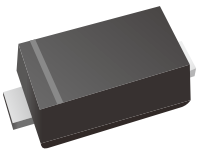
领晨科技
LEADING-TECH

LT32F THRU LT320F

Surface Mount Schottky Barrier Rectifier

Features



- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Lead free in comply with EU RoHS 2011/65/EU directives

Mechanical Data

- Case: SMAF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end

Ordering Information

Part Number	Shipping	Reel
LT32F THRU LT320F -TR3	3000PCS Tape&Reel	7 inchs
LT32F THRU LT320F-TR10	10000PCS Tape&Reel	13 inchs

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 by 20 %.

Parameter	Symbols	LT32F	LT34F	LT34AF	LT36F	LT38F	LT310F	LT312F	LT315F	LT320F	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	40	45	60	80	100	120	150	200	V
Maximum RMS voltage	V_{RMS}	14	28	32	42	56	70	84	105	140	V
Maximum DC Blocking Voltage	V_{DC}	20	40	45	60	80	100	120	150	200	V
Maximum Average Forward Rectified Current @ Fig.1	$I_{F(AV)}$	3.0									A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	80									A
Max Instantaneous Forward Voltage at 3 A	V_F	0.55			0.70	0.85		0.95			V
Maximum DC Reverse Current T_a = 25°C at Rated DC Reverse Voltage T_a =100°C	I_R	0.5 5				0.3 3					mA
Typical Junction Capacitance (1)	C_j	135			107	83		68		50	pF
Typical Thermal Resistance (2)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	100 20 30									°C/W
Operating Junction Temperature Range	T_j	-55 ~ +125									°C
Storage Temperature Range	T_{stg}	-55 ~ +150									°C

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C
(2) P.C.B. mounted with 0.2" X 0.2" (5 mm X 5 mm) copper pad areas.

