KI SEMICONDUCTOR CO.

SOD-123 Plastic-Encapsulate Diodes

B0520LW&B0530W&B0540W

SCHOTTKY RECTIFIER

FEATURES

- Low Forward Voltage Drop
- Guard Ring Construction forTransient Protection
- High Conductance

SOD-123

MARKING: B0520LW: SD
B0530W: SE
B0540W: SF

Maximum Ratings and Electrical Characteristics, Single Diode @T_A=25℃

Parameter	Symbol	B0520LW	B0530W	B0540W	Unit
Peak Repetitive Peak reverse voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	30	40	V
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	Pd	410			mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	244			K/W
Storage temperature	T_{STG}	-65~+150			℃
Voltage Rate of Change	dv/dt	1000			V/μs

Electrical Ratings @T_A=25℃

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=0V,f=1MHz
Reverse Recovery Time	t_{rr}			4	ns	I_F=I_R=10mA Irr=0.1XI_R,R_L=100Ω

Typical Characteristics

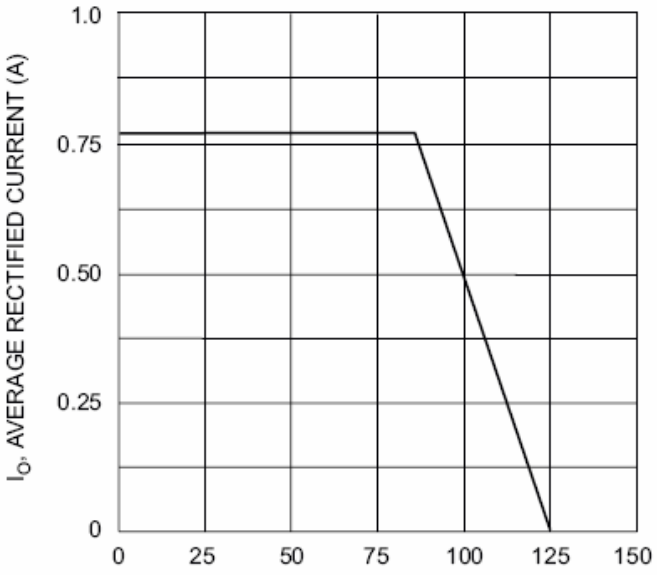

Fig. 1 Forward Current Derating Curve

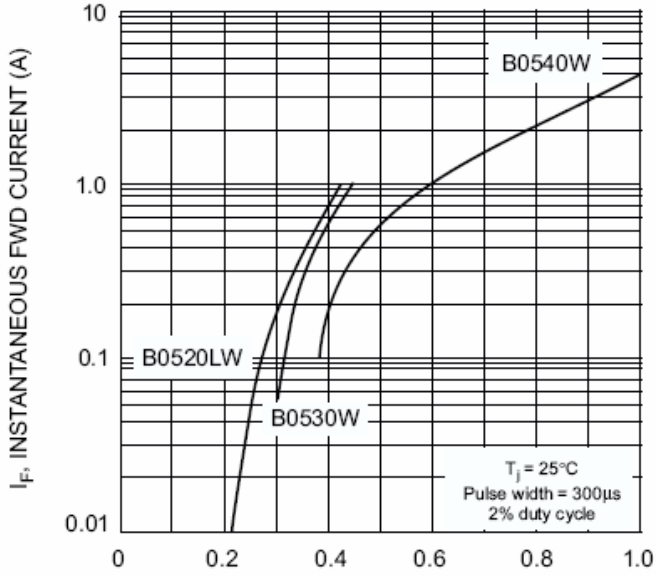

Fig. 2 Typical Forward Characteristics

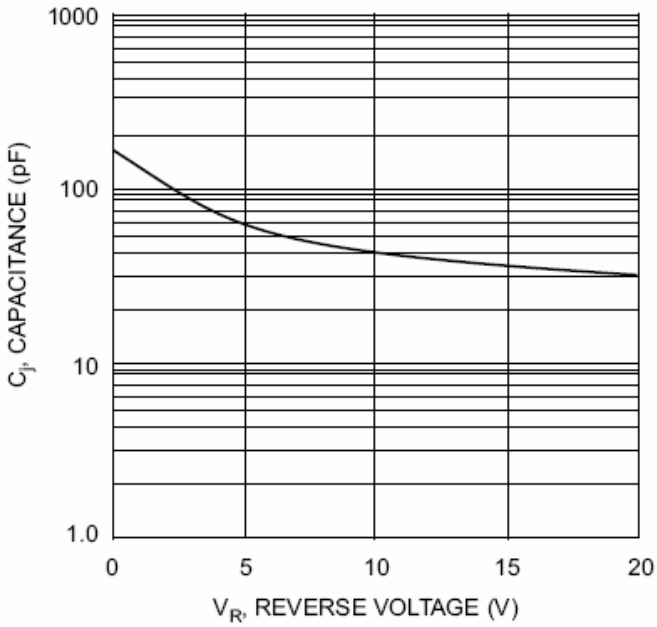

Fig. 3 Typ. Junction Capacitance vs Reverse Voltage