

## LOW VF SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

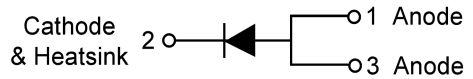
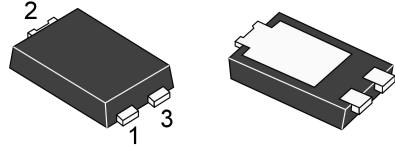
### Features

- Schottky Barrier Chip
- High Thermal Reliability
- Patented Super Barrier Rectifier Technology
- High Forward Surge Capability
- Ultra Low Power Loss, High Efficiency
- Excellent High Temperature Stability
- Plastic material-UL flammability 94V-0

### Mechanical Data

- Case: TO-277B, molded plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Mounting Position: Any
- Marking: Type Number
- Lead Free: For RoHS/Lead Free Version

TO-277B



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified, single phase, half wave, resistive or inductive load. For capacitive load, derate by 20%.)

	Symbols	SB 1020	SB 1030	SB 1045	SB 1050	SB 1060	SB 1080	SB 10100	SB 10150	SB 10200	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	45	50	60	80	100	150	200	Volts
Maximum RMS voltage	$V_{RMS}$	14	21	31	35	42	56	70	105	140	Volts
Maximum DC blocking voltage	VDC	20	30	45	50	60	80	100	150	200	Volts
Maximum average forward rectified current (see Fig.1)	$I(AV)$	10.0									Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	150.0									Amps
Maximum instantaneous forward voltage at 10.0 A (Note 1)	$V_F$	0.48			0.62		0.72		0.85		Volts
Maximum instantaneous reverse current at rated DC blocking voltage (Note 1)	$T_a = 25^\circ\text{C}$	0.2									mA
	$T_a = 125^\circ\text{C}$	15			50						
Typical thermal resistance (Note 2)	$R_{\theta JC}$	2.5									°C/W
Operating junction temperature range	$T_J$	-65 to +150									°C
Storage temperature range	$T_{STG}$	-65 to +150									°C

Notes: 1. Pulse test: 300  $\mu$ s pulse width, 1% duty cycle

2. Thermal resistance from junction to case

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FIG.1-FORWARD CURRENT DERATING CURVE

