

PSB30U100SR&PSB30U100FSR

30.0AMPS. SCHOTTKY BARRIER RECTIFIERS

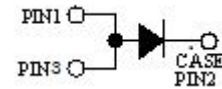
FEATURE

- . High current capability
- . Ultra low forward voltage drop
- . Low power loss, high efficiency
- . High surge capability
- . High temperature soldering guaranteed
260°C /10seconds, 0.25"(6.35mm)from case.



MECHANICAL DATA

- . Case: Molded with UL-94 Class V-0 recognized
Flame Retardant Epoxy
- . Mounting position: any



Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

MAXIMUM RATINGS ($T_C=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	PSB30U100SR&PSB30U100FSR	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	100	V
Maximum RMS Voltage	V_{RMS}	70	V
Maximum DC blocking Voltage	V_{DC}	100	V
Maximum Average Forward Rectified Current <i>Per Leg</i> at $T_C=100^\circ\text{C}$ <i>Total device</i>	$I_{F(AV)}$	15.0 30.0	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	250.0	A
Typical Junction Capacitance (Note 1)	C_J	980	pF
Operation Junction Temperature and Storage Temperature	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$
Maximum Mounting torque, M3 or 6-32 screw		1.1N•m (10 lbf•in)	

ELECTRICAL CHARACTERISTICS ($T_C=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Typ	Max	Units
Maximum Forward Voltage (<i>Per Leg</i>) at 3.0A DC at 5.0A DC at 10.0A DC at 30.0A DC	V_F	0.39 0.42 0.48 0.65	---- ---- ---- 0.72	V
Maximum DC Reverse Current at rated DC blocking voltage @ $T_A=25^\circ\text{C}$ @ $T_A=100^\circ\text{C}$	I_R	---- ----	0.25 20.0	mA

THERMAL CHARACTERISTICS ($T_C=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	PSB30U100SR	PSB30U100FSR	Units
Typical Thermal Resistance (Note 2)	$R_{(JC)}$	2.0	3.0	$^\circ\text{C}/\text{W}$

Notes:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
2. Thermal Resistance from Junction to Case

