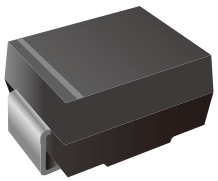
LTE3AB THRU LTE3JB

Surface Mount Superfast Recovery Rectifier

Features



- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Superfast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0

Mechanical Data

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

Ordering Information

Part Number	Shipping	Reel
LTE3AB THRU LTE3JB-TR3	3000PCS Tape&Reel	13 inchs

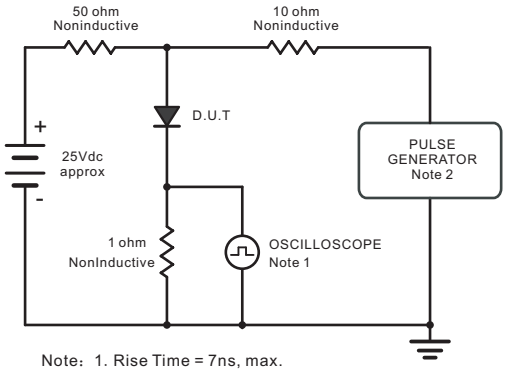
Maximum Ratings and Electrical Characteristics

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

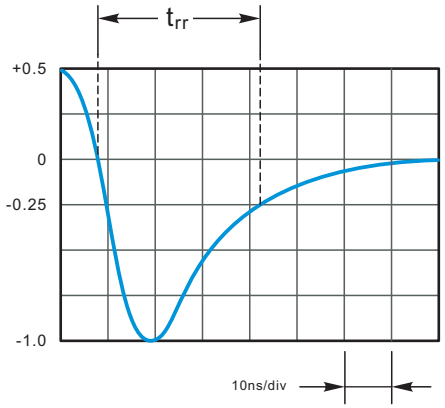
Parameter	Symbol	LTE3AB	LTE3BB	LTE3CB	LTE3DB	LTE3EB	LTE3GB	LTE3JB	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum average forward rectified current at Tc=100˚C	$I_{(AV)}$	3							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	90							A
Maximum instantaneous forward voltage at 3A	V_F	1				1.25		1.68	V
Maximum DC reverse current T_A=25℃ at rated DC blocking voltage T_A=100℃	I_R	5 100							μA
Maximum reverse recovery time (Note1)	t_{rr}	35							ns
Typical junction capacitance at V_R=4V, f=1MHz	C_J	45							pF
Typical thermal resistance (Note2)	$R_{\theta JA}$ $R_{\theta JC}$	50 16							°C/W
Operating junction and storage temperature range	T_J,T_{STG}	-55 to +150							°C

Note: (1) Measured with I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A.
(2) P.C.B. mounted with 2.0" X 2.0" (5cm X 5cm) copper pad areas.

Characteristics Curves



Note：1. Rise Time = 7ns, max.
Input Impedance = 1megohm,22pF.
2. Ries Time =10ns, max.
Source Impedance = 50 ohms.



