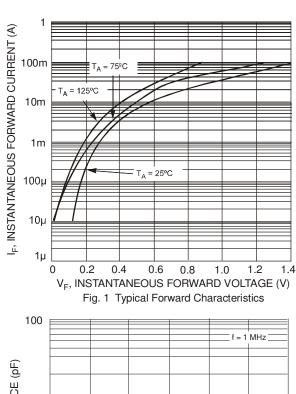
Characteristic			Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage	(Note 2)	$V_{(BR)R}$	40	_	_	V	$I_{R} = 10uA$
Forward Voltage Drop		$V_{F}$	_	290	370	mV	I <sub>F</sub> = 1mA
Leakage Current	(Note 2)	I <sub>R</sub>	_	_	1.0	μА	V <sub>R</sub> = 10V
Total Capacitance		Ст	_	2	_	pF	V <sub>R</sub> = 1V, f = 1.0 MHz

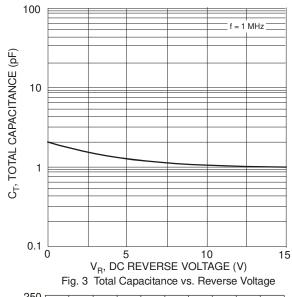
Notes:

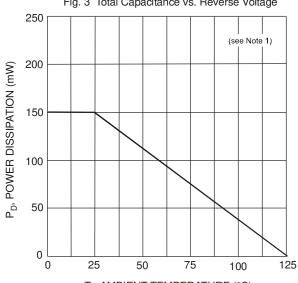
- Device mounted on FR-4 PC board with recommended pad layout, which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf.
- 2. Short duration pulse test used to minimize self-heating effect.
- 3. No purposefully added lead.
- 4. Diodes Inc.'s "Green" policy can be found on our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



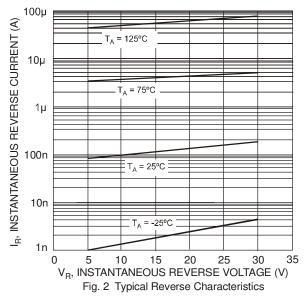








 $T_{A}$ , AMBIENT TEMPERATURE (°C) Fig. 5 Power Derating Curve



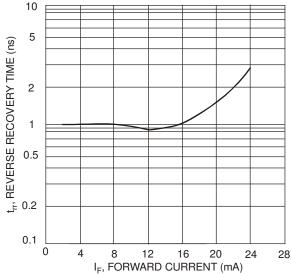


Fig. 4 Typical Reverse Recovery Time Characteristics

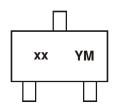


# Ordering Information (Note 6)

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

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

# **Marking Information**



xx = Product Type Marking Code SM = SDMP0340LT

SQ = SDMP0340LAT SP = SDMP0340LCT

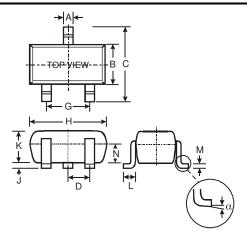
SN = SDMP0340LST YM = Date Code Marking

Y = Year (ex: N = 2002) M = Month (ex: 9 = September)

Date Code Key

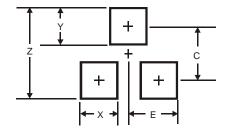
Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Code	М	N	Р	R	S	Т	U	V	W	Х	Υ	Z	Α	В	С
Month	Jan	Fe	b I	Mar	Apr	May	Ju	n	Jul	Aug	Sep	Oc	t I	VoV	Dec
Code	1	2		3	4	5	6		7	8	9	0		N	D

# **Package Outline Dimensions**



SOT-523						
Dim	Min	Max	Тур			
Α	0.15	0.30	0.22			
В	0.75	0.85	0.80			
С	1.45	1.75	1.60			
D	_	_	0.50			
G	0.90	1.10	1.00			
Н	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			
М	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
Υ	0.51
С	1.3
E	0.7





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