

# SV1045 THRU SV1050

## Surface Mount Schottky Barrier Rectifiers

Reverse Voltage - 45 to 50 Volts Forward Current - 10.0 Amperes

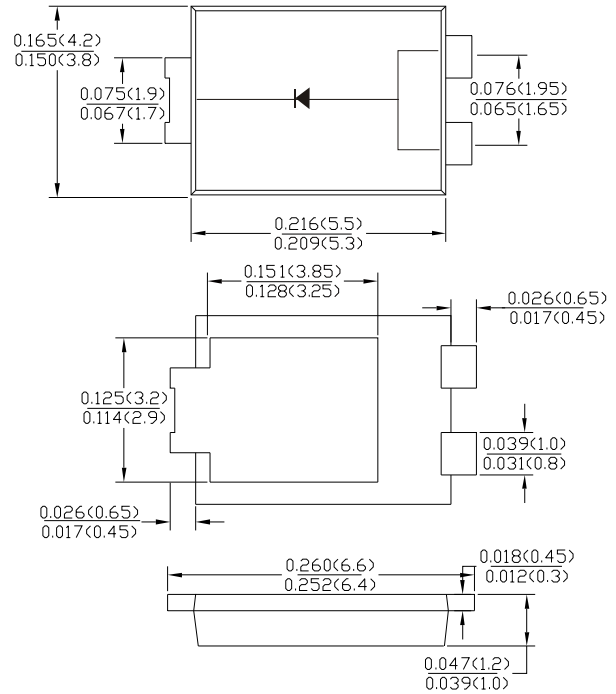
### Features

- 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-277, 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-277



dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

RATINGS AT  $25^\circ\text{C}$  AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED

SINGLE PHASE, HALF WAVE, 60 HZ, RESISTIVE OR INDUCTIVE LOAD.

FOR CAPACITIVE LOAD, DERATE CURRENT BY 20%

RATINGS	SYMBOL	SV1045	SV1050	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	$V_{RRM}$	45	50	V
MAXIMUM RMS VOLTAGE	$V_{RMS}$	31.5	35	V
MAXIMUM DC BLOCKING VOLTAGE	$V_{DC}$	45	50	V
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT SEE FIG.1 PER LEG	$I_O$	10		A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD PER LEG	$I_{FSM}$	300		A
STORAGE TEMPERATURE RANGE	$T_{STG}$	- 65 TO + 175		$^\circ\text{C}$
OPERATING JUNCTION TEMPERATURE RANGE	$T_J$	- 55 TO + 150		$^\circ\text{C}$

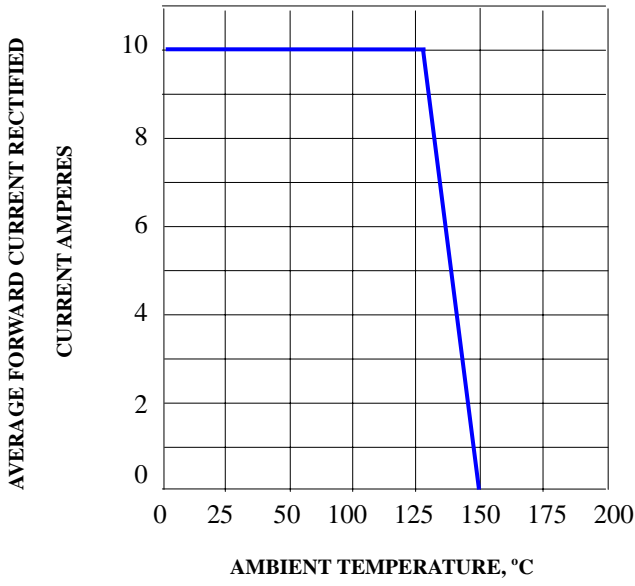
### ELECTRICAL CHARACTERISTICS

CHARACTERISTICS	SYMBOL	SV1045	SV1050	UNITS
MAXIMUM FORWARD VOLTAGE AT $I_F = 10\text{A}$ $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	VF	0.45		V
		0.43		
TYPICAL FORWARD VOLTAGE AT $I_F = 2\text{A}$ $T_J = 125^\circ\text{C}$		0.23		
TYPICAL FORWARD VOLTAGE AT $I_F = 5\text{A}$ $T_J = 125^\circ\text{C}$		0.31		
TYPICAL FORWARD VOLTAGE AT $I_F = 8\text{A}$ $T_J = 125^\circ\text{C}$		0.37		
MAXIMUM REVERSE CURRENT AT $25^\circ\text{C}$ PER LEG (NOTE 1)	$I_R$	0.2		mA
MAXIMUM REVERSE CURRENT AT $125^\circ\text{C}$ PER LEG (NOTE 1)	$I_R$	20		mA

