B140WS-001

1 Amperes Surface mounts Schottky Barrier Rectifiers
VOLTAGE : 40 Volts

Features

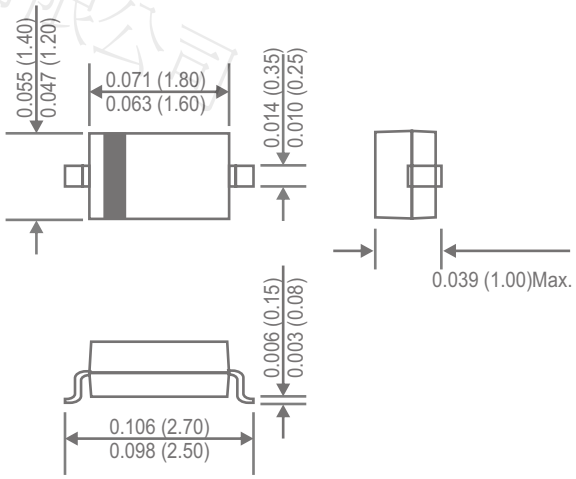
- Tiny plastic SMD package.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guardring for overvoltage protection.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Suffix "G" indicates Halogen-free part, ex.B140WSG-001
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, SOD-123
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Weight : 0.0002 ounce, 0.005 gram

Outline

SOD-323



Dimensions in inches and (millimeters)

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	B140WS-001	UNIT
Making code		SL	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	V
Maximum RMS Voltage	V_{RMS}	28	
Maximum DC Blocking Voltage	V_{DC}	40	
Maximum Instantaneous Forward Voltage At 5.0Adc	V_F	0.60	V
Operating Temperature	T_J	-55~+125°C	°C

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	I_O			1	A
Forward surge current	Peak forward surge current 8.3ms single half sine-wave superimposed on rates load (JEDEC method) per leg	I_{FSM}			5	A
Reverse current	$V_R = V_{RRM}$ T_A= 25 °C	I_R			0.1	mA
	$V_R = V_{RRM}$ T_A= 100 °C				20	
Thermal resistance per leg	Junction to ambient	$R_{\theta JA}$		98		°C/W
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		120		pF
Storage temperature		T_{STG}	-55		+125	°C

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Rating and characteristic curves

