

## II. Schottky Rectifier

### 1.0A Surface Mount Schottky Rectifier B5817W~B5819W

(Package: SOD-123)

<p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• For use in low voltage, high frequency inverters</li> <li>• Free wheeling, &amp; polarity protection applications</li> <li>• High conductance</li> </ul> <p><b>MECHANICAL DATA</b></p> <ul style="list-style-type: none"> <li>• Case : Molded plastic, SOD-123</li> <li>• Terminals : Plated leads solderable per MIL-STD-750, Method 2026</li> <li>• Polarity : Color band denotes cathode</li> </ul> <p><b>DEVICE MARKING CODE</b></p> <ul style="list-style-type: none"> <li>• B5817W : SJ</li> <li>• B5818W : SK</li> <li>• B5819W : SL</li> </ul>	<p>Case: SOD-123 Dimensions in millimeters and (inches)</p>
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### Ratings & Electrical Characteristics

Ratings at 25 ambient temperature unless otherwise specified.

Characteristic	Symbol	B5817W	B5818W	B5819W	Unit
Peak repetitive reverse voltage	$V_{RRM}$	20	30	40	Volts
Working peak reverse voltage	$V_{RWM}$				
DC blocking voltage	$V_R$				
RMS reverse voltage	$V_{R(RMS)}$	14	21	28	Volts
Average rectified output current	$I_O$	1.0			Amps
Peak forward surge current @8.3ms	$I_{FSM}$	25			Amps
Power dissipation	$P_D$	250			mW
Repetitive peak forward current	$I_{FRM}$	625			mA
Typical thermal resistance, junction to ambient	$R_{th-JA}$	500			°C/W
Storage temperature range	$T_{stg}$	-65 to +150			°C

Electrical ratings @Ta=25						
Parameter	Symbols	Min	Max	Unit	Testing Condition	
Reverse breakdown voltage	$V_{(BR)}$	20		Volts	$I_R=1mA$	B5817W
		30		Volts		B5818W
		40		Volts		B5819W
Reverse voltage leakage current	$I_R$		1	mA	$V_R=20V$	B5817W
					$V_R=30V$	B5818W
					$V_R=40V$	B5819W
Forward Voltage	$V_F$		0.45	Volts	$I_F=1A$ $I_F=3A$	B5817W
			0.75	Volts		B5818W
			0.55 0.875	Volts		B5819W
Diode Capacitance	$C_D$		120	PF	$V_R=4V, f=1.0MHz$	

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# Ratings and Characteristic Curves of B5817W~B5819W

FIG. 1- FORWARD CURRENT DERATING CURVE

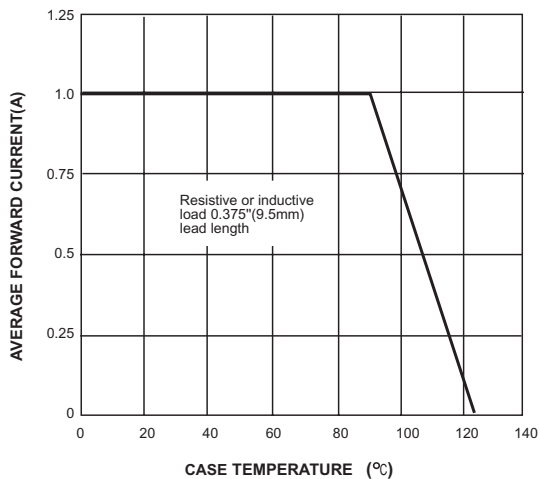


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

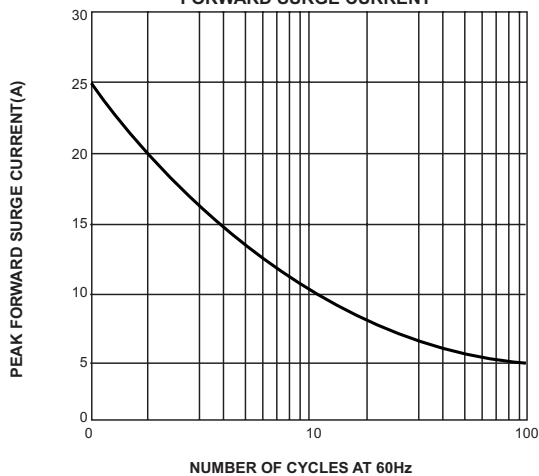


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

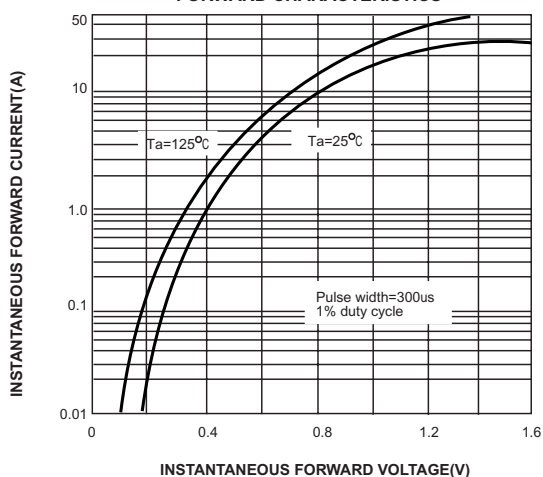


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

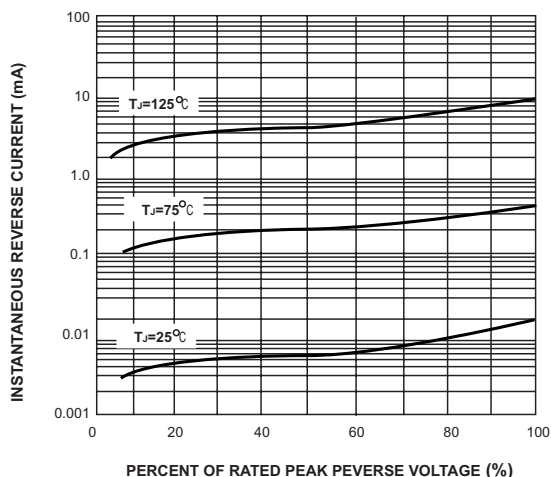


FIG. 5- TYPICAL JUNCTION CAPACITANCE

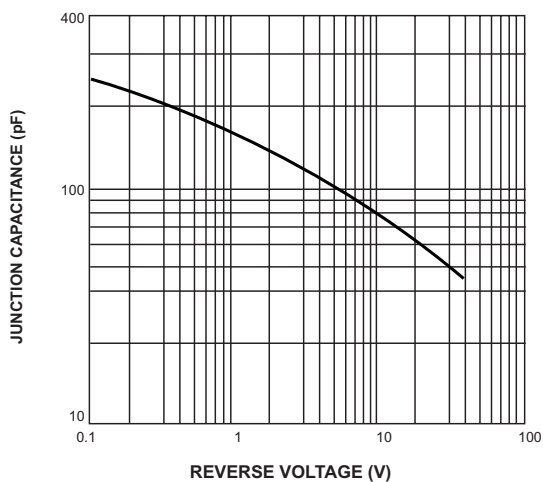


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

