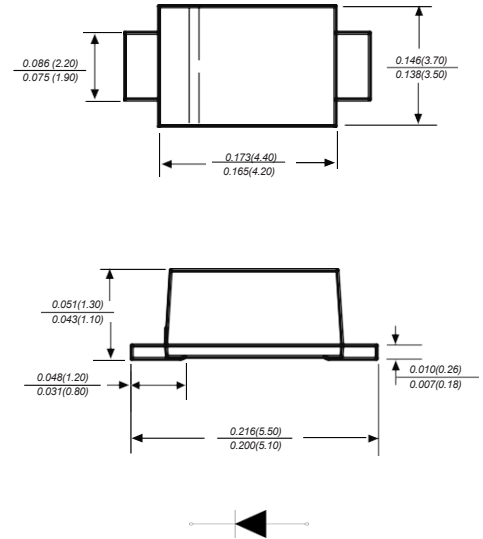


SURFACE MOUNT TRENCH SCHOTTKY RECTIFIER

Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ High efficiency operation
- ◆ Ultra low forward voltage drop, low power losses
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:
260°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

SMBF



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	SYMBOLS	ST34BF	ST36BF	ST310BF	UNITS
Marking Code		ST34BF	ST36BF	ST310BF	
Maximum repetitive peak reverse voltage	V _{RRM}	40	60	100	V
Maximum RMS voltage	V _{RMS}	28	42	70	V
Maximum DC blocking voltage	V _{DC}	40	60	100	V
Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1)	I _(AV)	3.0			A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	80			A
Maximum instantaneous forward voltage at 3.0A	V _F	0.45	0.50	0.60	V
Maximum DCreverse current TA=25℃ at rated DCblocking voltage TA=125℃	I _R	0.30		0.10	mA
		5.0			
Typical junction capacitance (NOTE 2)	C _J	350	400	160	pF
Typical thermal resistance (NOTE 3)	R _{θJA}	47.0	60.0		℃/W
Operating junction temperature range	T _J	-55 to +150			℃
Operating storage temperaturerange	T _{STG}	-55 to +150			℃

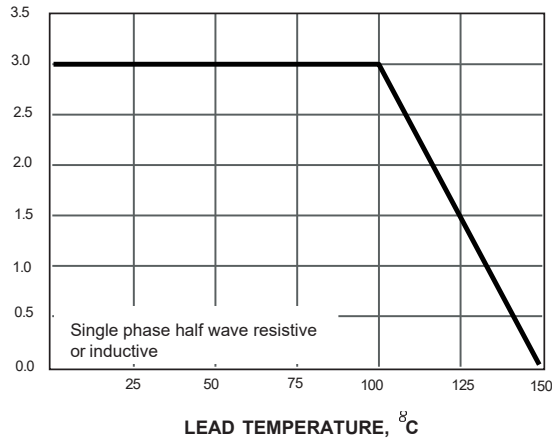
Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

Ratings And Characteristic Curves

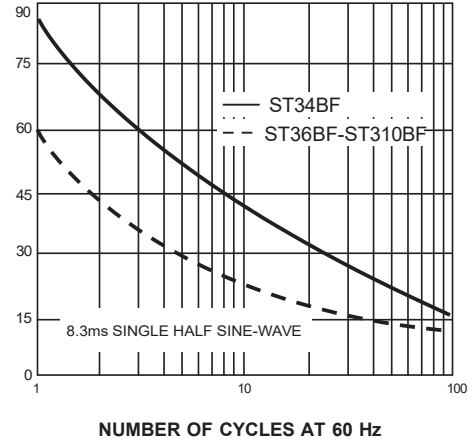
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



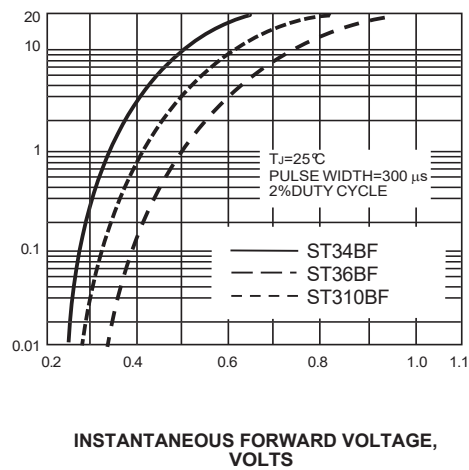
PEAK FORWARD SURGE CURRENT,
AMPERES

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



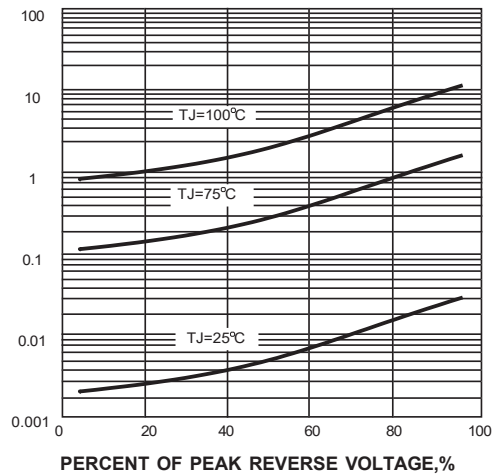
INSTANTANEOUS FORWARD
CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



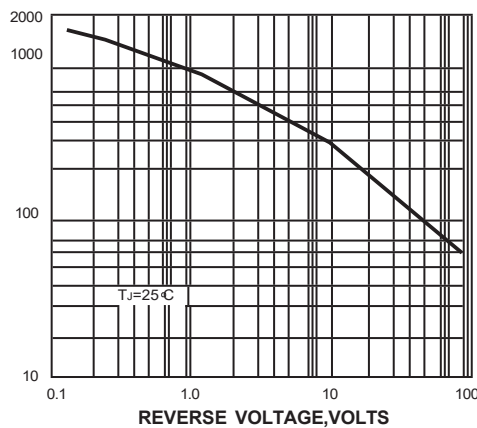
INSTANTANEOUS REVERSE CURRENT,
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



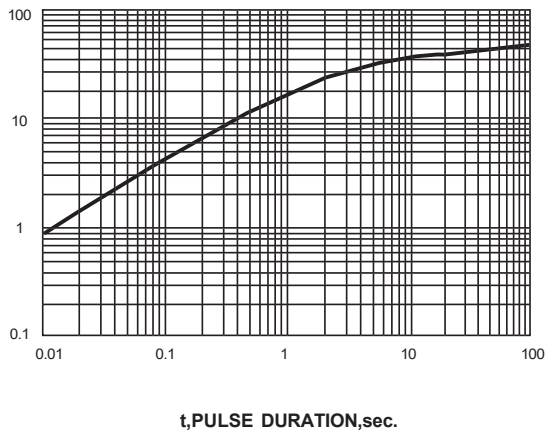
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.