FUXINSEMI
INNOVATOR IN SEMICONDUCTOR

BX320

3.0A Surface Mount Schottky Barrier Rectifiers -200V

Features

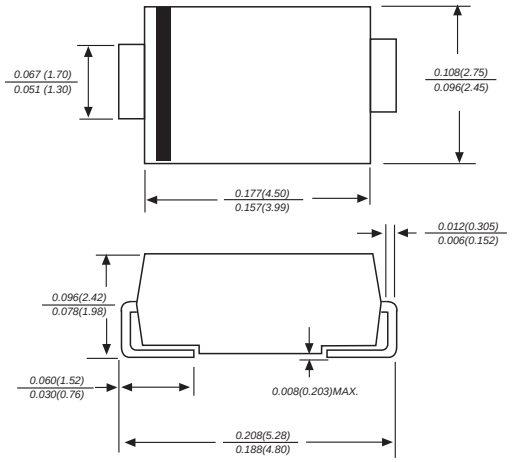
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Metal silicon junction,majority carrier conduction
- Low power loss,high efficiency
- Built-in strain relief,ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 260℃/10 seconds at terminals
- Compliant to RoHS 2.0
- Halogen-free

Mechanical data

- **Case**: JEDEC DO-214AC molded plastic body
- **Terminals**: Solder plated, solderable per MIL-STD-750, Method 2026
- **Polarity**: Color band denotes cathode end
- **Mounting Position**: Any

Package outline

SMA/DO-214AC



Dimensions in inches and (millimeters)

Maximum ratings and Electrical Characteristics (AT T_A=25℃ unless otherwise noted)

	SYMBOLS	BX320	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	200	V
Maximum RMS voltage	V_{RMS}	140	V
Maximum DC blocking voltage	V_{DC}	200	V
Maximum average forward rectified current at T_L(see fig.1)	$I_{(AV)}$	3.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	80	A
Maximum instantaneous forward voltage at 3.0A	V_F	0.93	V
Maximum DC reverse current T_A=25℃	I_R	0.1	mA
at rated DC blocking voltage T_A=100℃		2.0	
Typical junction capacitance (NOTE 1)	C_J	450	pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	70	°C/W
Operating junction temperature range	T_J,	-55 to +175	°C
Storage temperature range	T_{STG}	-55 to +175	°C

Note:1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2.P.C.B. mounted with 2.0x2.0"(5.0x5.0cm) copper pad areas