Characteristics Curves

Fig.1 Forward Current Derating Curve

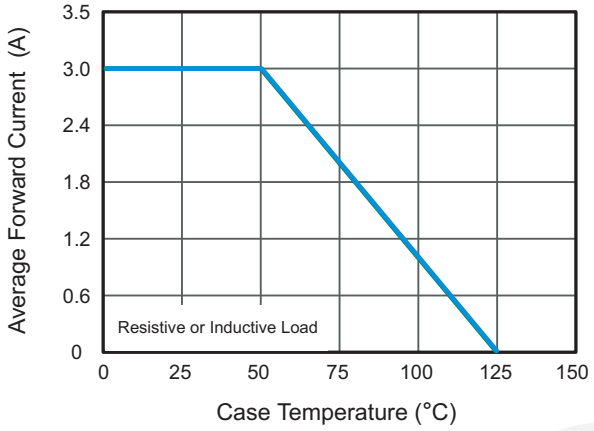


Fig.2 Typical Reverse Characteristics

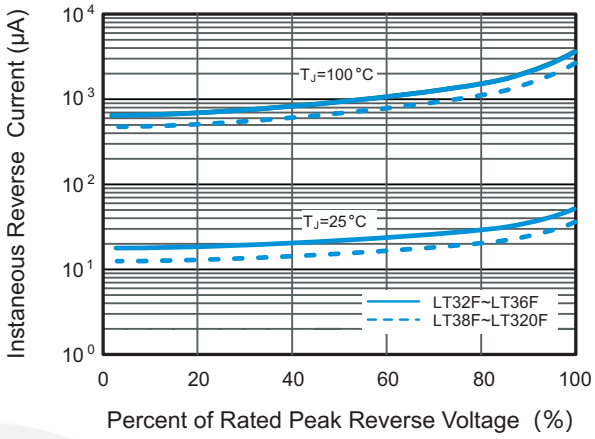


Fig.3 Typical Forward Characteristic

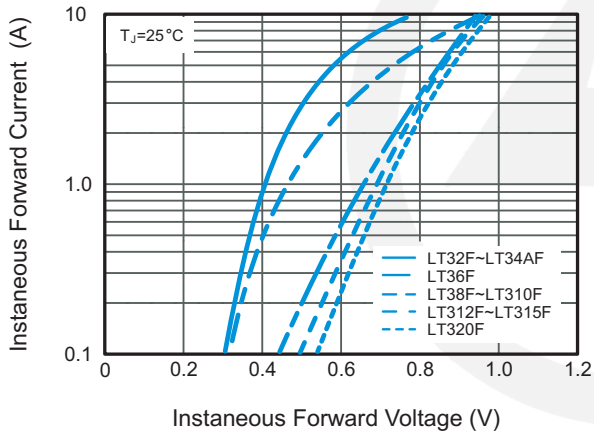


Fig.4 Typical Junction Capacitance

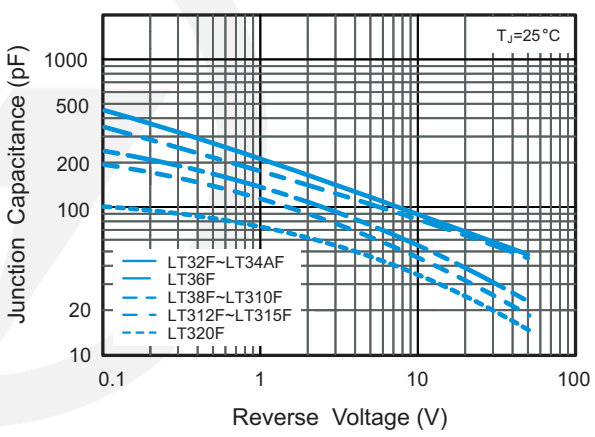
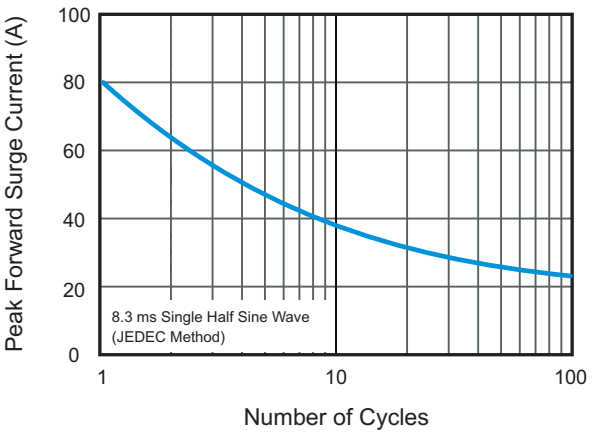
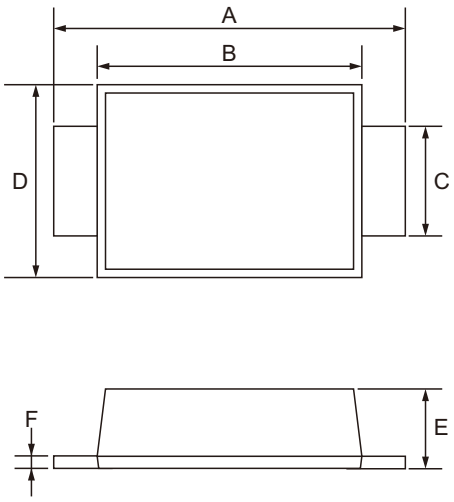


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

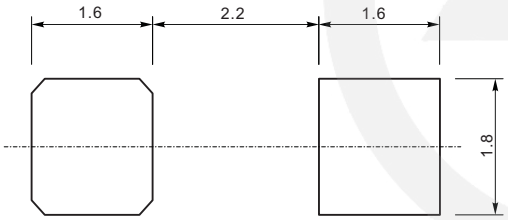


SMAF Package Outline



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	4.40	4.90
B	3.30	3.70
C	1.30	1.60
D	2.40	2.70
E	0.90	1.20
F	0.12	0.20

SMAF Suggested Pad Layout



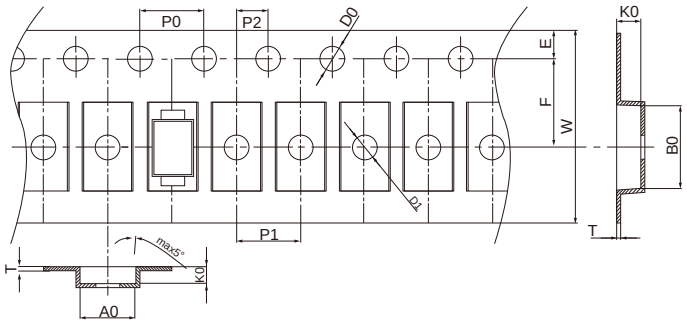
Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purpose only.

Marking

Type number	Marking code
LT32F	SS32
LT34F	SS34
LT34AF	SS345
LT36F	SS36
LT38F	SS38
LT310F	SS310
LT312F	SS312
LT315F	SS315
LT320F	SS320

Carrier Tape Dimensions

Unit：mm

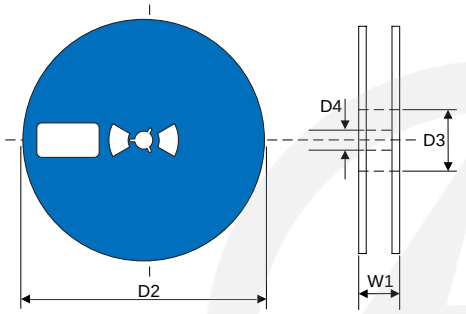


Symbol	Spec	Symbol	Spec
A0	2.93±0.10	T	0.20±0.03
B0	5.33±0.10	E	1.73±0.10
K0	1.33±0.10	F	5.50±0.10
P0	4.00±0.10	D0	1.55±0.05
P1	4.00±0.10	D1	1.50±0.05
P2	2.00±0.10	W	12.0±0.30

