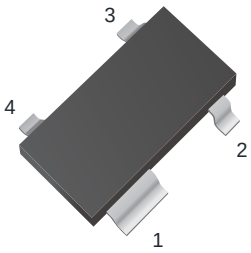
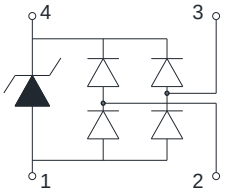
Features

- IEC 61000-4-2 Level 4 ESD Protection
  - ±30kV Contact Discharge
  - ±30kV Air Discharge
- 104W Peak pulse Power (8/20us)
- Low clamping voltage
- Working voltage: 5V
- Low leakage current
- Protecting two Uni-directional lines
- Capacitance: 1.2pF Typ.
- Lead free in comply with EU RoHS 2011/65/EU directives





Applications

- MP3 Players
- Battery Protection
- Vbat pin for Mobile Device
- Mobile Phones
- Power Line Protection
- Hand Held portable Applications

Ordering Information

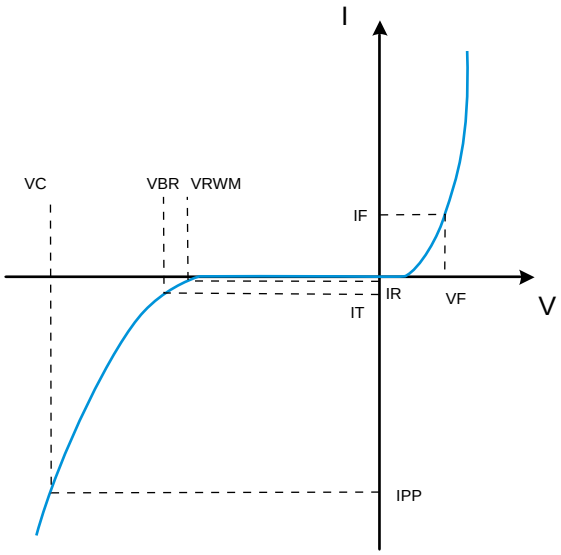
Part Number	Marking	Shipping	Reel
LTE14T05A03LD-TR3	R05	3000PCS Tape&Reel	7 inchs

Absolute Maximum Rating

Over operating free-air temperature range (unless otherwise noted)

Parameters	Symbol	Min	Max	Unit
Peak pulse power (tp=8/20us)	P_{pk}		104	W
Peak pulse current (tp=8/20us)	I_{PP}		8	A
ESD (IEC61000-4-2 air discharge)	V_{ESD}		±30	kV
ESD (IEC61000-4-2 contact discharge)	V_{ESD}		±30	kV
Junction temperature	T_J		125	˚C
Operating temperature	T_{OP}	-40	85	˚C
Storage temperature	T_{STG}	-55	150	˚C
Lead temperature	T_L		260	˚C

Symbol	Parameters
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
I_F	Forward Current
V_F	Forward Voltage @ I_F



Electrical Characteristics

At T_A = 25℃ unless otherwise noted

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	5.5			V
Reverse Leakage Current	I_R	V_{RWM}=5V			0.1	μA
Clamping Voltage	V_C	I_{PP}=1A; tp=8/20us		8	10	V
		I_{PP}=8A; tp=8/20us		10.5	13	V
Junction Capacitance	C_J	V_R=0V; f=1MHz, I/O-GDN		1.2	2.0	pF
		V_R=0V; f=1MHz, I/O-I/O		0.6	1.0	pF