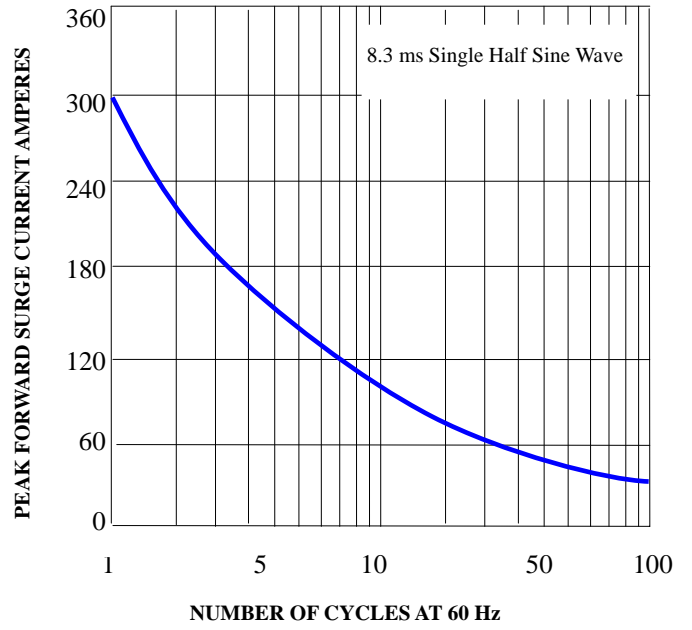
### THERMAL CHARACTERISTICS ( $T_c = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

PARAMETER	SYMBOL	SV1045	SV1050	UNITS
TYPICAL THERMAL RESISTANCE JUNCTION TO CASE PER LEG	$R_{\theta jc}$	23		$^\circ\text{C}/\text{W}$

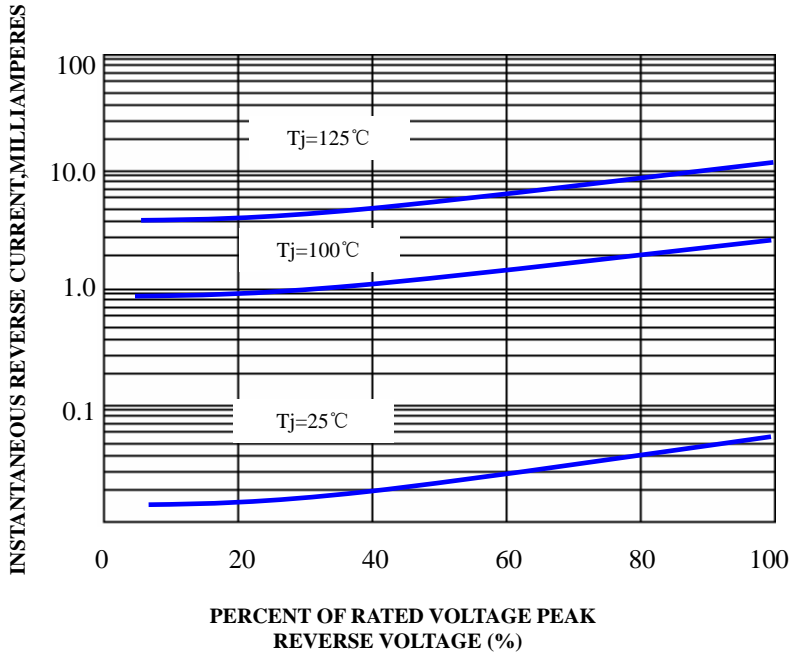
**FIG. 1-FORWARD CURRENT DERATING CURVE**



**FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE RATING**



**FIG. 3- TYPICAL REVERSE CHARACTERISTICS**



**FIG. 4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**

