

SCHOTTKY BARRIER DIODE

PRODUCT SUMMARY

SOD-123 Plastic-Encapsulate Diode

FEATURES

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

 **Pb-free; RoHS-compliant**



MARKING: B5817W: SJ
B5818W: SK
B5819W: SL

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Single Diode @ $T_A=25^{\circ}\text{C}$

Parameter	Symbol	B5817W	B5818W	B5819W	Unit
Non-Repetitive Peak reverse voltage	V_{RM}	20	30	40	V
Peak repetitive Peak reverse voltage	V_{RRM}	20	30	40	V
Working Peak Reverse Voltage	V_{RWM}				
DC Blocking Voltage	V_R				
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}	25			A
Repetitive Peak Forward Current	I_{FRM}	625			mA
Power Dissipation	P_d	250			mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500			K/W
Storage temperature	T_{STG}	-65~+150			$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS (T_{amb}=25 °C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Reverse breakdown voltage	V _(BR)	I _R = 1mA			
		B5817W	20		v
		B5818W	30		
		B5819W	40		
Reverse voltage leakage current	I _R	V _R =20V	B5817W		
		V _R =30V	B5818W		1
		V _R =40V	B5819W		
Forward voltage	V _F	B5817W	I _F =1A		0.45
			I _F =3A		0.75
		B5818W	I _F =1A		0.55
			I _F =3A		0.875
		B5819W	I _F =1A		0.6
			I _F =3A		0.9
Diode capacitance	C _D	V _R =4V, f=1MHz		120	pF

TYPICAL CHARACTERISTICS

Fig. 1 - Forward Current Derating Curve

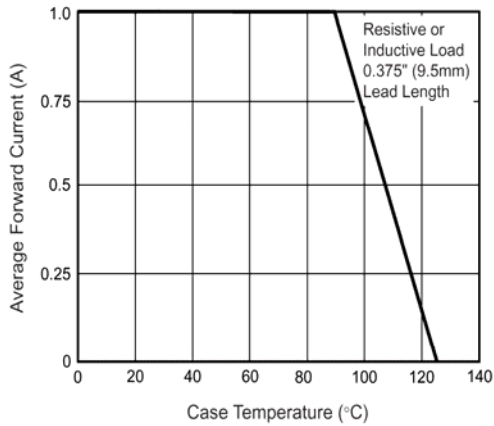


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

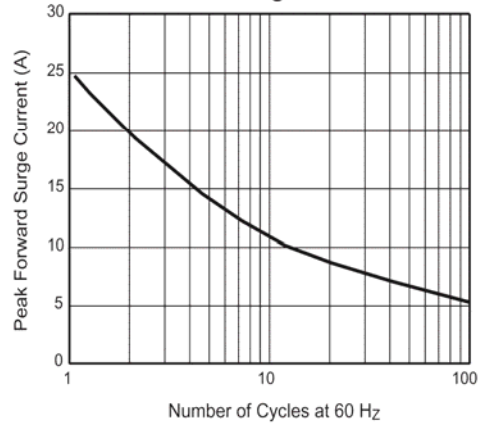


Fig. 3 - Typical Instantaneous Forward Characteristics

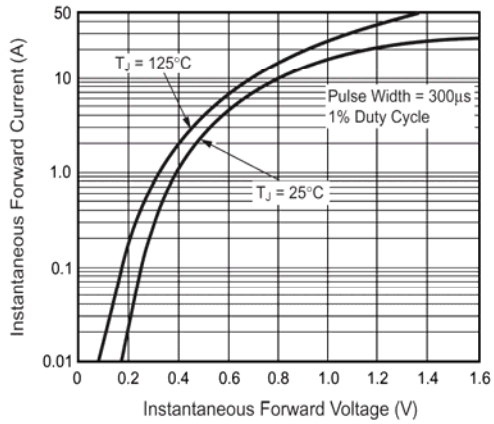


Fig. 4 - Typical Reverse Characteristics

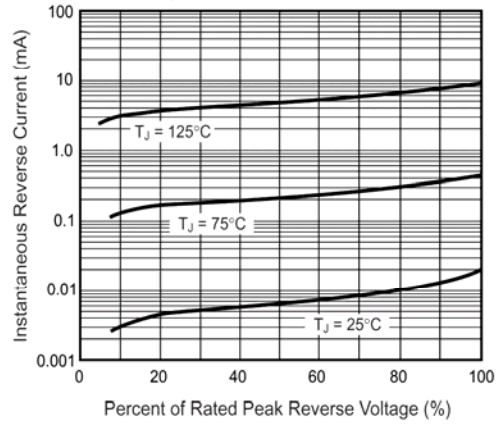


Fig. 5 - Typical Junction Capacitance

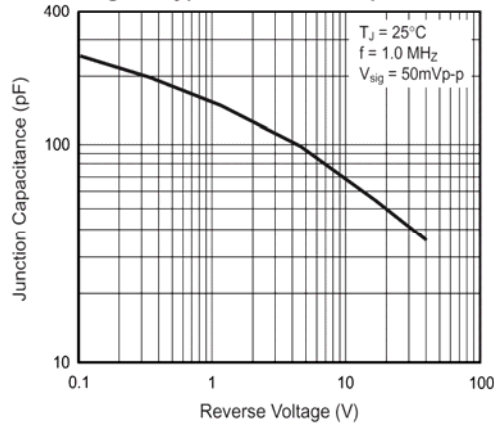
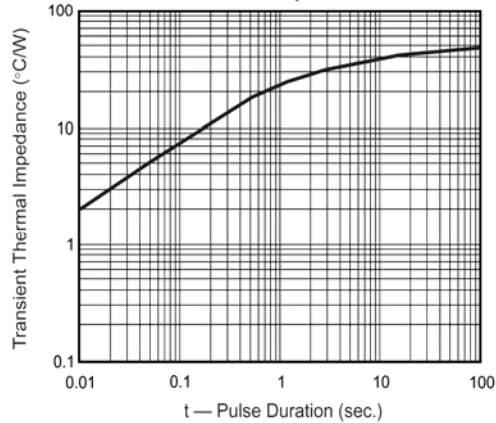


Fig. 6 - Typical Transient Thermal Impedance



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