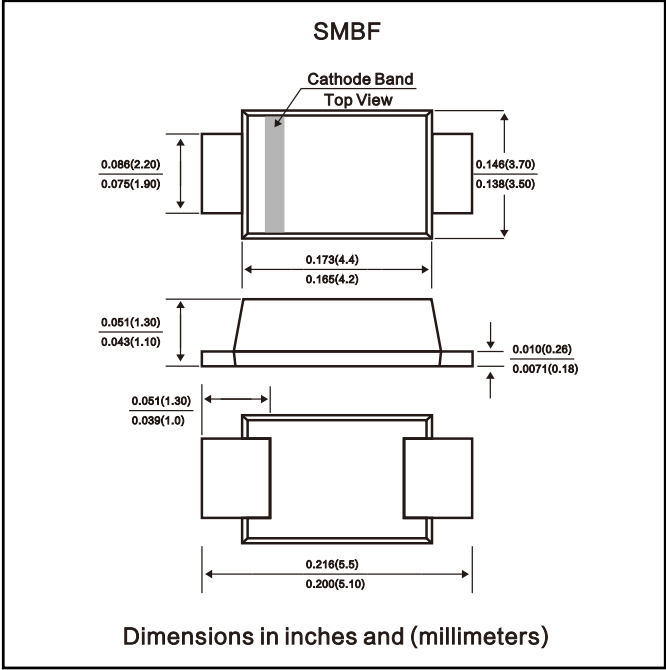


- ### Features
- Plastic package has Underwriters Laborator
  - Flammability Classification 94V-0
  - For surface mounted applications
  - Low profile package
  - Built-in strain relief
  - Metal silicon junction, majority carrier conduction
  - High surge capability
  - High current capability, low forward voltage drop
  - Low power loss, high efficiency
  - For use in low voltage high frequency inverters, free wheeling and polarity protection applications
  - Guardring for overvoltage protection
  - High temperature soldering guaranteed: 250°C/10 seconds at terminals



### Mechanical Data

- Case: JEDEC SMB, molded plastic over passivated chip
- Polarity: Color band denotes cathode end
- Weight: 0.093 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

		HL52BF	HL53BF	HL54BF	HL55BF	HL56BF	HL58BF	HL59BF	HL510BF	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	90	100	V
Maximum RMS voltage	$V_{RWS}$	14	21	28	35	42	56	63	70	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	90	100	V
Maximum average forward rectified current at $T_L$ (SEE FIG. 1) (NOTE 2)	$I_{(AV)}$	5.0								A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	175								A
Maximum instantaneous forward voltage at 5.0A (NOTE 1)	$V_F$	0.5		0.65		0.75				V
Maximum DC reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage (NOTE 1) @ $T_A=100^\circ\text{C}$	$I_R$	0.5				10				mA
Typical thermal resistance (NOTE 2)	$R_{JA}$	55								°C/W
	$R_{JL}$	17								
Operating junction temperature range	$T_J$	-55 to +150								°C
Storage temperature range	$T_{STG}$	-55 to +150								°C

NOTE: 1. Pulse test: 300 μs pulse width, 1% duty cycle  
 2. P.C.B. mounted with 0.55" x 0.55" (14.0 x 14.0 mm<sup>2</sup>) copper pad areas

FIG.1 -- FORWARD DERATING CURVE

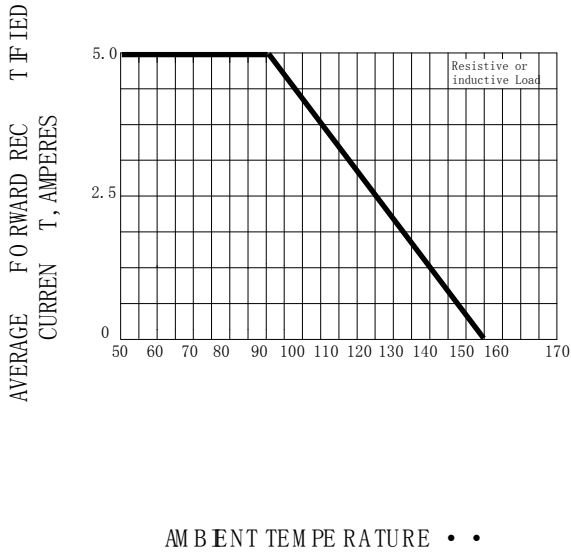


FIG.2-- PEAK FORWARD SURGE CURRENT

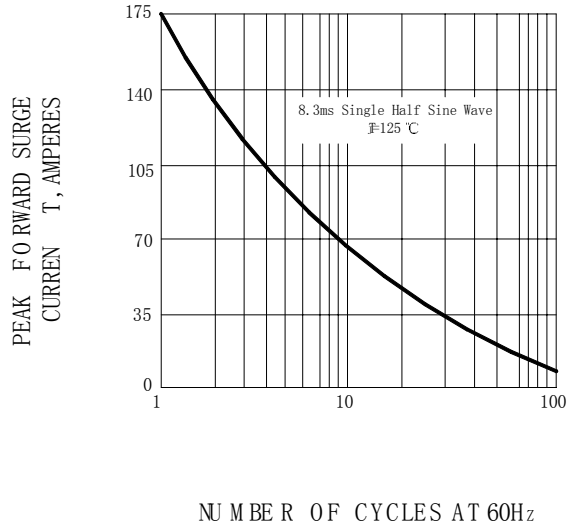


FIG.3 -- TYPICAL FORWARD CHARACTERISTICS

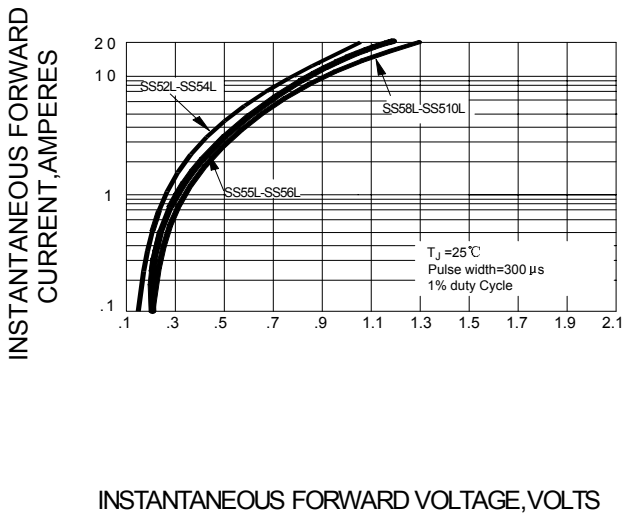


FIG.4 -- TYPICAL REVERSE CHARACTERISTICS

