



B120WS-F THRU B1100WS-F

1 Amperes Surface Mount Schottky Barrier Rectifiers
VOLTAGE : 20 TO 100Volts

Features	Outline
<ul style="list-style-type: none"> • Low profile surface mounted application in order to optimize board space. • Low power loss, high efficiency. • High current capability, low forward voltage drop. • High surge capability. • Guardring for overvoltage protection. • Ultra high-speed switching. • Silicon epitaxial planar chip, metal silicon junction. • Suffix "G" indicates Halogen-free part, ex.B120WSG-F. • Lead-free parts meet environmental standards of MIL-STD-19500 /228 	<p>SOD-323F</p> <p>Dimensions in inches and (millimeters)</p>
Mechanical data	
<ul style="list-style-type: none"> • Epoxy:UL94-V0 rated flame retardant • Case : Molded plastic, SOD-323F • Terminals : Solder plated, solderable per MIL-STD-750, Method 2026 • Polarity : Indicated by cathode band • Weight : Approximated 0.008 gram 	

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Parameter	Symbol	B120WS-F	B130WS-F	B140WS-F	B160WS-F	B1100WS-F	UNIT
Making code		12	13	14	16	10	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	60	100	V
Maximum RMS Voltage	V_{RMS}	14	21	28	42	70	
Maximum DC Blocking Voltage	V_{DC}	20	30	40	60	100	
Maximum Instantaneous Forward Voltage@1.0A, $T_A = 25^\circ\text{C}$	V_F	0.50			0.70	0.81	V
Operating Temperature	T_J	-50 ~ +125				-50 ~ +150	°C

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig. 1	I_O			1.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}			30	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25^\circ\text{C}$	I_R			0.1	mA
	$V_R = V_{RRM}$ $T_A = 100^\circ\text{C}$				20	
Thermal resistance	Junction to ambient	$R_{\theta JA}$		88		°C/W
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		120		pF
Storage temperature		T_{STG}	-50		+150	°C



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Rating and characteristic curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

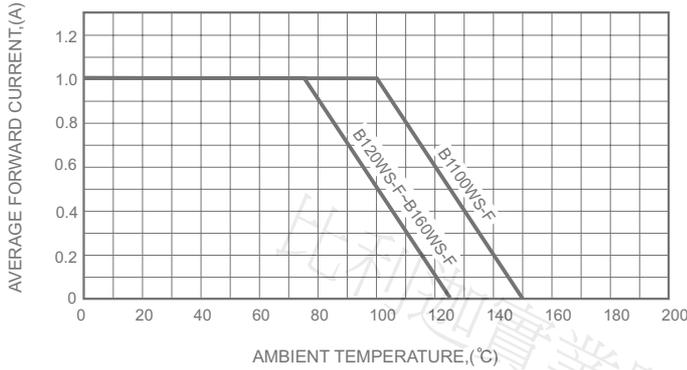


FIG.2-TYPICAL FORWARD CHARACTERISTICS

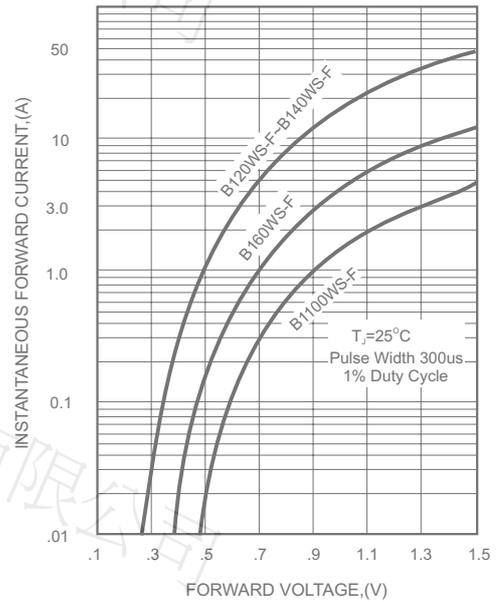


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

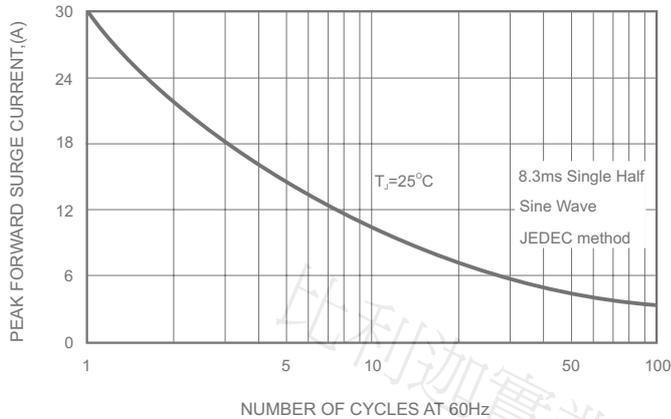


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

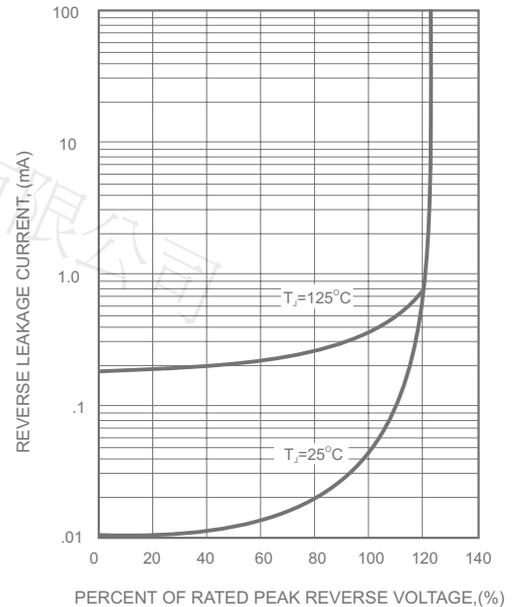


FIG.4-TYPICAL JUNCTION CAPACITANCE

