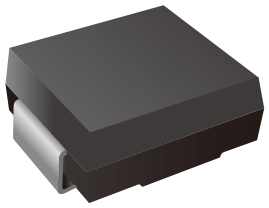
LT82C THRU LT820C

Surface Mount Schottky Barrier Rectifier



Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Metal silicon junction,majority carrier conduction
- Low power loss,high efficiency
- Built-in strain relief,ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 260℃/10 seconds at terminals
- Marking:S82~S820 or SS82~SS820

Mechanical Data

- **Case**: JEDEC DO-214AB molded plastic body
- **Terminals**: leads solderable per MIL-STD-750, Method 2026
- **Polarity**: Color band denotes cathode end
- **Mounting Position**: Any
- **Weight**:0.22g / 0.0077oz

Maximum Ratings and Electiral characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase half-wave 60Hz,resistive or inductive load, for capacitive load derate current by 20%.

	SYMBOLS	LT82C	LT84C	LT86C	LT88C	LT810C	LT812C	LT815C	LT820C	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	20	40	60	80	100	120	150	200	VOLTS
Maximum RMS voltage	V_{RMS}	14	28	42	56	70	84	105	140	VOLTS
Maximum DC blocking voltage	V_{DC}	20	40	60	80	100	120	150	200	VOLTS
Maximum average forward rectified current	$I_{(AV)}$	8.0								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 8.0A	V_F	0.45	0.55	0.70		0.85				Volts
Maximum DC reverse current T_A=25℃	I_R	1.0								mA
at rated DC blocking voltage T_A=100℃		50								
Typical junction capacitance (NOTE 1)	C_J	600		400						pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	35.0								˚C/W
Operating junction temperature range	T_J,	-55 to +150								˚C
Storage temperature range	T_{STG}	-55 to +150								˚C

Note:1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Electrical characteristics Curves