Characteristic Curves

Fig.1 8/20μs waveform per IEC61000-4-5

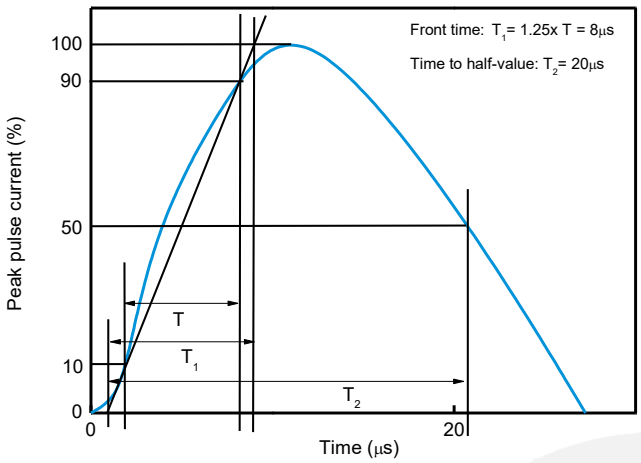


Fig.2 Contact discharge current waveform per IEC61000-4-2

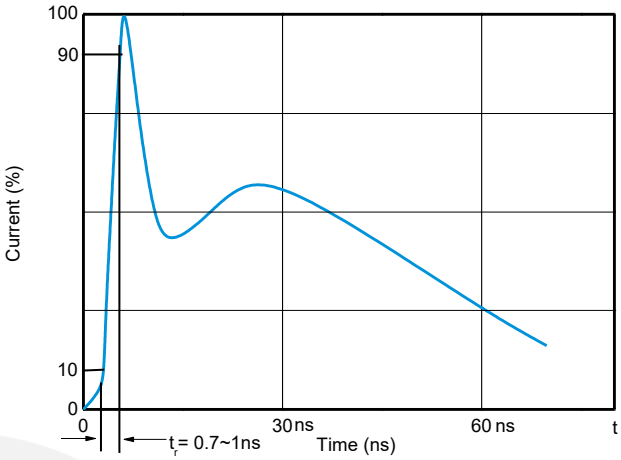


Fig.3 Clamping voltage vs Peak pulse current

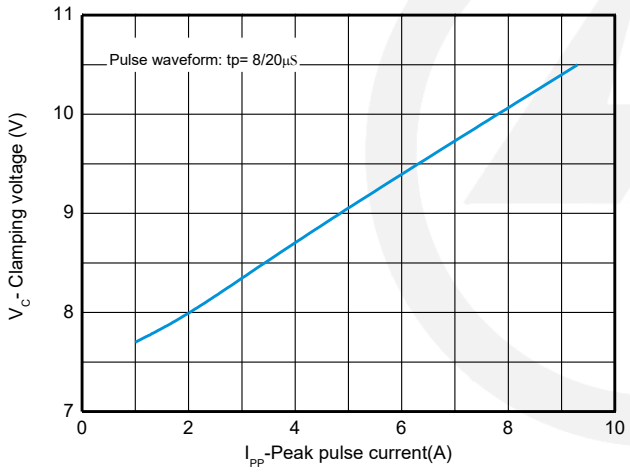


Fig.4 Capacitance vs Reverse voltage

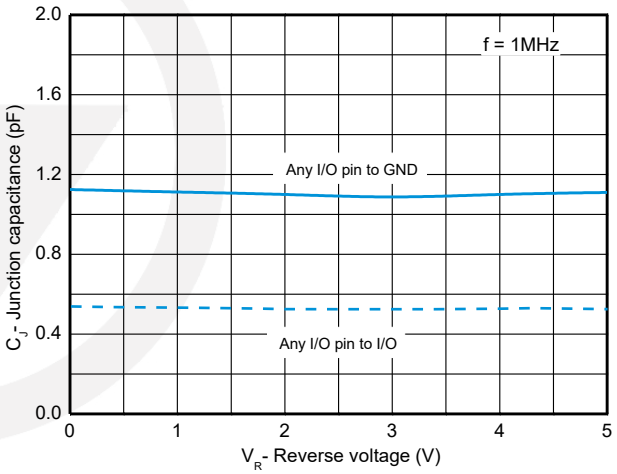


Fig.5 Non-repetitive peak pulse power vs Pulse time

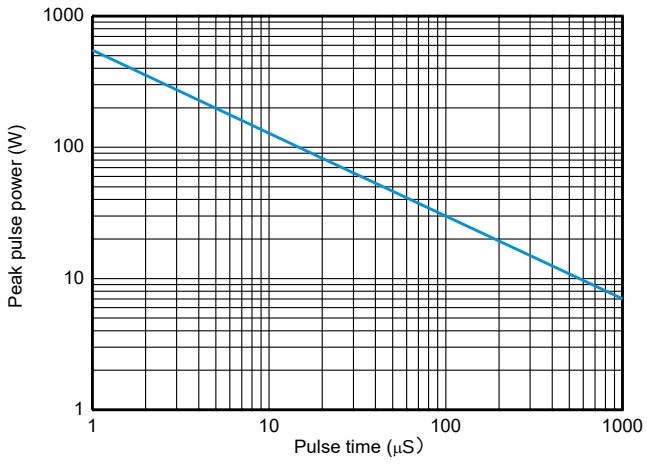
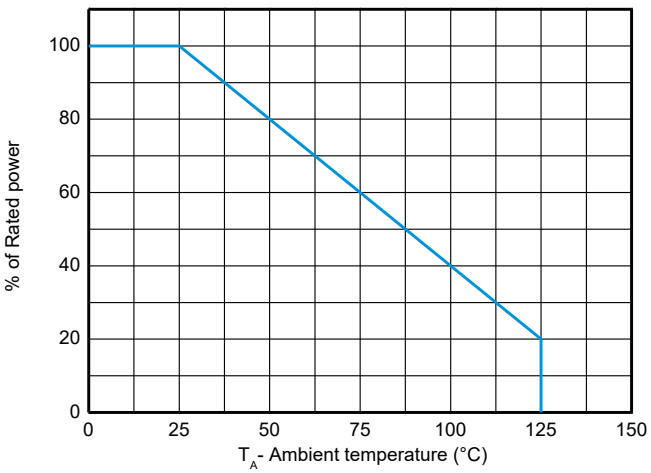
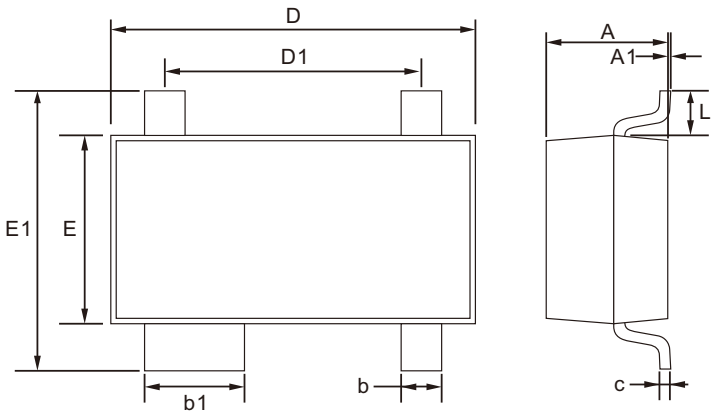


