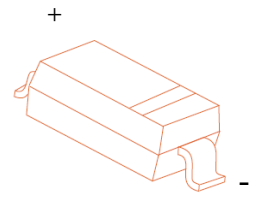
SCHOTTKY BARRIER DIODE

SOD-123



FEATURES

For use in low voltage, high frequency inverters
Free wheeling, and polarity protection applications.

MARKING: B5817W: SJ
B5818W:SK
B5819W: SL

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

Parameter	Symbol	B5817W	B5818W	B5819W	Unit
Non-Repetitive Peak reverse voltage	V_{RM}	20	30	40	V
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	1			A
Peak forward surge current @=8.3ms	I_{FSM}	9			A
Repetitive Peak Forward Current	I_{FRM}	1.5			A
Power Dissipation	Pd	500			mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	250			℃/W
Storage temperature	T_{STG}	-65~+150			℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions		MIN	MAX	UNIT
Reverse breakdown voltage	$V_{(BR)}$	I_R= 1mA	B5817W B5818W B5819W	20 30 40		V
Reverse voltage leakage current	I_R	V_R=20V V_R=30V V_R=40V	B5817W B5818W B5819W		1	mA
Forward voltage	V_F	B5817W	I_F=1A I_F=3A		0.45 0.75	V
		B5818W	I_F=1A I_F=3A		0.55 0.875	V
		B5819W	I_F=1A I_F=3A		0.6 0.9	V
Diode capacitance	C_D	V_R=4V, f=1MHz			120	pF

Typical Characteristics

Fig. 1 - Forward Current Derating Curve

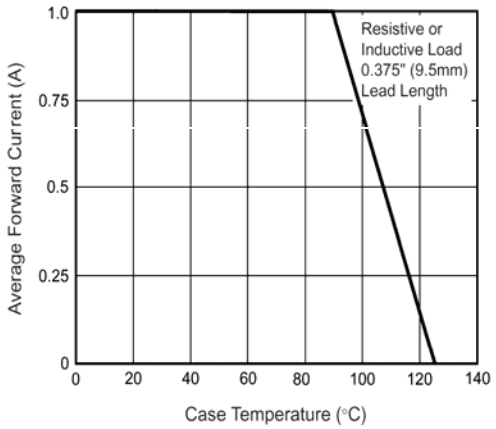


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

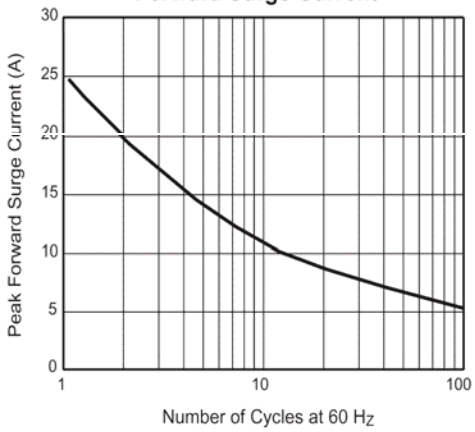


Fig. 3 - Typical Instantaneous Forward Characteristics

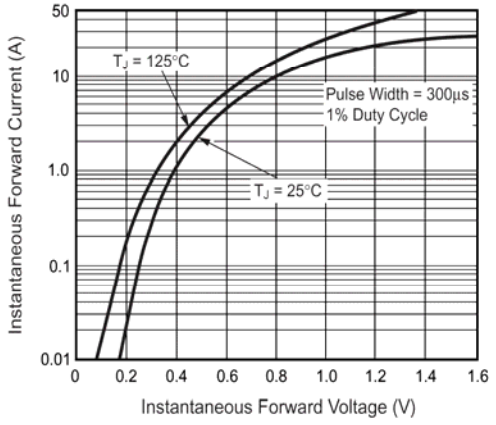


Fig. 4 - Typical Reverse Characteristics

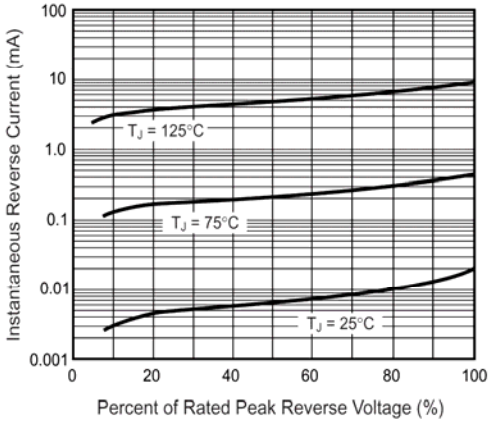


Fig. 5 - Typical Junction Capacitance

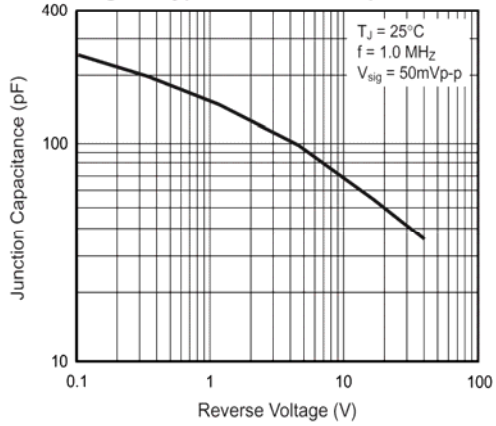


Fig. 6 - Typical Transient Thermal Impedance