

SCHOTTKY RECTIFIER

PRODUCT SUMMARY

SOD-123 Plastic-Encapsulate Diodes
 Lower Gate Charge
 Small Footprint & Low Profile Package

FEATURES

Low Forward Voltage Drop
 Guard Ring Construction for Transient Prote
 High Conductance
 Also Available in Lead Free Version

MARKING: B0520LW: SD
 B0530W: SE
 B0540W: SF



Pb-free; RoHS-compliant

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS,

SINGLE DIODE @TA=25 °C

Parameter	Symbol	B0520LW	B0530W	B0540W	Unit
Peak Repetitive Peak reverse voltage	V_{RRM}				
Working Peak Reverse Voltage	V_{RWM}	20	30	40	V
DC Blocking Voltage	V_R				
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	V
Average Rectified Output Current	I_O	500			mA
Peak forward surge current	I_{FSM}	5.5			A
Power Dissipation	P_d	410			mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	304			°C/W
Storage temperature	T_{STG}	-65~+125			°C
Voltage Rate of Change	dv/dt	1000			V/μs

ELECTRICAL RATINGS @TA=25 °C

Parameter	Symbol	B0520LW	B0530W	B0540W	Unit	Conditions
Minimum Reverse Breakdown Voltage	$V_{(BR)R}$	20	-	-	V	$I_R=250\mu A$
		-	30	-		$I_R=200\mu A$
		-	-	40		$I_R=20\mu A$
Forward voltage	V_{F1}	0.3	0.375	-	V	$I_F=0.1A$
	V_{F2}	0.385	0.430	0.510		$I_F=0.5A$
	V_{F3}	-	-	0.62		$I_F=1A$
Reverse current	I_{R1}	75	-	-	μA	$V_R=10V$
	I_{R2}	-	20	-		$V_R=15V$
Reverse current	I_{R3}	250	-	10	μA	$V_R=20V$
	I_{R4}	-	130	-		$V_R=30V$
	I_{R5}	-	-	20		$V_R=40V$
Capacitance between terminals	C_T			170	pF	$V_R=0V, f=1MHz$

TYPICAL CHARACTERISTICS

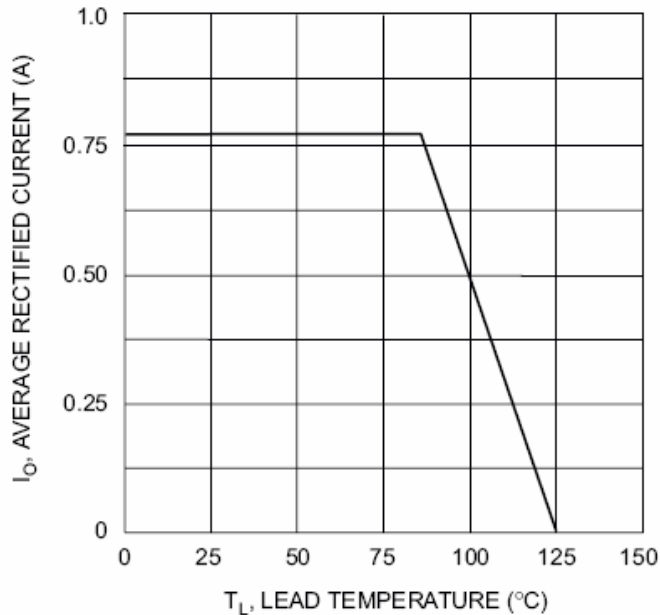


Fig. 1 Forward Current Derating Curve

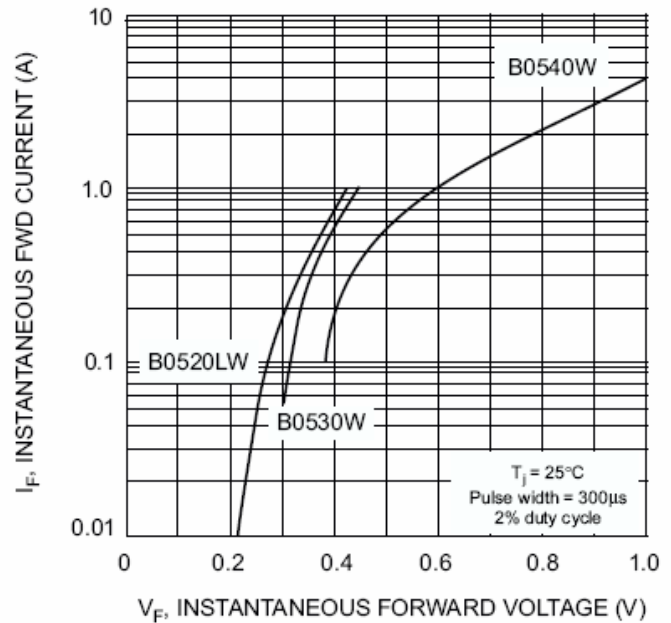


Fig. 2 Typical Forward Characteristics

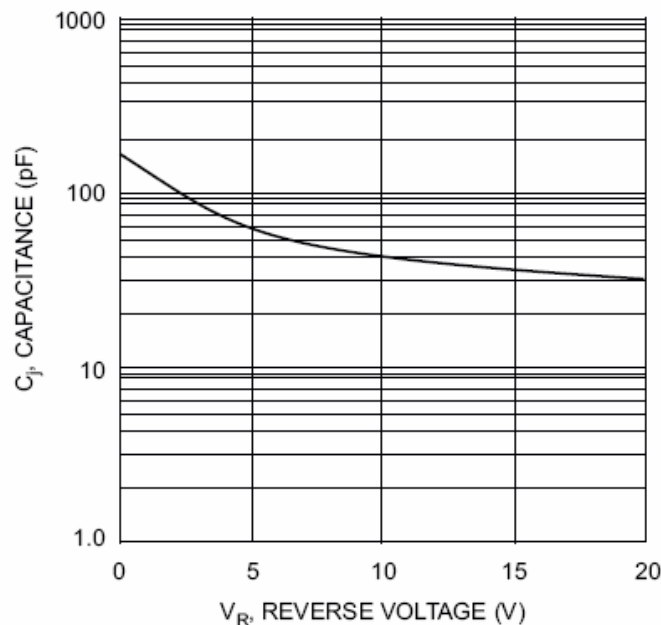


Fig. 3 Typ. Junction Capacitance vs Reverse Voltage

Information furnished by Silicon Standard Corporation is believed to be accurate and reliable. However, Silicon Standard Corporation makes no guarantee or warranty, expressed or implied, as to the reliability, accuracy, timeliness or completeness of such information and assumes no responsibility for its use, or for infringement of any patent or other intellectual property rights of third parties that may result from its use. Silicon Standard reserves the right to make changes as it deems necessary to any products described herein for any reason, including without limitation enhancement in reliability, functionality or design. No license is granted, whether expressly or by implication, in relation to the use of any products described herein or to the use of any information provided herein, under any patent or other intellectual property rights of Silicon Standard Corporation or any third parties.