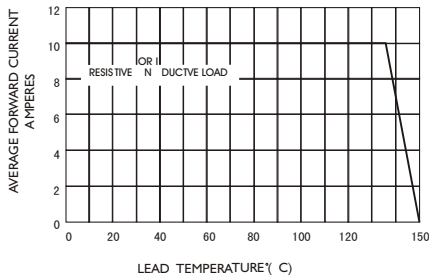


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

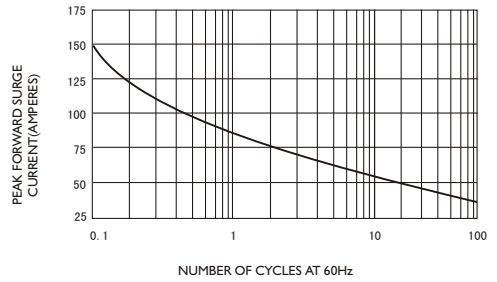


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

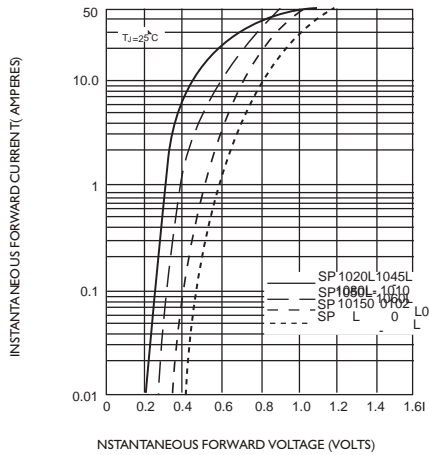


FIG.4-TYPICAL REVERSE CHARACTERISTICS

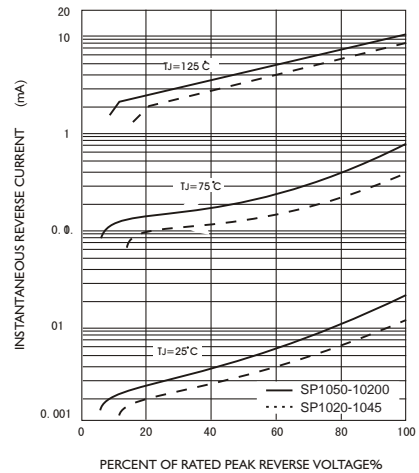


FIG.5-TYPICAL JUNCTION CAPACITANCE

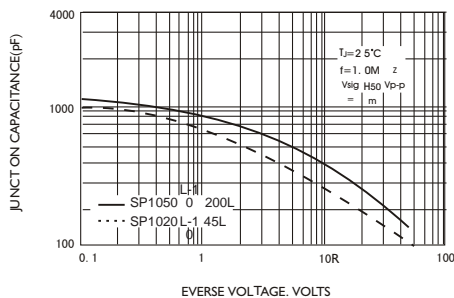
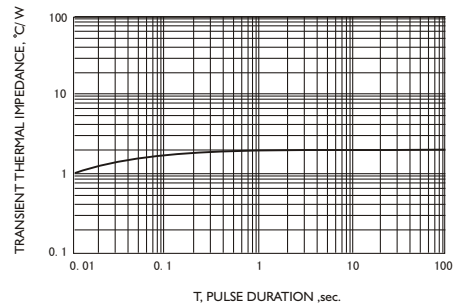
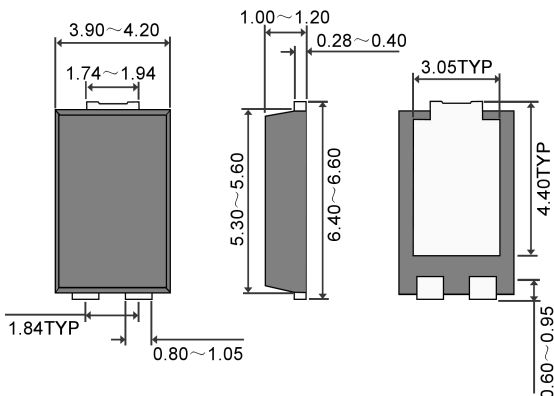


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

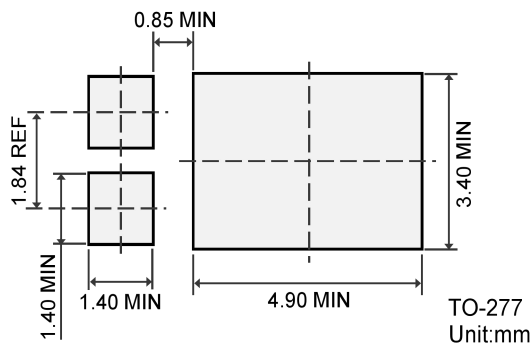


### Package Outline Dimensions



TO-277  
Unit:mm

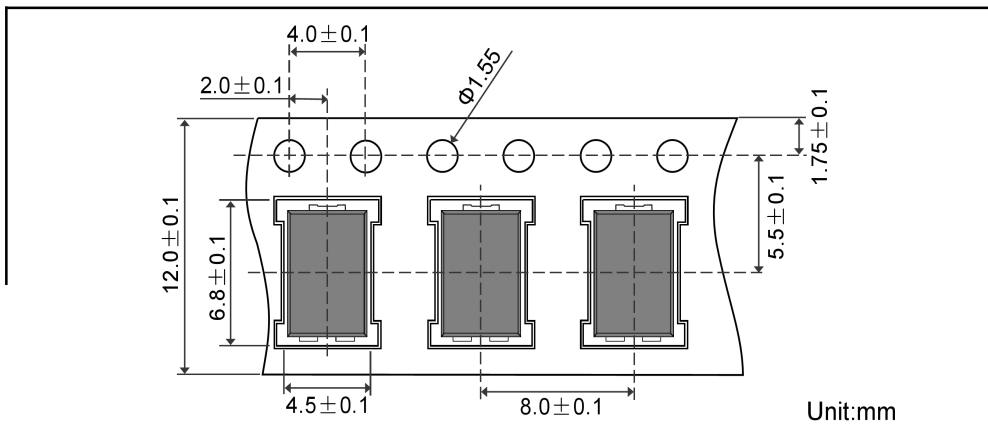
### Suggested Solder Pad Layout



TO-277  
Unit:mm

### Packing Information

Packaging	Package	Reel Quantity	Reel Size	Tape Size
Reel	TO-277B	5000 pcs	13'	12 mm



Unit:mm