Rating and characteristic curves

FIG. 1- FORWARD CURRENT DERATING CURVE

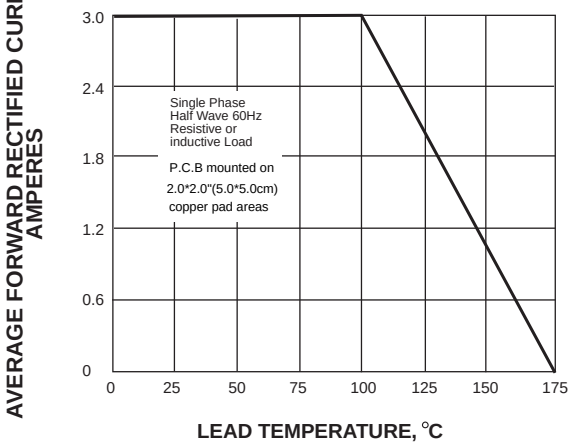


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

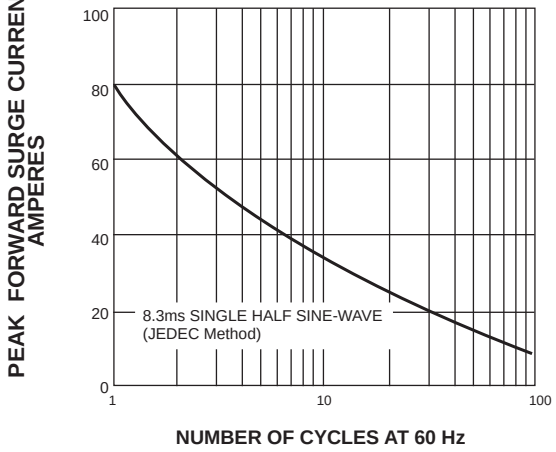


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

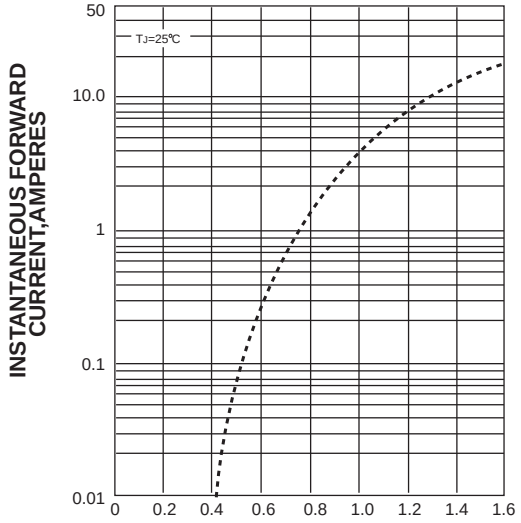


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

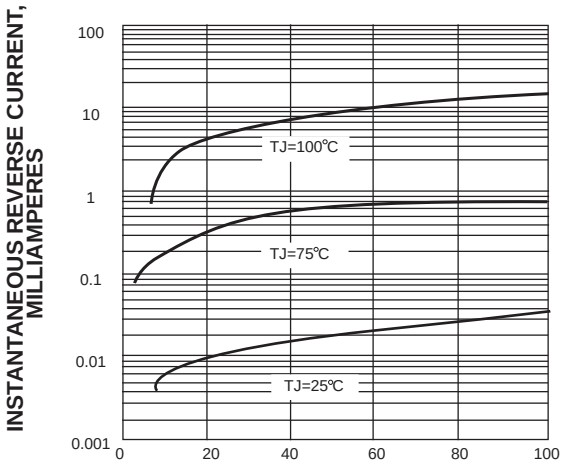


FIG. 5-TYPICAL JUNCTION CAPACITANCE

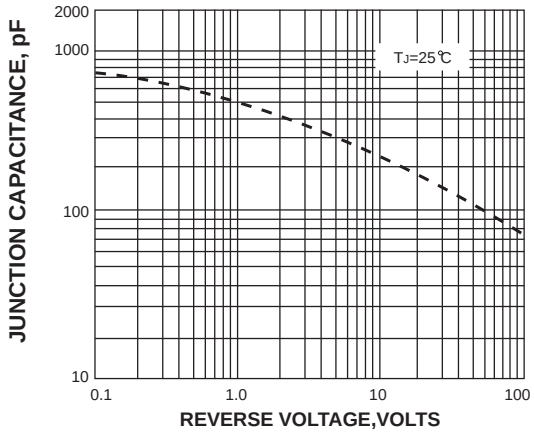
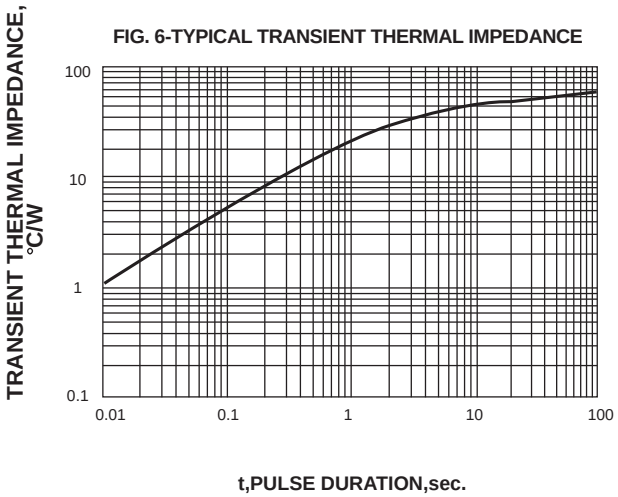


