



# RB520S40

## SURFACE MOUNT SCHOTTKY BARRIER DIODE

### FEATURES

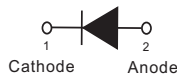
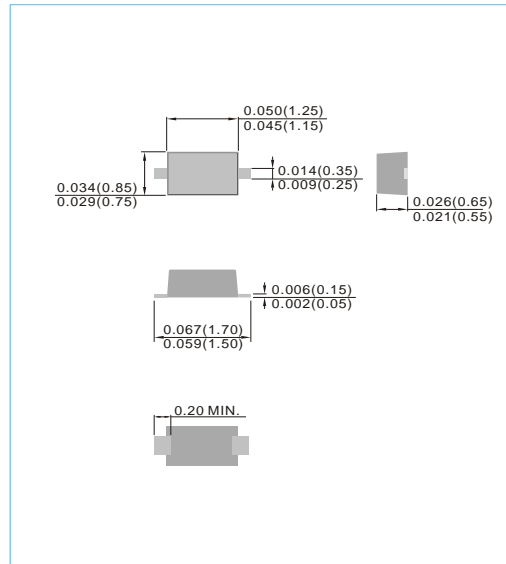
- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Negligible Reverse Recovery Time
- Low Reverse Capacitance
- Ultra-Small Mount Package
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

- Case: SOD-523, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Appox Weight : 0.00005 ounces, 0.0014 grams

**SOD-523**

Unit : inch(mm)



### 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>RWM</sub> V <sub>R</sub>	40	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	28	V
Forward Continuous Current (Note 1)	I <sub>FM</sub>	250	mA
Non-Repetitive Peak Forward Surge Current@t <sub>≤</sub> 1s	I <sub>FSM</sub>	1	A

### THERMAL CHARACTERISTICS@T<sub>A</sub>=25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P <sub>D</sub>	150	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	R <sub>θJA</sub>	667	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	-55 to +125	°C

- Notes : 1.Part mounted on FR-4 board with recommended pad layout  
2.Short duration pulse test used so as to minimize self-heating effect



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

Characteristic	Test Conditions	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage (Note 2)	$I_R=10\mu\text{A}$	$V_{BR(R)}$	40	-	-	V
Forward Voltage Drop	$I_F=20\text{mA}$ $I_F=200\text{mA}$	$V_F$	-	-	0.37 0.6	V
Peak Reverse Current (Note 2)	$V_R=30\text{V}$ $V_R=10\text{V}$	$I_R$	-	-	5 1	$\mu\text{A}$
Total Capacitance	$V_R=0\text{V}, f=1\text{MHz}$	$C_T$	-	50	-	pF
Reverse Recovery Time	$I_F=I_R=200\text{mA}$ , $I_{RR}=0.1 \times I_R, R_L=100\Omega$	$T_{RR}$	-	10	-	ns



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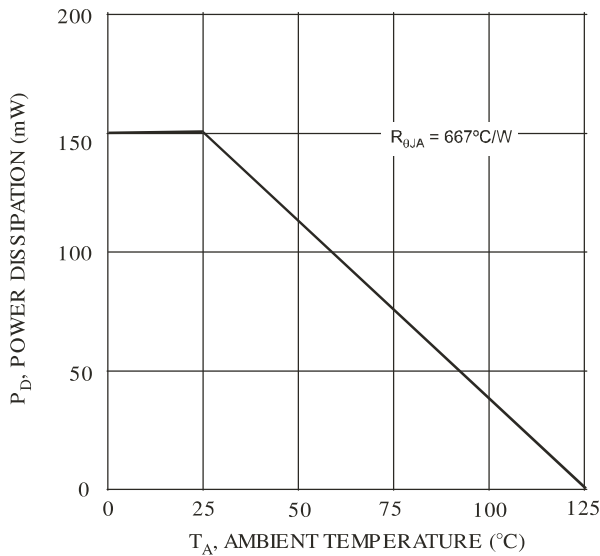


Fig. 1 Derating Curve

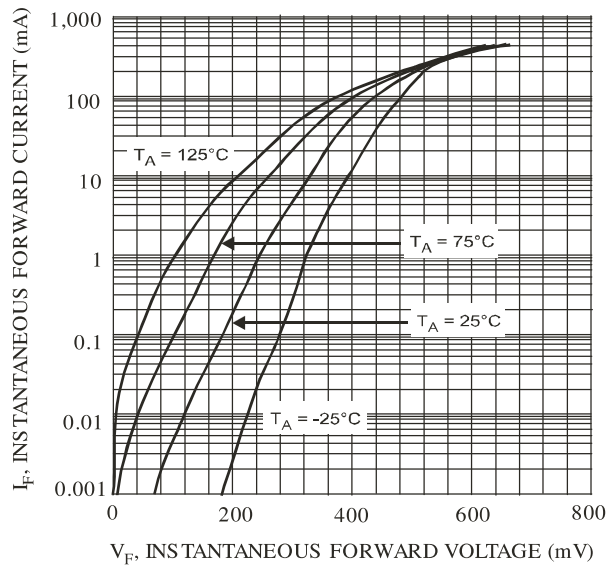


Fig. 2 Typical Forward Characteristics

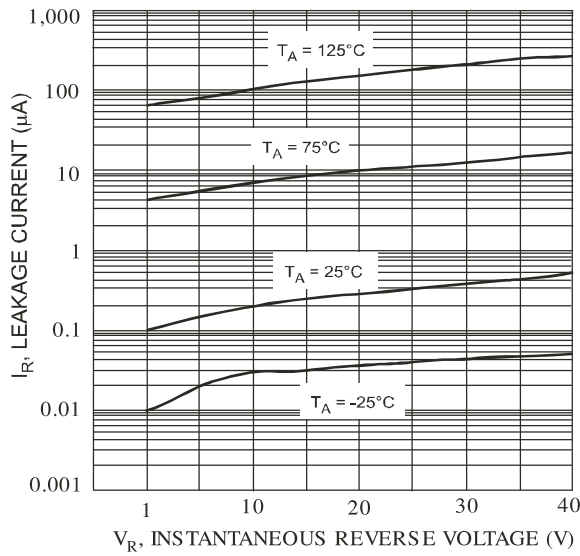


Fig. 3 Typical Reverse Characteristics

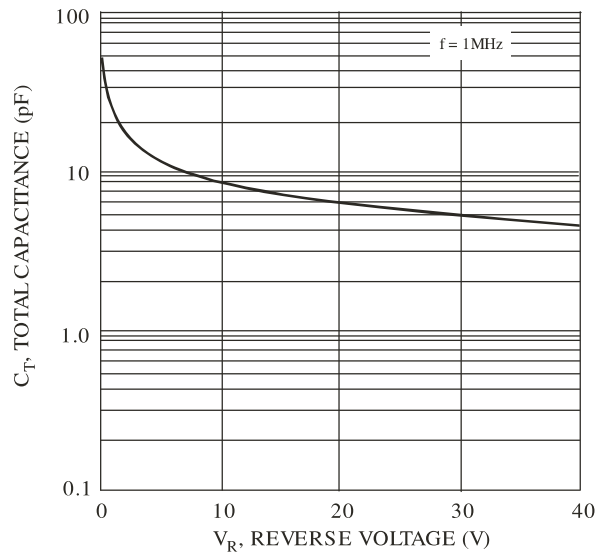


Fig. 4 Typ. Total Capacitance vs. Reverse Voltage

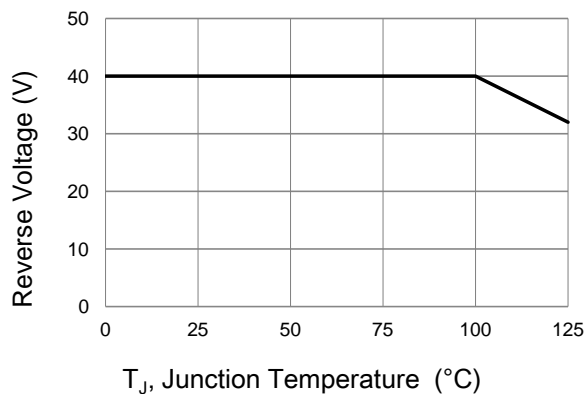


Fig.5 Operating Temperature Derating Curve



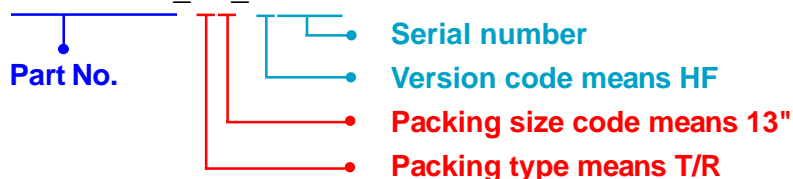
# RB520S40

## PART NO PACKING CODE VERSION

Part No Packing Code	Package Type	Packing Type	Marking	Version
RB520S40_R1_00001	SOD-523	5K pcs / 7" reel	22	Halogen free
RB520S40_R2_00001	SOD-523	12K pcs / 13" reel	22	Halogen free

For example :

**RB500V-40\_R2\_00001**

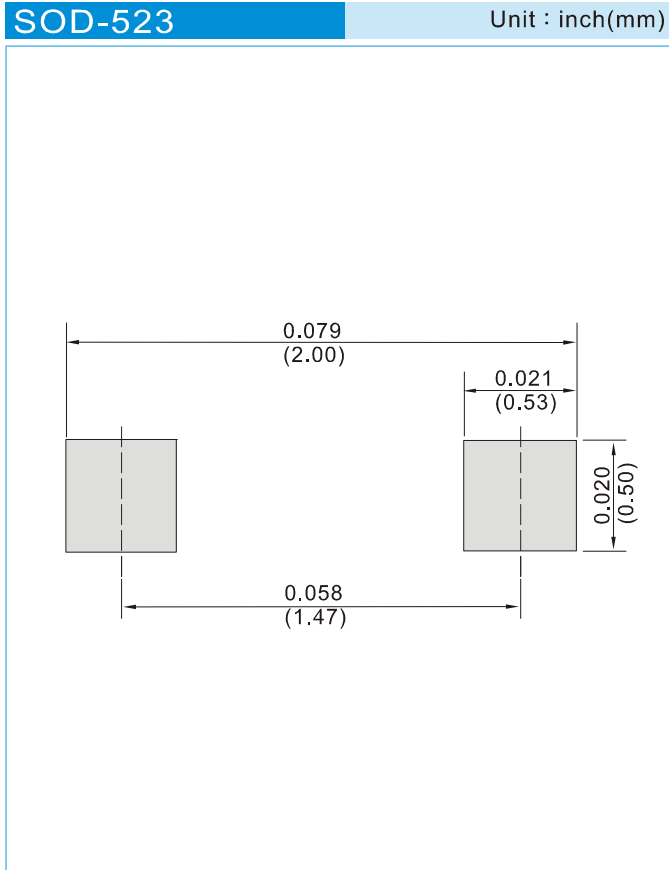


Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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## MOUNTING PAD LAYOUT





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