Set time Base for 10ns/div

Fig.2 Maximum Average Forward Current Rating

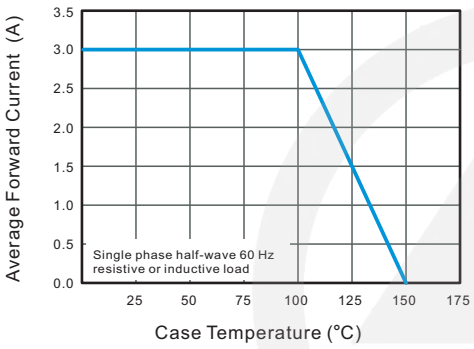


Fig.3 Typical Reverse Characteristics

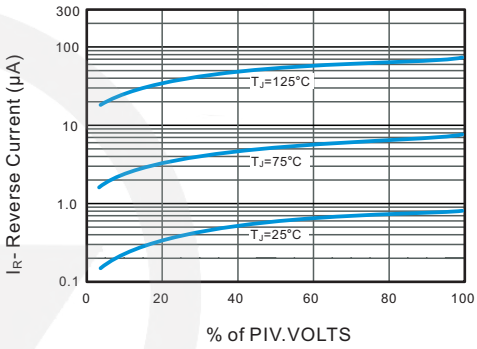


Fig.4 Typical Forward Characteristics

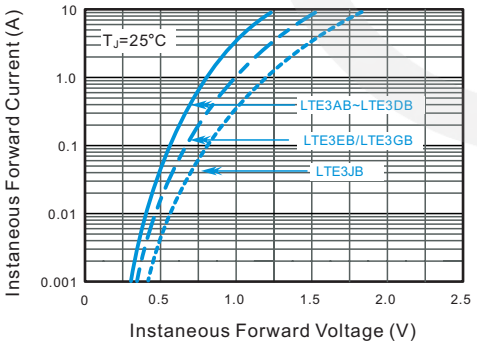


Fig.5 Typical Junction Capacitance

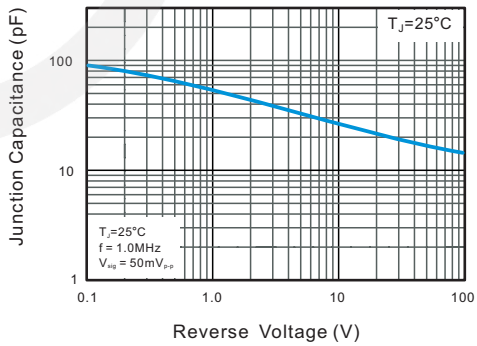
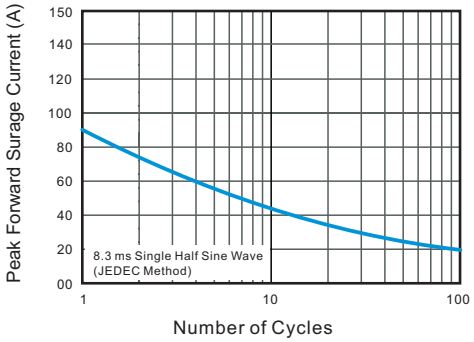
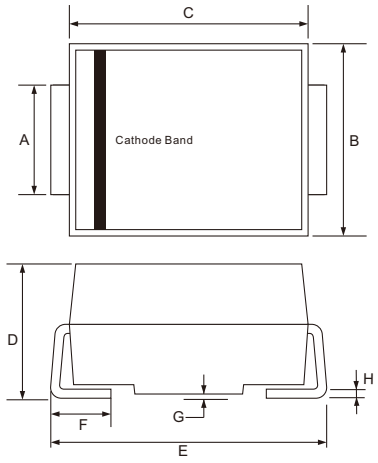


Fig.6 Maximum Non-Repetitive Peak Forward Surage Current



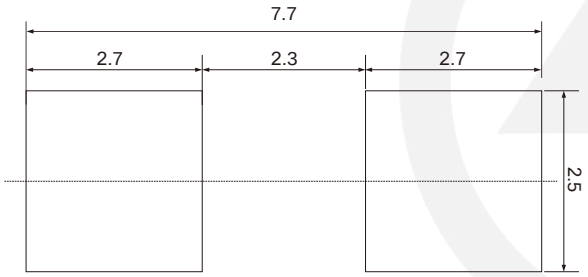
SMB Package Outline



Unit : mm

SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	1.90	2.20
B	3.30	3.94
C	4.05	4.75
D	2.13	2.65
E	5.08	5.59
F	0.76	1.52
G	0.203 TYP.	
H	0.15	0.31

SMB Suggested Pad Layout



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

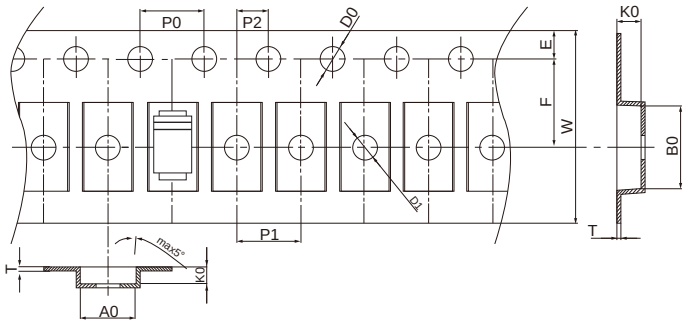
Marking

Type number	Marking code
LTE3AB	ES3A
LTE3BB	ES3B
LTE3CB	ES3C
LTE3DB	ES3D
LTE3EB	ES3E
LTE3GB	ES3G
LTE3JB	ES3J

