

S54BF

5.0AMPS. SCHOTTKY BARRIER RECTIFIERS

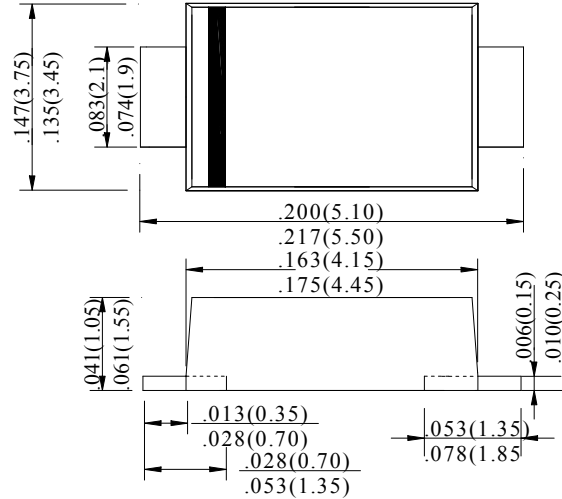
FEATURE

- . For surface mounted application
- . High current capability
- . Low forward voltage drop
- . Low power loss, high efficiency
- . High surge current capability
- . High temperature soldering guaranteed
260°C/10 seconds at terminals.

MECHANICAL DATA

- . Terminal: Solder plated
- . Case: Molded with UL-94 Class V-0 recognized
Flame Retardant Epoxy (free halogen)
- . Polarity: color band denotes cathode
- . Packaging: 12mm tape per EIA STD RS-481

SMBF



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, derate current by 20%

Type Number	SYM BOL	S54BF	units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	V
Maximum RMS Voltage	V_{RMS}	28	V
Maximum DC blocking Voltage	V_{DC}	40	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5.0	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	120.0	A
Maximum Forward Voltage at 5.0A DC	V_F	0.55	V
Maximum DC Reverse Current @ $T_J=25^\circ\text{C}$ at rated DC blocking voltage @ $T_J=100^\circ\text{C}$	I_R	0.2 10.0	mA
Typical Junction Capacitance (Note1)	C_J	270	pF
Typical Thermal Resistance (Note2)	$R_{(JA)}$	55	°C/W
Storage Temperature	T_{STG}	-55 to +150	°C
Operating Junction Temperature	T_J	-55 to +125	°C

Note:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
2. Measured on P.C.Board with 0.2×0.2"(5.0×5.0mm)Copper Pad Areas.

RATING AND CHARACTERISTIC CURVES (S54BF)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