Fig.6 Power derating vs. Ambient temperature



SOT-143 Package Outline

Unit: mm

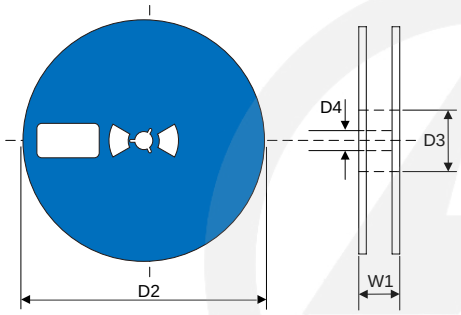


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.90	1.05
A1	0.00	0.10
b	0.30	0.50
b1	0.75	0.90
c	0.08	0.15
D	2.80	3.00
D1	1.80	2.00
E	1.20	1.40
E1	2.25	2.55
L	0.55TYP.	

Reel Dimensions

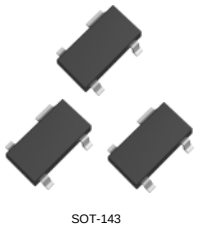
Unit：mm

7” Reel

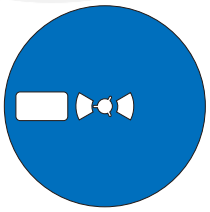


D2	Φ178.0±2.0
D3	Φ50
D4	13.0±0.5
W1	12±0.5
Quantity: 3000PCS	

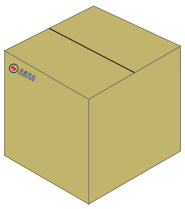
Packaging


SOT-143

3000PCS/Reel



15Reel/Inner Box
45KPCS/Inner Box



Dim(Unit:mm)
210mm*208mm*203mm

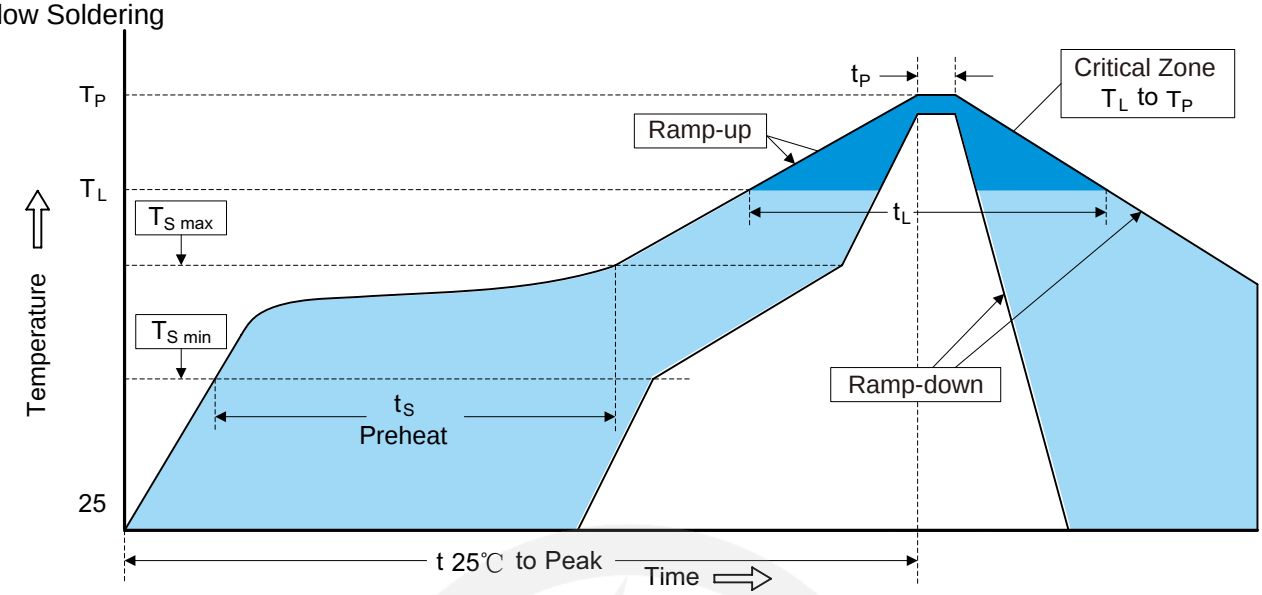
4 Boxs per carton
180KPCS per carton

Dim(Unit:mm)
440mm*440mm*230mm

7 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	2024.8.27	2024.8.27	3.0	New File	/	Ding	