LTE3AB THRU LTE3JB

Carrier Tape Dimensions

Unit：mm

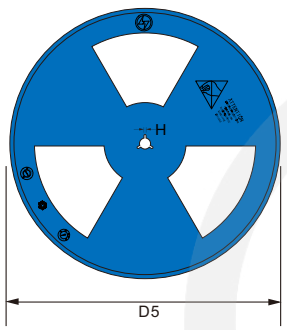


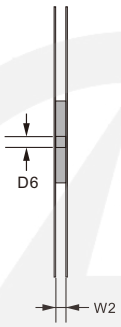
Symbol	Spec	Symbol	Spec
A0	3.80±0.10	D0	1.55±0.05
B0	5.45±0.10	D1	1.55±0.05
K0	2.50±0.10	T	0.25±0.05
P0	4.00±0.10	E	1.75±0.10
P1	8.00±0.10	F	5.50±0.05
P2	2.00±0.10	W	12.0 $^{+0.3}_{-0.1}$

Reel Dimensions

Unit：mm

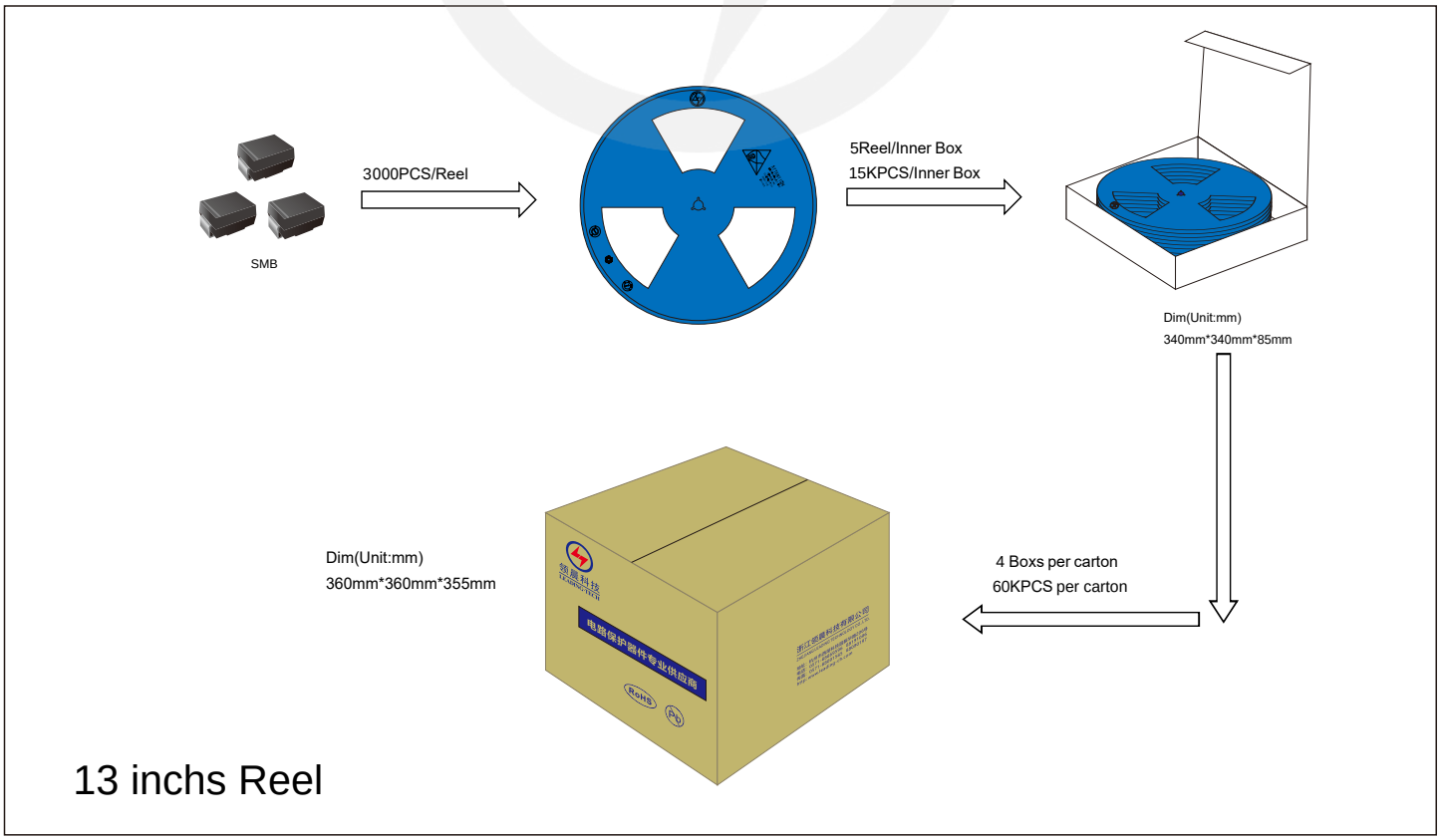
13” Reel





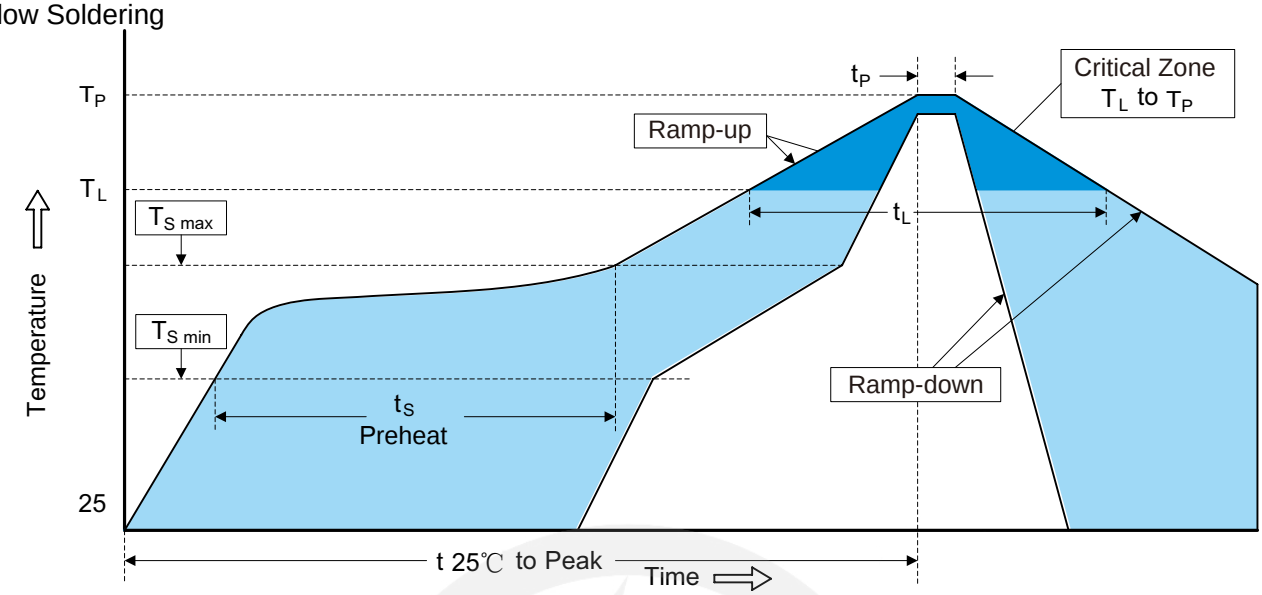
D5	Φ330.0±2.0
D6	Φ13.5±0.5
H	2.5±1.0
W2	12±2.0
Quantity: 3000PCS	

Packaging



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	2024.5.18	2024.5.18	3.0	New File	/	Ding	
02	2025.06.12	2025.06.12	3.1	Update packaging information	/	Ding	