



Data Sheet

Customer :

Product : Small Signal Schottky Diode-Standard

Part No.: B120WS-F/B130WS-F/B140WS-F/B160WS-F/B1100WS-F/B1150WS-F
B1200WS-F

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1 Amperes Surface Mount Schottky Barrier Rectifiers

Voltage : 20 to 200Volts

■ Features

- 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 over voltage protection
- Ultra high-speed switching
- Silicon epitaxial planar chip, metal silicon junction
- Lead-free parts meet environmental standards of MIL-STD-19500/228
- Halogen free



■ Mechanical Data

Epoxy : UL94-V0 rated flame retardant

Case : Molded Plastic, SOD-323F

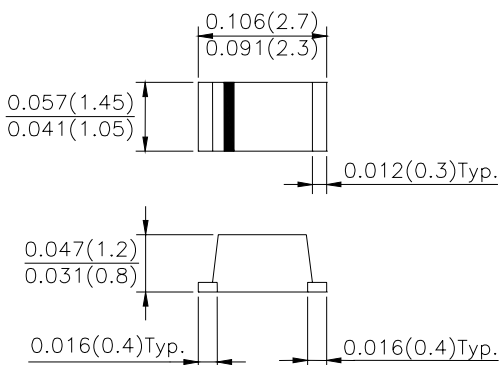
Terminals : Solder plated, Solderable per MIL-STD-750, Method 2026

Polarity : Indicated by cathode band

Weight : Approximated 0.008 gram

Packaging : 2.5Kpcs per 7" reel

■ Package Dimensions in inches(millimeters): SOD-323F



■ 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	B1150WS-F	B1200WS-F	Unit
Marking Code		12	13	14	16	10	1A	1B	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	60	100	150	200	V
Maximum RMS Voltage	V_{RMS}	14	21	28	42	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	60	100	150	200	V
Maximum Instantaneous Forward Voltage @ 1.0A, $T_A=25^\circ\text{C}$	V_F	0.50			0.70	0.81	0.87	0.90	V
Operating Temperature	T_J	-50 ~ +125				-50 ~ +150			$^\circ\text{C}$

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		$^\circ\text{C}/\text{W}$
Diode Junction Capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		120		pF
Storage Temperature		T_{STG}	-50		+150	$^\circ\text{C}$

Rated and Characteristic Curve

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

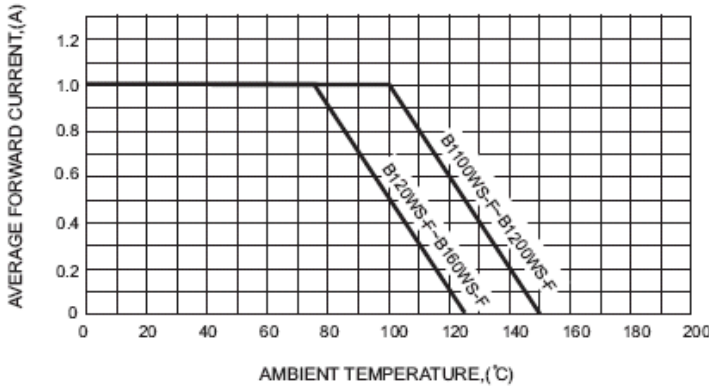


FIG.2-TYPICAL FORWARD CHARACTERISTICS

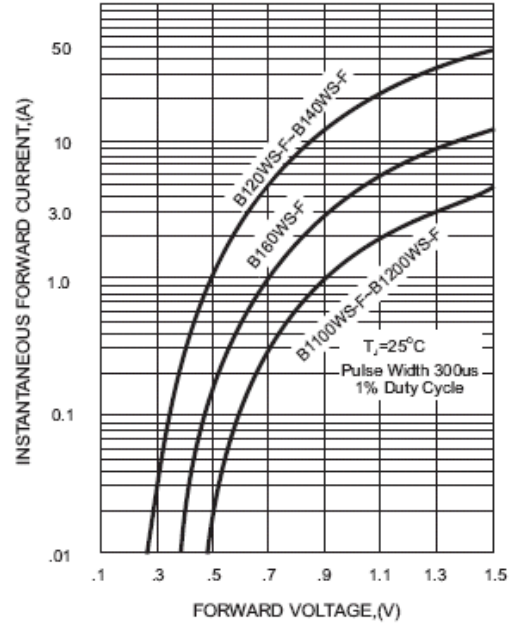


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

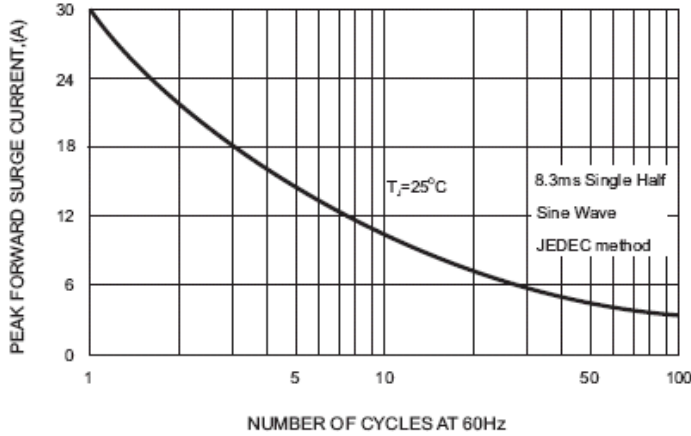


FIG.4-TYPICAL JUNCTION CAPACITANCE

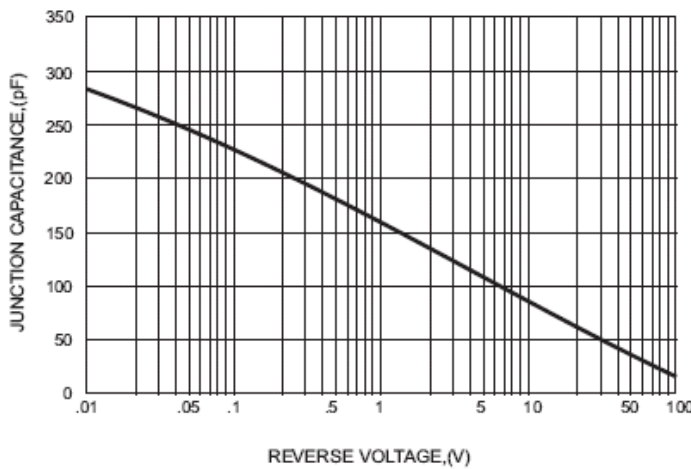


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