Fig.1 Forward Current Derating Curve

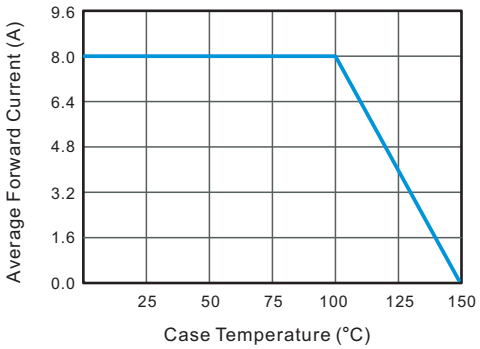


Fig.2 Typical Reverse Characteristics

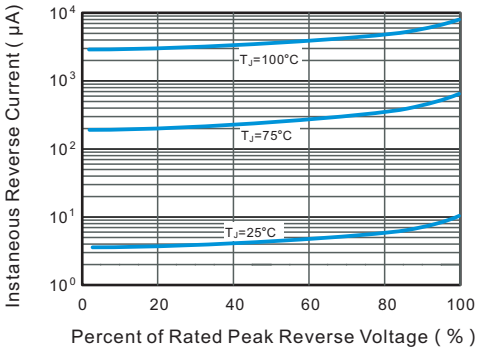


Fig.3 Typical Forward Characteristic

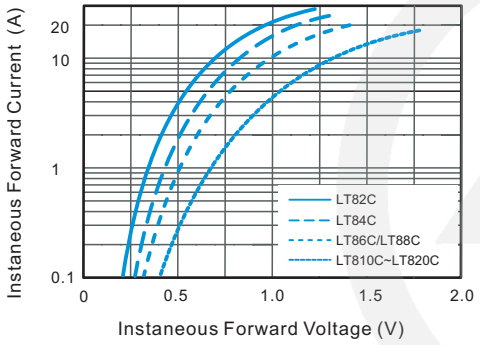


Fig.4 Typical Junction Capacitance

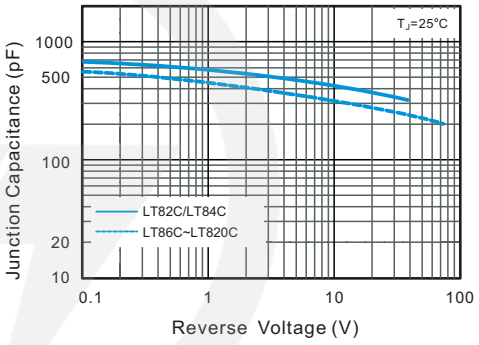


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

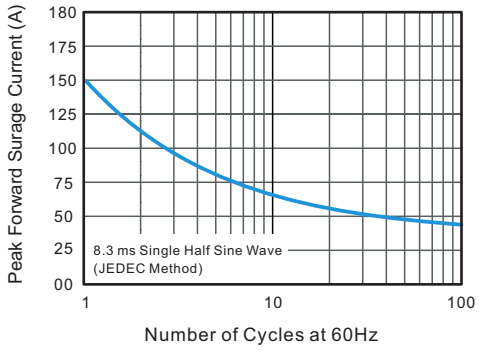
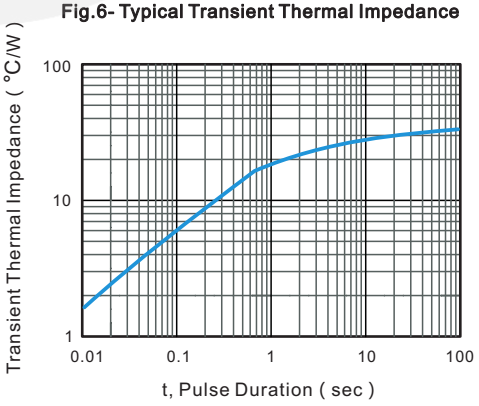
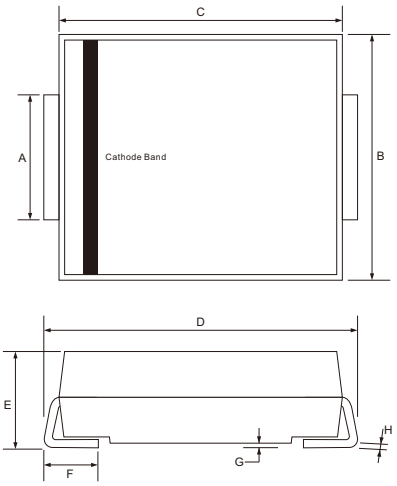


Fig.6- Typical Transient Thermal Impedance



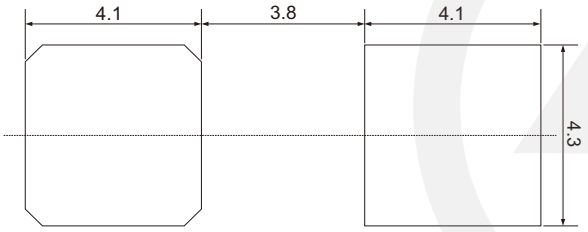
SMC Package Outline



Unit : mm

SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	2.75	3.27
B	5.59	6.22
C	6.50	7.11
D	7.60	8.13
E	1.99	2.80
F	0.76	1.60
G	0.05	0.31
H	0.10	0.31

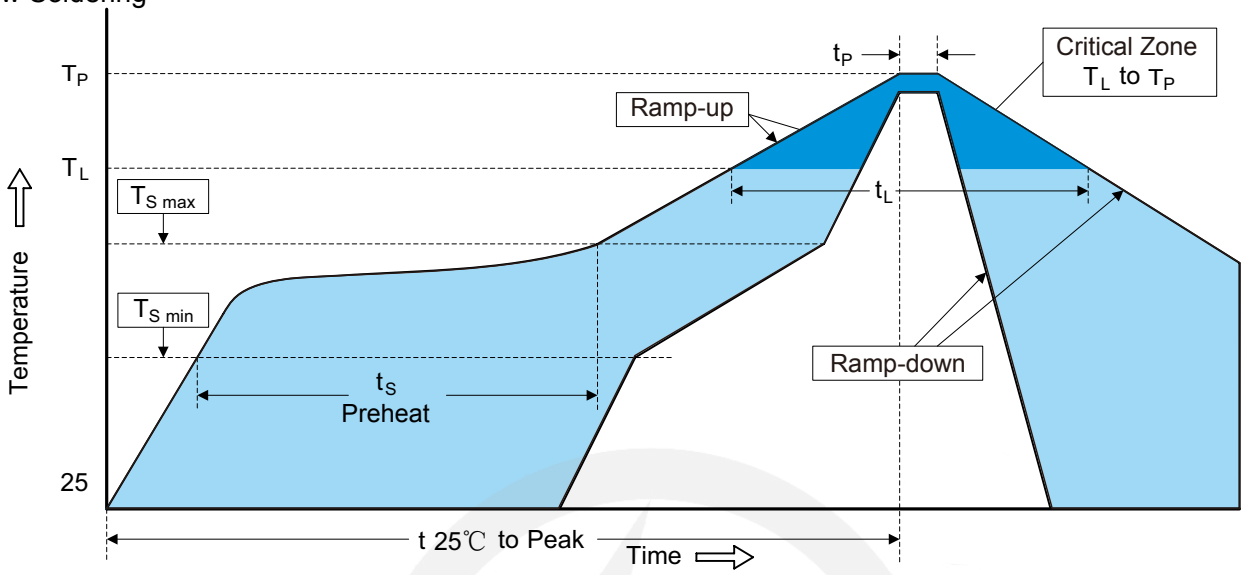
SMC Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm
3.The pad layout is for reference purpose only.

Recommended Soldering Conditions

Reflow Soldering

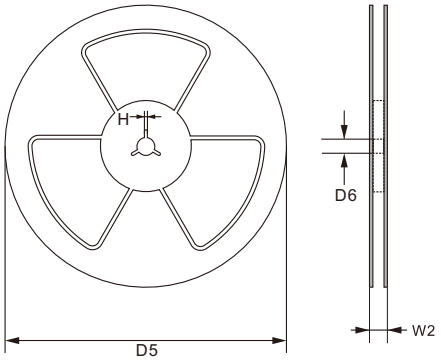


Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3℃/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_S)	 150℃ 200℃ 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	 3℃/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	 217℃ 60-150 seconds
Peak Temperature (T_P)	260℃
Time within 5℃ of actual Peak Temperature (t_P)	20-40 seconds
Ramp-down Rate	6℃/second max.
Time 25℃ to Peak Temperature	8 minutes max.

Packaging

13” Reel



D5	Φ330.0±2.0
D6	Φ13.5±0.5
H	2.5±1.0
W2	16.0±2.0
Quantity: 3000PCS	