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

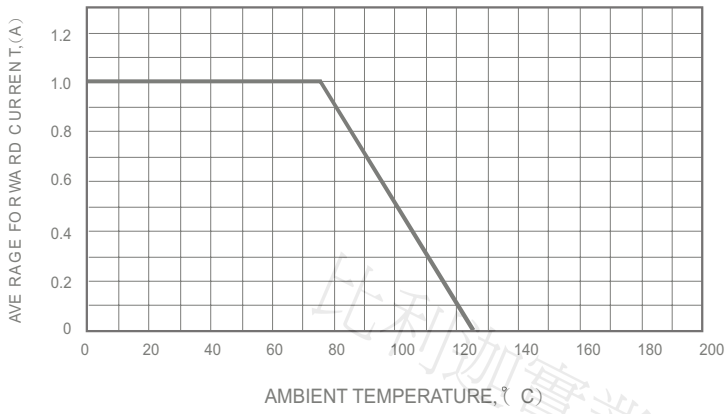


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

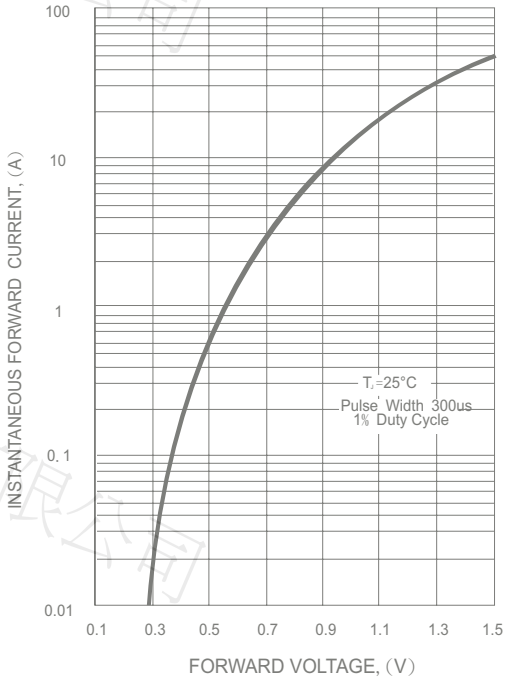


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

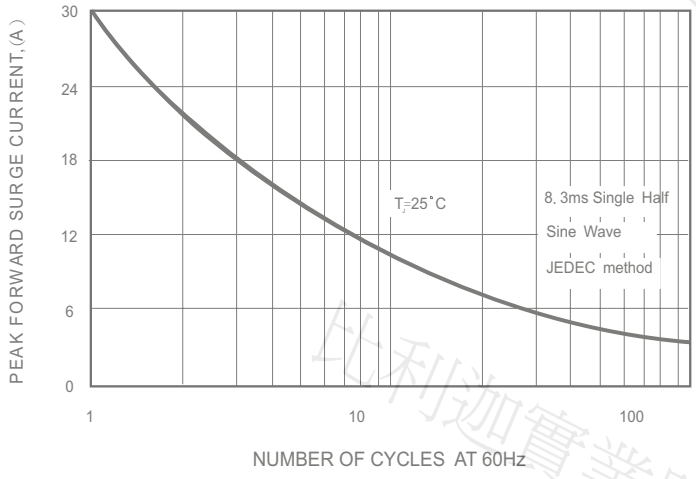


FIG. 4-TYPICAL JUNCTION CAPACITANCE

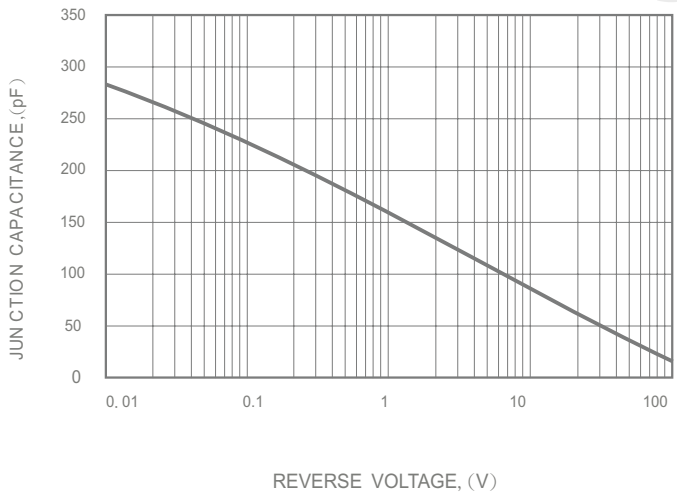
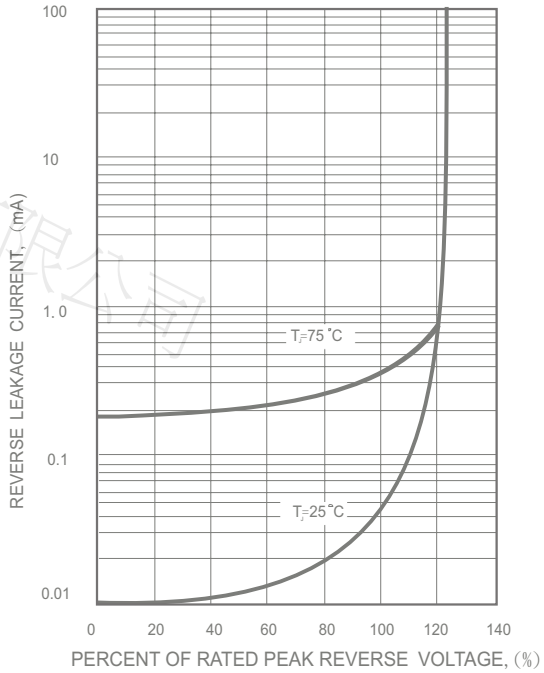


FIG. 5 - TYPICAL REVERSE CHARACTERISTICS



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