Reel Dimensions

Unit：mm

7” Reel

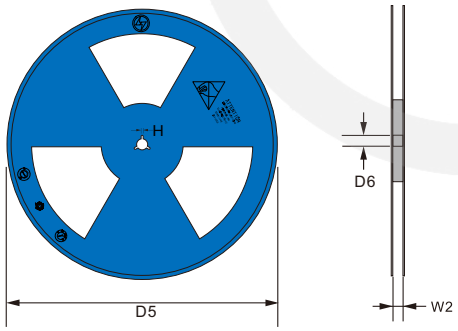


D2	Φ178.0±2.0
D3	Φ50.0
D4	13.0±0.5
W1	12±0.5
Quantity: 3000PCS	

Reel Dimensions

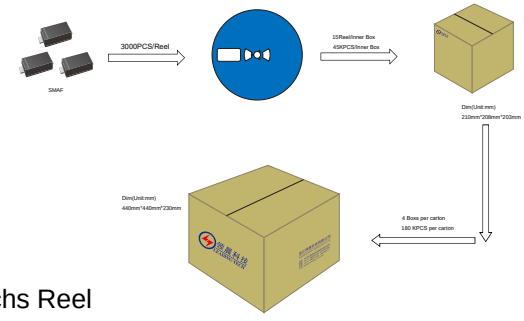
Unit：mm

13” Reel

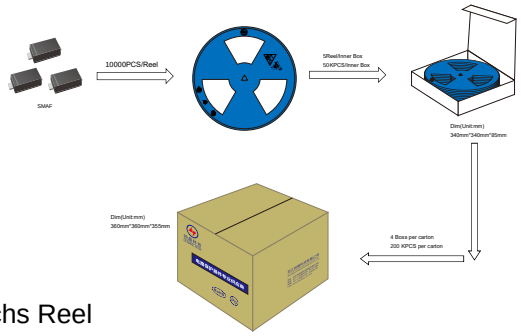


D5	Φ330.0±2.0
D6	Φ13.5±0.5
H	2.5±1.0
W2	12±2.0
Quantity: 10000PCS	

Packaging



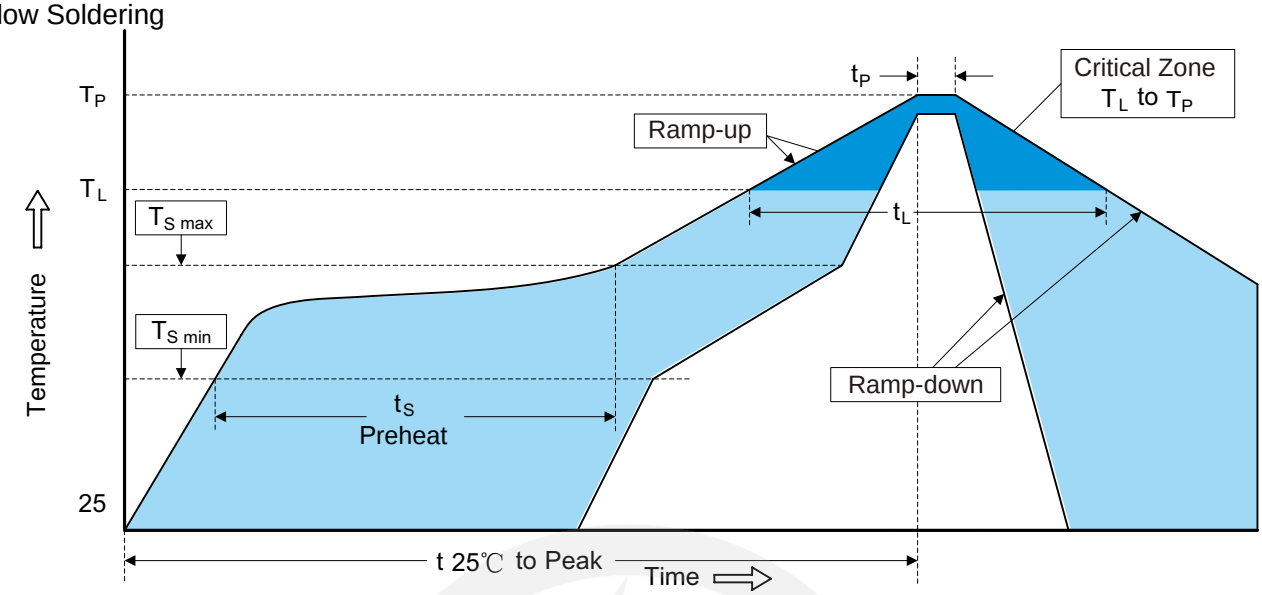
7 inchs Reel



13 inchs Reel

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.

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Version Update Information

Series NO.	Enactment/Revision Date	Effective Date	Version	Revision content	Revision Reason	Revision Person	Note
01	2025.02.04	2025.02.04	3.0	New File	/	Ding	