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

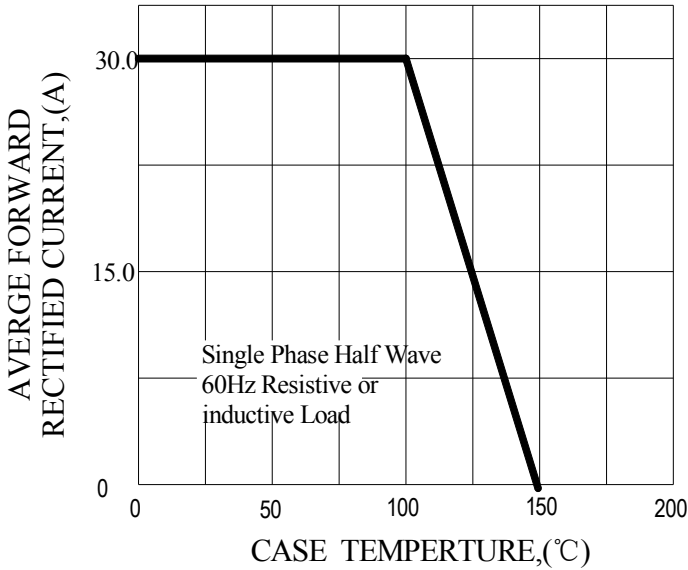


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

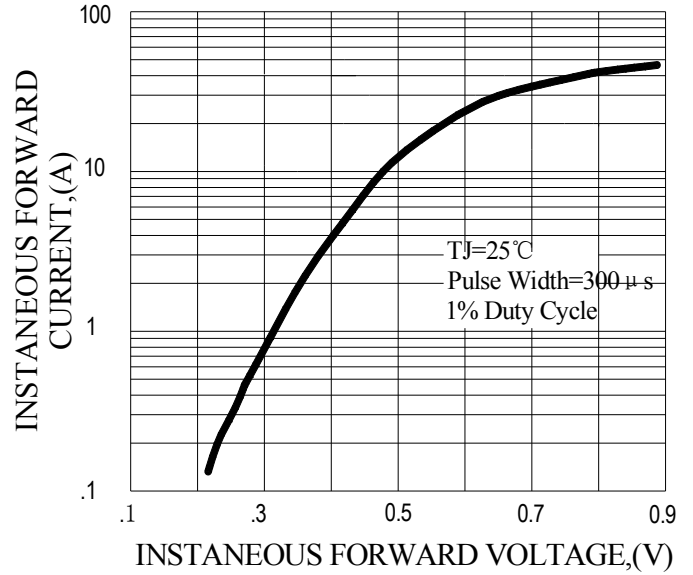


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

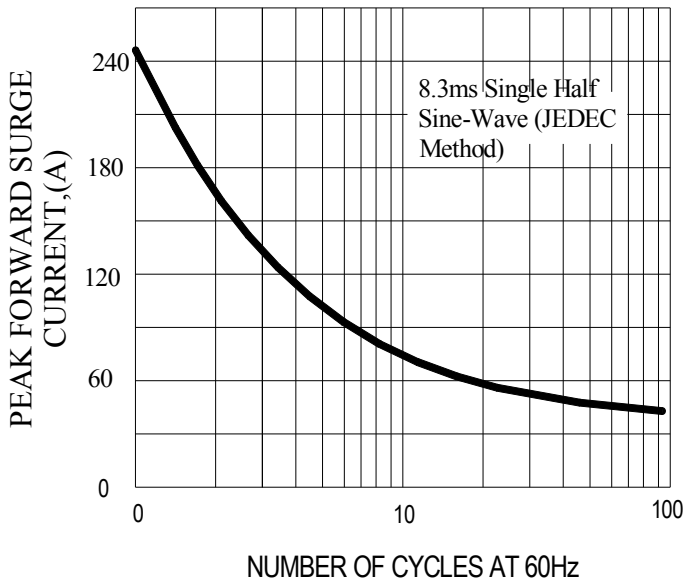
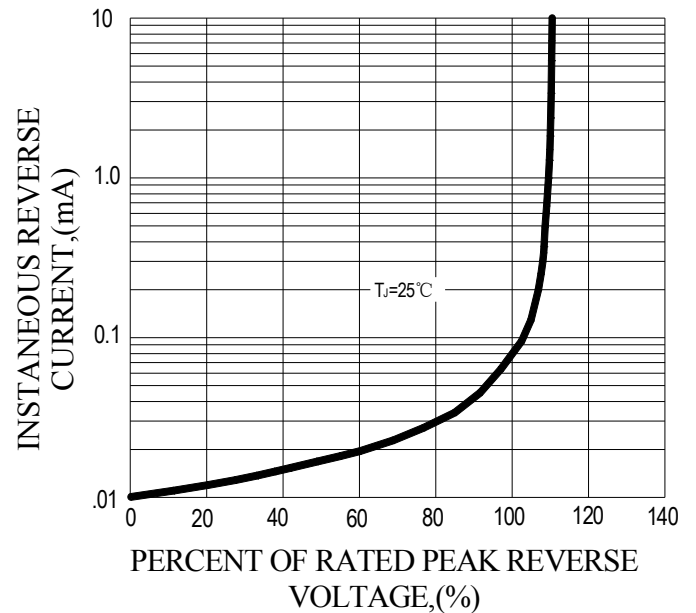
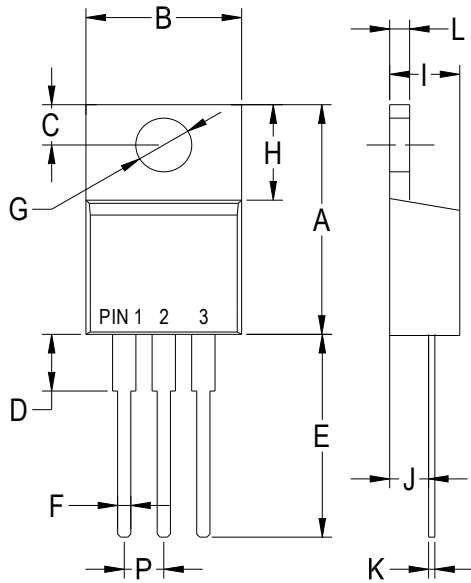


FIG.4-TYPICAL REVERSE CHARACTERISTICS



PACKAGE OUTLINE DIMENSIONS

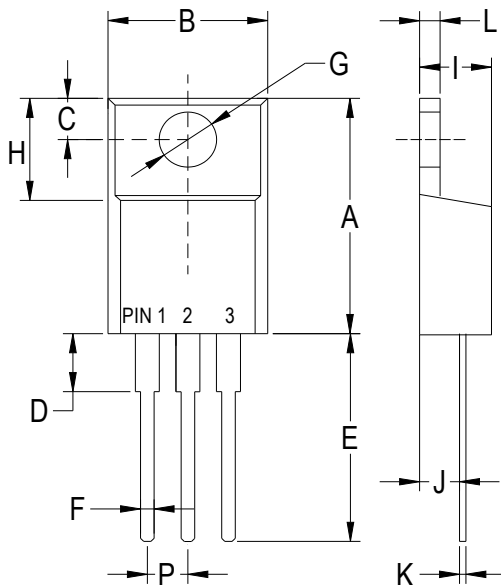
TO-220AB



TO-220AB		
Dim	Min	Max
A	.573 (14.55)	.603 (15.32)
B	—	.412 (10.5)
C	.103 (2.62)	.113 (2.87)
D	.140 (3.56)	.160 (4.06)
E	.510 (13.0)	.560 (14.3)
F	.027 (0.68)	.037 (0.94)
G	.148 (3.74)	.154 (3.91)
H	.230 (5.84)	.270 (6.86)
I	.175 (4.44)	.185 (4.86)
J	.100 (2.54)	.110 (2.79)
K	.014 (0.35)	.025 (0.64)
L	.045 (1.14)	.055 (1.40)
P	.095 (2.41)	.105 (2.67)

Dimensions in inches and (millimeters)

ITO-220AB



ITO-220AB		
Dim	Min	Max
A	.571 (14.5)	.610 (15.5)
B	.383 (9.72)	.406 (10.3)
C	.110 (2.80)	.126 (3.20)
D	.133 (3.38)	.162 (4.10)
E	.512 (13.0)	.551 (14.0)
F	.028 (0.70)	.035 (0.90)
G	.114 (2.90)	.138 (3.50)
H	.268 (6.80)	.291 (7.40)
I	.162 (4.10)	.185 (4.70)
J	.102 (2.60)	.110 (2.80)
K	.018 (0.45)	.026 (0.65)
L	.097 (2.46)	.113 (2.86)
P	.890 (2.25)	.113 (2.85)

Dimensions in inches and (millimeters)

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