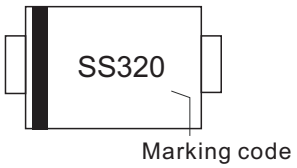
FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



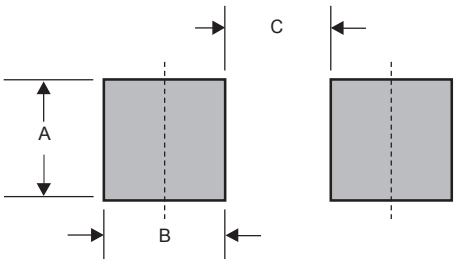
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code	Example
BX320	SS320	

Suggested solder pad layout

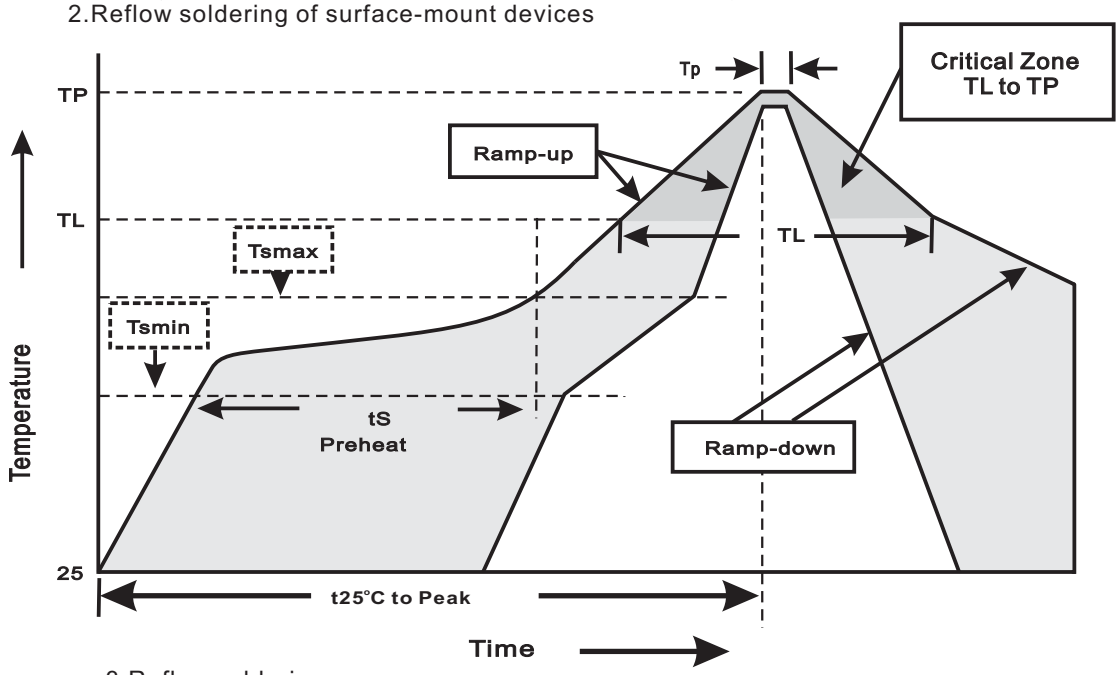


Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMA	0.110 (2.80)	0.063 (1.60)	0.087 (2.20)

Suggested thermal profiles for soldering processes

1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
2.Reflow soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(T_L to T_P)	<3°C/sec
Preheat -Temperature Min(Tsmin) -Temperature Max(Tsmax) -Time(min to max)(t_s)	 150°C 200°C 60~120sec
Tsmax to T_L -Ramp-upRate	 <3°C/sec
Time maintained above: -Temperature(T_L) -Time(t_L)	 217°C 60~260sec
Peak Temperature(T_P)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(t_P)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes