

NSR0520

SCHOTTKY BARRIER DIODE

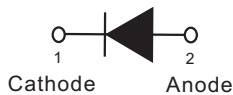
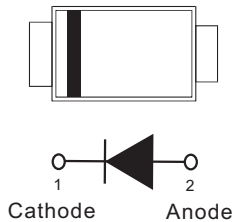
Schottky barrier diodes are optimized for very low forward voltage drop and low leakage current and are used in a wide range of dc-dc converter, clamping and protection application in portable devices. NSR0520 in a SOD-523 miniature package enables designers to meet the challenging task of achieving higher efficiency and meeting reduced space requirements.

FEATURES

- Very Low Forward Voltage Drop-325mV@100mA
- Low Reverse Current-8 μ A@10V
- Continuous Forward Current-500mA
- Power Dissipation with Minimum Trace-170mW
- Very High Switching Speed-12ns@10mA
- Low Capacitance-35pF@1.0V
- In compliance with EU RoHS 2002/95/EC directives

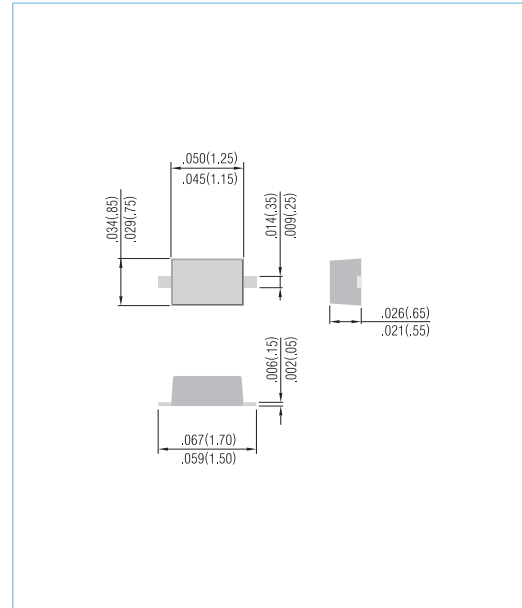
MECHANICAL DATA

- Case: SOD-523, Molded Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity : Color band cathode
- Approx. Weight: 0.001gram
- Mounting Position: Any
- Marking : 52



SOD-523

Unit: inch (mm)



MAXIMUM RATINGS

Characteristic	Symbol	Value	Unit
Reverse Voltage	V_R	20	Vdc
Forward Continuous Current (DC)	I_F	500	mA
Non-Repetitive Peak Forward Surge Current	I_{FSM}	2.0	A

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THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance Junction-to-Ambient	$R_{\theta JA}$	600	$^{\circ}\text{C/W}$
Total Power Dissipation@ $T_A=25^{\circ}\text{C}$	P_D	170	mW
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to + 125	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Reverse Leakage ($V_R=10\text{V}$) ($V_R=20\text{V}$)	I_R	-	8.0 75	30	μA
Forward Voltage ($I_F=10\text{mA}$) ($I_F=100\text{mA}$) ($I_F=500\text{mA}$)	V_F	- - -	255 325 410	320 390 480	mV
Total Capacitance ($V_R=1.0\text{V}, f=1\text{MHz}$)	C_T	-	35	-	pF
Reverse Recovery Time ($I_F=I_R=10\text{mA}, I_R=1.0\text{mA}$)	T_{RR}	-	12.0	-	ns

