



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOD-123 Plastic-Encapsulate Diodes

B0520LW/B0530W/B0540W SCHOTTKY RECTIFIER

SOD-123



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

Maximum Ratings and Electrical Characteristics, Single Diode @T_A=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 _{θJA}	244			K/W
Storage temperature	T _{STG}	-65~+150			°C
Voltage Rate of Change	dv/dt	1000			V/μs

Electrical Ratings @T_A=25°C

Parameter	Symbol	B0520LW	B0530W	B0540W	Unit	Conditions
Minimum Reverse Breakdown Voltage	V _{(BR)R}	20	-	-	V	I _R =250μA
		-	30	-		I _R =130μA
		-	-	40		I _R =20μA
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 =1V, f=1MHz
Reverse Recovery Time	t _{rr}			4	ns	I _F =I _R =10mA I _{rr} =0.1X I _R , R _L =100Ω

Typical Characteristics

B0520LW/B0530W/B0540W

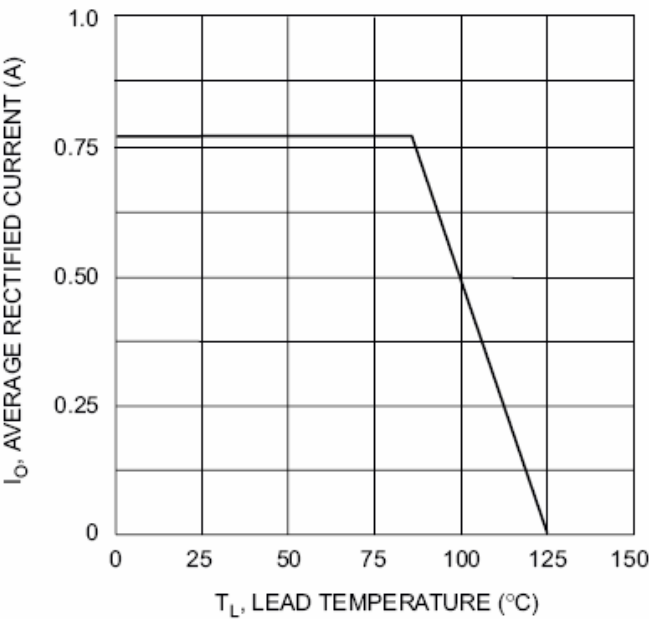


Fig. 1 Forward Current Derating Curve

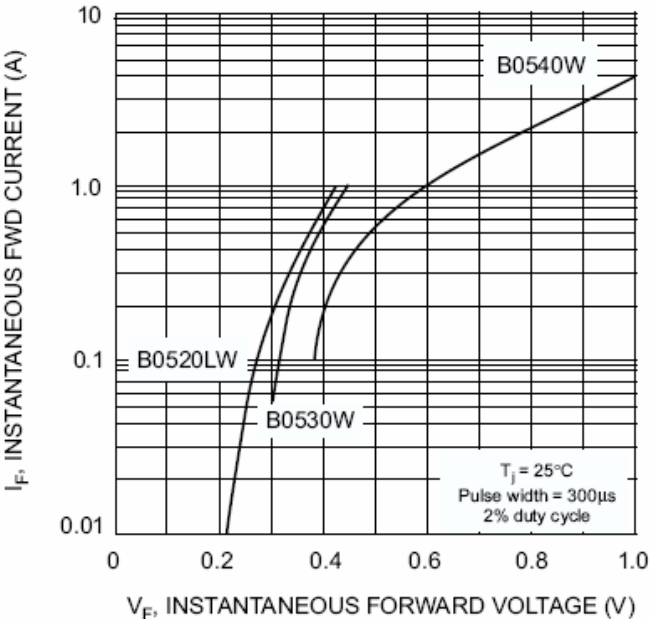


Fig. 2 Typical Forward Characteristics

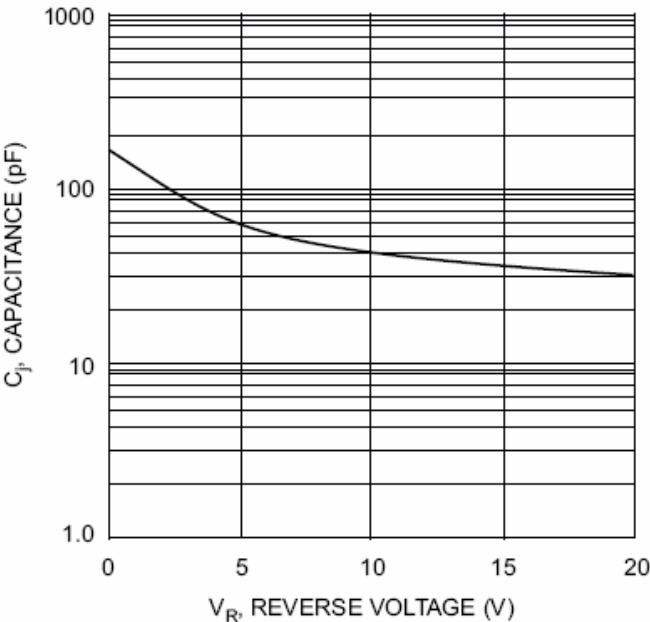


Fig. 3 Typ. Junction Capacitance vs Reverse Voltage