

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 Protection
 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

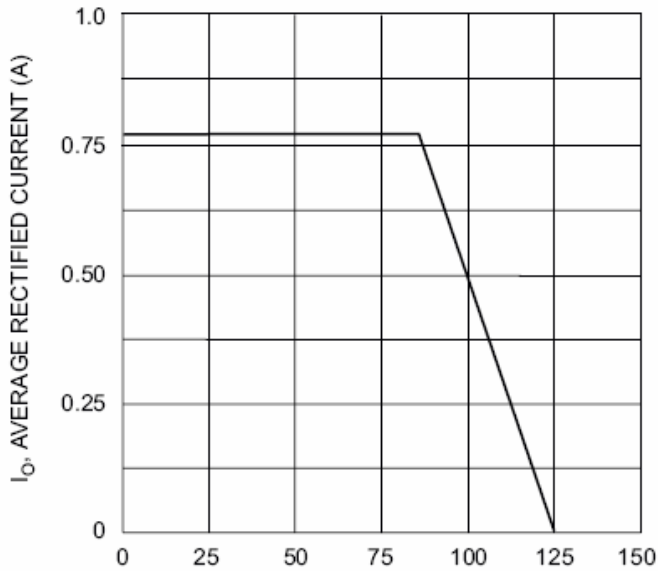


Fig. 1 Forward Current Derating Curve

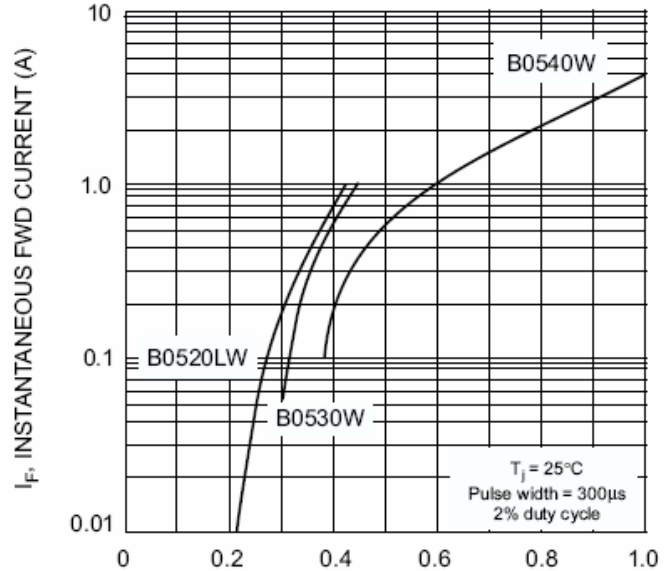


Fig. 2 Typical Forward Characteristics

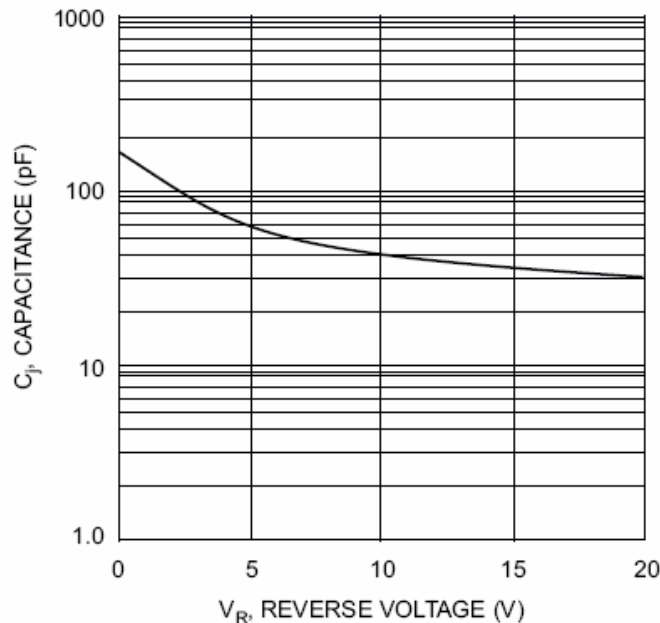


Fig. 3 Typ. Junction Capacitance vs Reverse Voltage

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