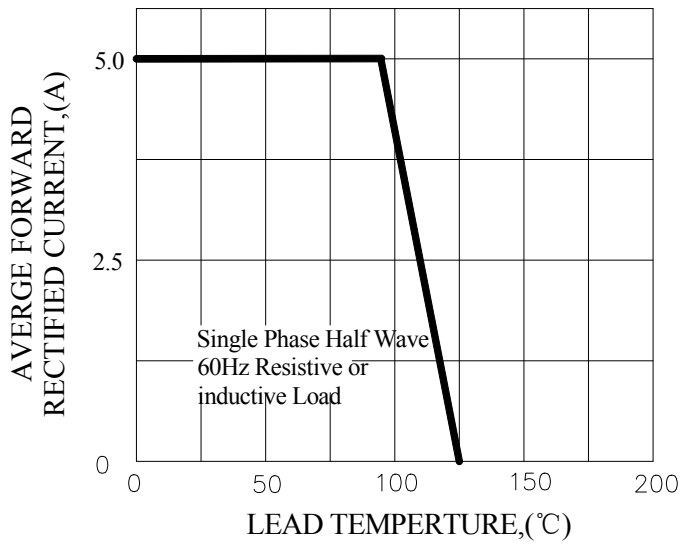


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

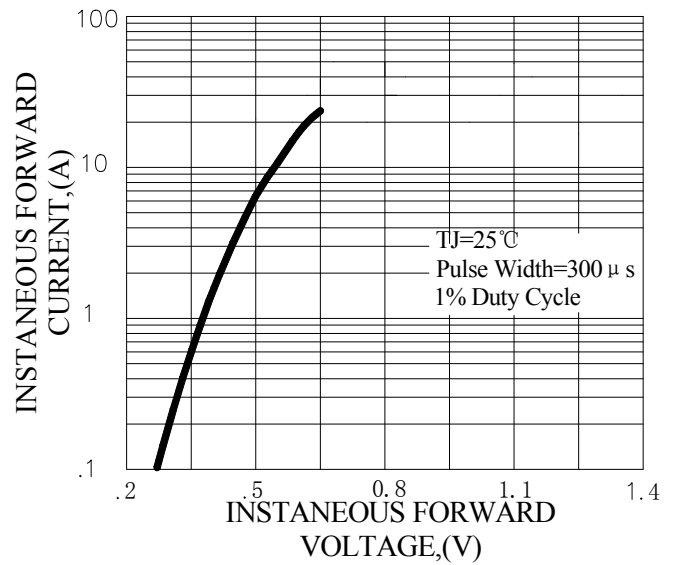


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

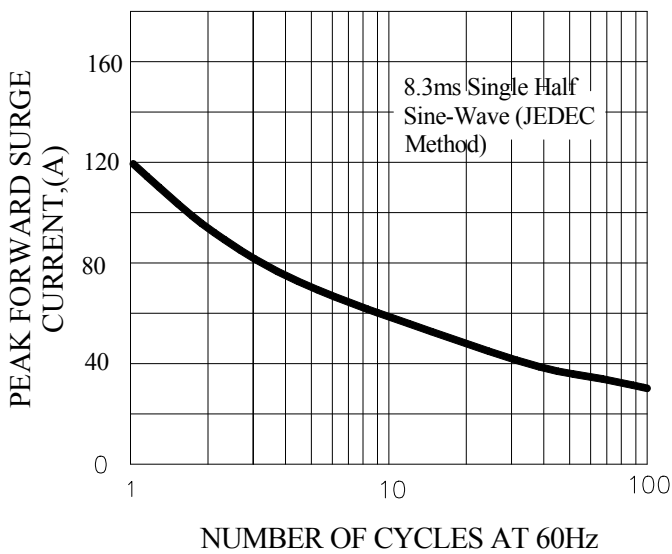
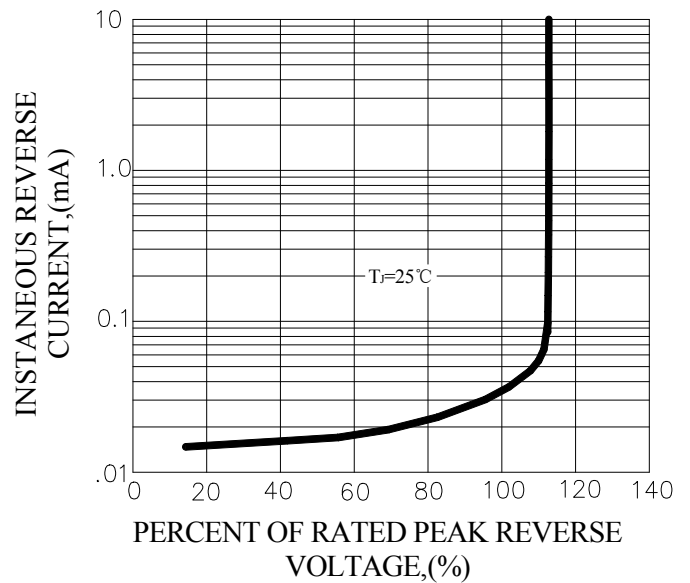
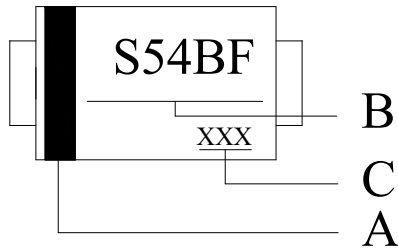


FIG.4-TYPICAL REVERSE CHARACTERISTICS



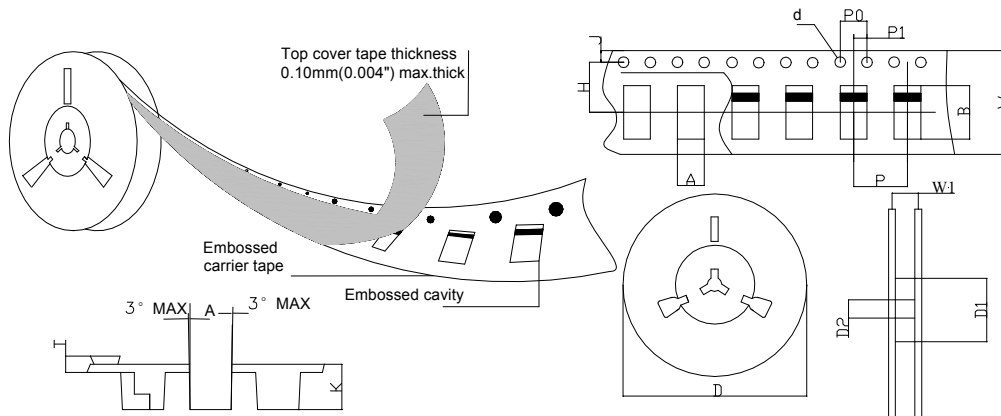
Marking and packaging illustration

1、Marking



SYMBOL	Explanation
A	Color Band Denotes Cathode
B	Product name
C	Date Code

2、Packaging



SPECIFICATIONS mm(inch)		PACKAGE	
SYMBOL	ITEM	SMBF	
	Carrier width	A	3.81(0.150)Max
	Carrier length	B	5.61(0.221)Max
	Sprocket hole	d	ø1.55(0.061)Typ
	Reel outer diameter	D	435.0(17.13)Typ
	Reel inner diameter	D1	153.0(6.02)Min
	Feed hole diameter	D2	77.0(3.03)Typ
	Sprocket hole position	J	1.75(0.069)Typ
	Punch hole position	H	5.50(0.216)Typ
	Carrier depth	K	1.6(0.063)Typ
	Punch hole pitch	P	4.00(0.157)Typ
	Sprocket hole pitch	P0	4.00(0.157)Typ
	Embossment center	P1	2.00(0.079)Typ
	Overall tape thickness	T	0.30(0.012)Typ
	Tape width	W	12.0(0.472)Typ
	Reel width	W1	91.0(3.582)Min