

B5817WS THRU B5819WS

VOLTAGE RANGE
CURRENT

20 to 40 Volts
1.0 Ampere

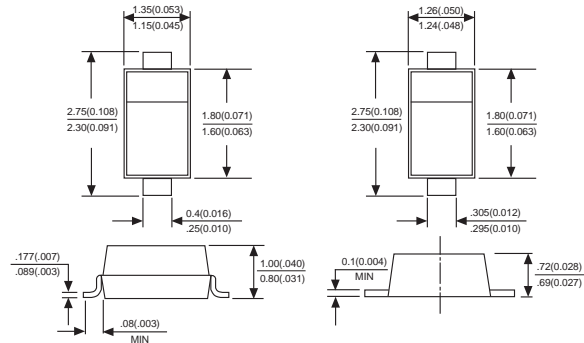
FEATURES

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

MECHANICAL DATA

- Case : Molded plastic body
- Terminals : Plated leads solderable per MIL-STD-750, Method 2026
- Polarity : Polarity symbols marked on case
- Marking : B5817W:SJ, B5818W:SK, B5819W:SL

SOD-323



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Maximum ratings and electrical characteristics, Single diode @T_A=25°C

PARAMETER	SYMBOLS	B5817WS	B5818WS	B5819WS	UNITS
Peak repetitive peak reverse voltage	V _{RRM}				
Working peak	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		1		A
Peak forward surge current @=8.3ms	I _{FSM}		9		A
Repetitive peak forward current	I _{FRM}		625		mA
Power dissipation	P _d		200		mW
Thermal resistance junction to ambient	R _{θJA}		625		K/W
Storage temperature	T _{STG}		-65 to +150		°C
Non-Repetitive peak reverse voltage	V _{RM}	20	30	40	V

Electrical ratings @T_A=25°C

PARAMETER	SYMBOLS	Min.	Max.	Unit	Test conditions	
Reverse breakdown voltage	V _(BR)	20		V	I _R =1mA	B5817WS
		30		V		B5818WS
		40		V		B5819WS
Reverse voltage leakage current	I _R		1	mA	V _R =20V	B5817WS
					V _R =30V	B5818WS
					V _R =40V	B5819WS
Forward voltage	V _F		0.45	V	I _F =1A I _F =3A	B5817WS
			0.75	V		B5818WS
			0.55 0.875	V		B5819WS
Diode capacitance	C _D		120	pF	V _R =4V, f=1.0MHz	

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FIG. 1- FORWARD CURRENT DERATING CURVE

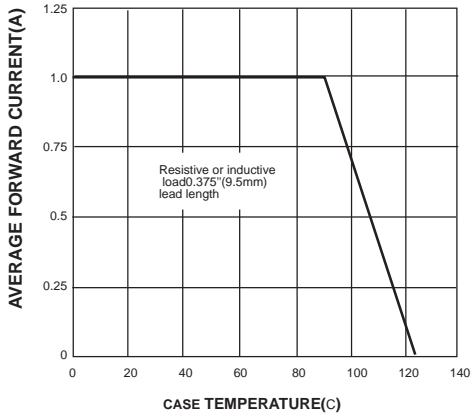


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

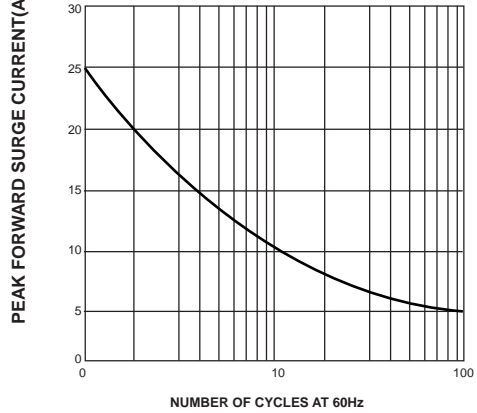


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

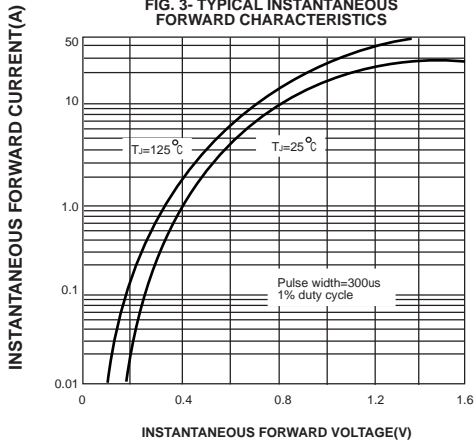


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

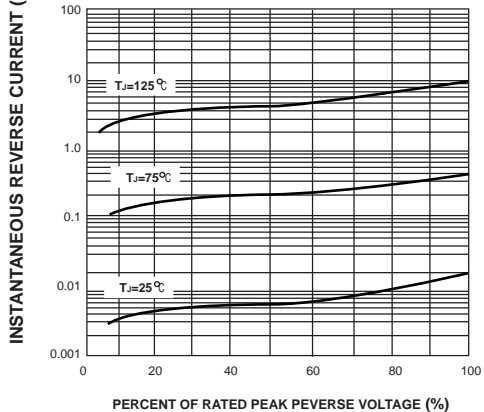


FIG. 5- TYPICAL JUNCTION CAPACITANCE

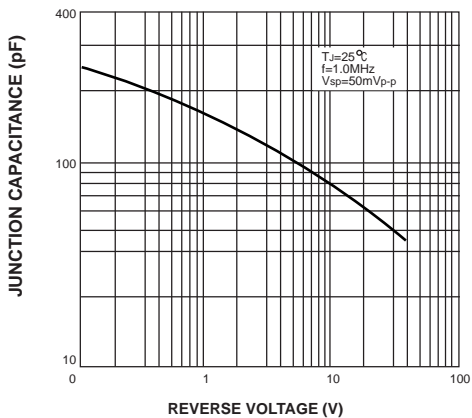


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

