

SDM40E20L/S/C

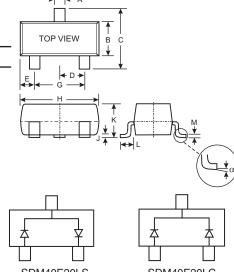
DUAL SURFACE MOUNT SCHOTTKY BARRIER DIODE

Features

- Very Low Forward Voltage Drop
- **Guard Ring Construction for Transient Protection**
- **High Conductance**
- Lead Free By Design/RoHS Compliant (Note 4)
- "Green Device" (Note 5)

Mechanical Data

- Case: SOT-23
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Polarity: See Diagram
- Leads: Solderable per MIL-STD-202, Method 208
- Terminals: SDM40E20LS Finish Matte Tin Finish annealed over Alloy 42 leadframe. SDM40E20LC Finish — Matte Tin Finish annealed over CDA194 leadframe. Solderable per MIL-STD-202, Method 208
- Marking: Date Code and Type Code
- Type Code: KSW, KWS
- Ordering Information: See Page 3
- Weight: 0.008 grams (approximate)



SOT-23								
Dim	Min	Max						
Α	0.37	0.51						
В	1.20	1.40						
С	2.30	2.50						
D	0.89	1.03						
E	0.45	0.60						
G	1.78	2.05						
Н	2.80	3.00						
J	0.013	0.10						
K	0.903	1.10						
L	0.45	0.61						
М	0.085	0.180						
α	0°	8°						
All Dimensions in mm								

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SDM4	10E20LS	SDM40	E20LC
KSW Ma	rking Code)	(KWS Mark	king Code)

Maximum Ratings @ T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristic		Symbol	Value	Unit	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		V _{RRM} V _{RWM} V _R	20	V	
RMS Reverse Voltage		V _{R(RMS)}	14	V	
Forward Continuous Current (Note 1)		I _{FM}	0.4	А	
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated	I _{FSM}	2	А		
Power Dissipation	(Note 1)	P_d	225	mW	
·	(Note 2)	Гd	300	ITIVV	
Typical Thermal Resistance Junction to Ambient	(Note 1)	R _в ја	444	0000	
	(Note 2)	п⊕ЈА	333	°C/W	
Operating and Storage Temperature Range	T _{j,} T _{STG}	-65 to +125	°C		

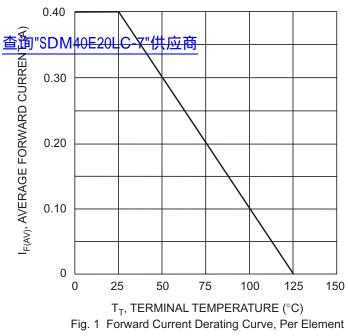
Electrical Characteristics @ T_A = 25°C unless otherwise specified

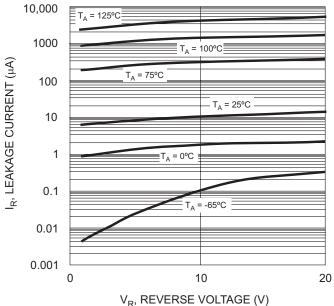
Characteristic	Symbol	Min	Тур	Max	Unit	Test Conditions		
Reverse Breakdown Voltage (Note 3)	V _{(BR)R}	20	_	_	V	$I_R = 0.5 \text{mA}$		
Forward Voltage Drop	VF	_		0.310 0.430	V	I _F = 0.1A I _F = 0.5A		
Leakage Current (Note 3)	I _R	_		100 250	μА	$V_R = 10V$ $V_R = 20V$		
Total Capacitance	C _T	_	120	_	pF	f = 1MHz, V _R = 0VDC		

1. Device mounted on FR-5 1.0 x 0.75 x 0.062 inch PCB pad layout.

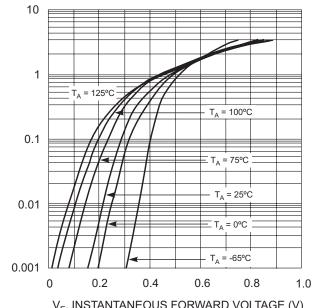
- 2. Device mounted on Alumina PCB, 0.4 inch x 0.3 inch x 0.024 inch pad layout.
- 3. Short duration test pulse used to minimize self-heating effect.
- 4. No purposefully added lead.
- 5. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.







V_R, REVERSE VOLTAGE (V)
Fig. 3 Typical Reverse Characteristics, Per Element



I_F, INSTANTANEOUS FORWARD CURRENT (A)

V_F, INSTANTANEOUS FORWARD VOLTAGE (V) Fig. 2 Typical Forward Characteristics, Per Element

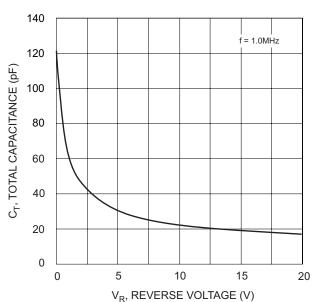


Fig. 4 Typ. Total Capacitance vs Reverse Voltage, Per Element

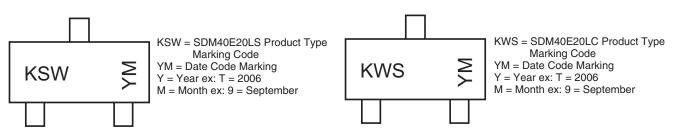


Ordering Information (Note 6)

查恂"SDM40E20LCpW做应商		Packaging	Shipping		
	SDM40E20LS-7	SOT-23	3000/Tape & Reel		
	SDM40E20LC-7	SOT-23	3000/Tape & Reel		

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

Marking Information



Date Code Key

Year	Year 2005 2006		200	2007 2008		2009		2010	2011	2	2012	
Code S T		Т	UV		W X		Y	Y Z				
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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