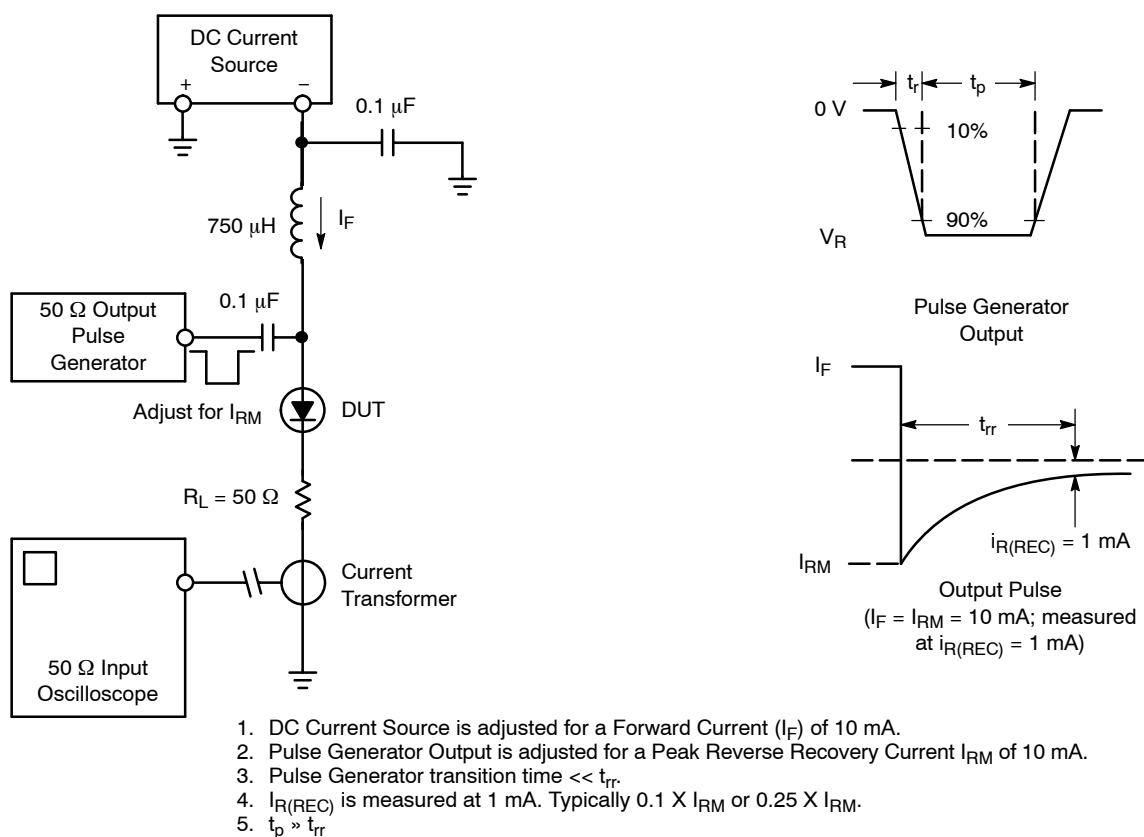


Figure 1. Recovery Time Equivalent Test Circuit

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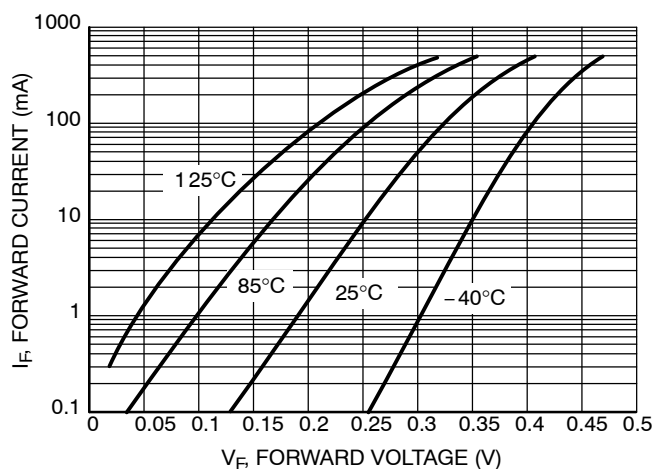


Figure 2.

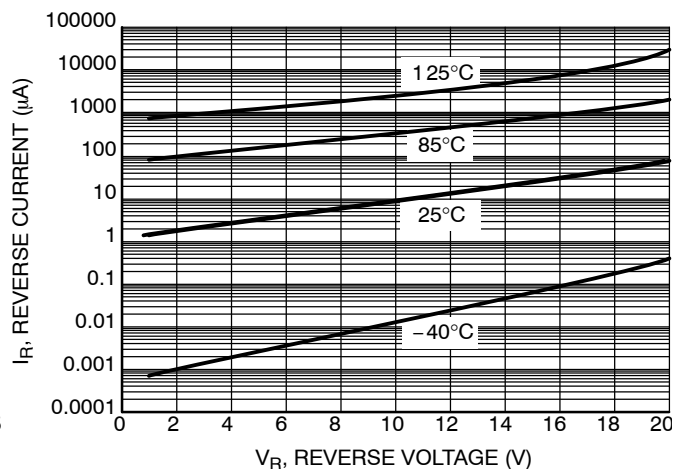


Figure 3.

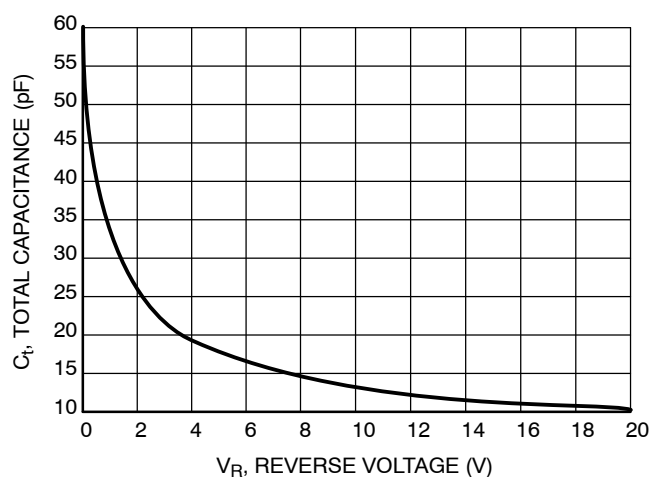
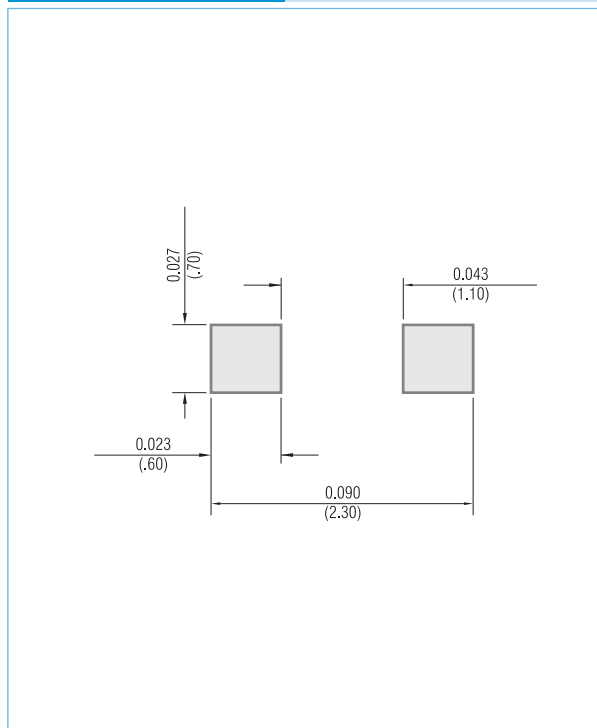


Figure 4.

MOUNTING PAD LAYOUT

SOD-523

Unit: inch (mm)



ORDER INFORMATION

- Packing information
 - T/R - 12K per 13" plastic Reel
 - T/R - 5K per 7" plastic Reel

LEGAL STATEMENT

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