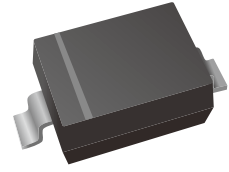


Fast Switching Diode

Features

- Fast Switching Device (TRR <50nS)
- Power Dissipation of 250mW
- High Stability and High Reliability
- Low reverse leakage
- Lead free in comply with EU RoHS 2011/65/EU directives



Machanical Data

- Case:SOD-323
- Polarity: Color band denotes cathode end
- Epoxy UL: 94V-0
- Mounting Position: Any

Ordering Information

Part Number	Shipping	Reel
LT19SW THRU LT21SW-TR3	3000PCS Tape&Reel	7 inches
LT19SW THRU LT21SW-TR12	12000PCS Tape&Reel	13 inches

Absolute Maximum Rating (Ta=25 unless otherwise noted)

Parameters	Symbol	Value			Unit
		LT19SW	LT20SW	LT21SW	
Non-Repetitive Peak Reverse Voltage	V_R	120	200	250	V
Peak Repetitive Reverse Voltage	V_{RRM}	100	150	200	V
Working Peak Reverse Voltage	V_{RWM}				
RMS Reverse Voltage	$V_{R(RMS)}$	71	106	141	V
Power Dissipation	P_d	250			mW
Operating junction temperature	T_j	-55 to +150			°C
Storage temperature range	T_s	-55 to +150			°C
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	500			°C/W
Average Rectified Current	I_o	200			mA
Peak Forward Surge Current @tp=1ms; TA=25°C	I_{FSM}	1.7			A

Valid provided that electrodes are kept at ambient temperature.

Electrical Characteristics (TA=25°C unless otherwise specified)

Symbols	Parameter	Test Condition	Limits		Unit
			Min	Max	
V_{RB}	Reverse Voltage	IB=100uA LT19SW LT20SW LT21SW	120 200 250		V
I_R	Reverse Leakage Current	VR=100V LT19SW VR=150V LT20SW VR=200V LT21SW		0.1	uA
V_F	Forward Voltage	IF=100mA		1.00	V
		IF=200mA		1.25	
T_{RR}	Reverse Recovery Time	IF= 30mA, IR=30mA		50	nS
		RL=100Ω			
		I _{RR} =3mA			
C	Capacitance	VR=0V, f=1MHZ		5	pF

Characteristics Curves

Fig.1 Forward Characteristics

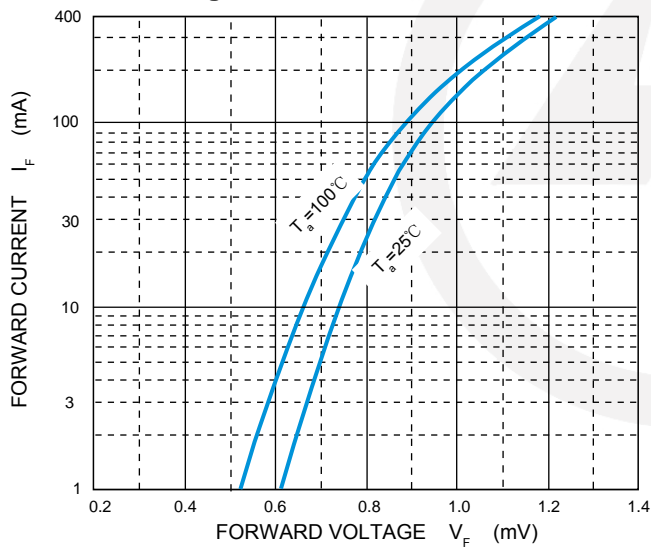


Fig.2 Typical Reverse Characteristics

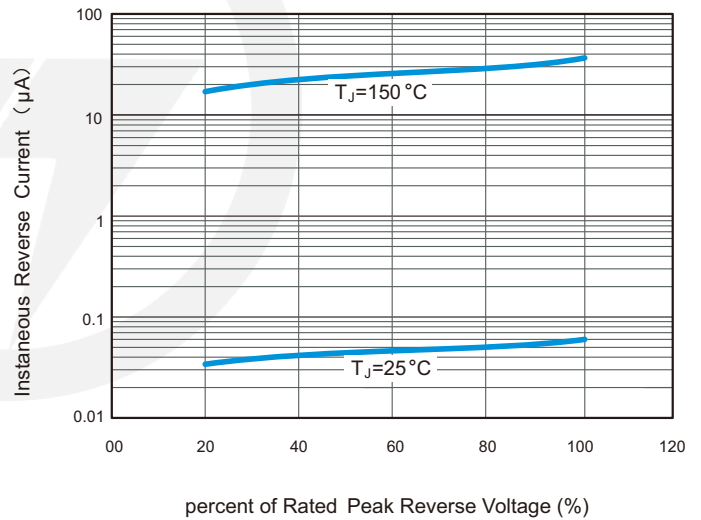


Fig.3 Capacitance Characteristics

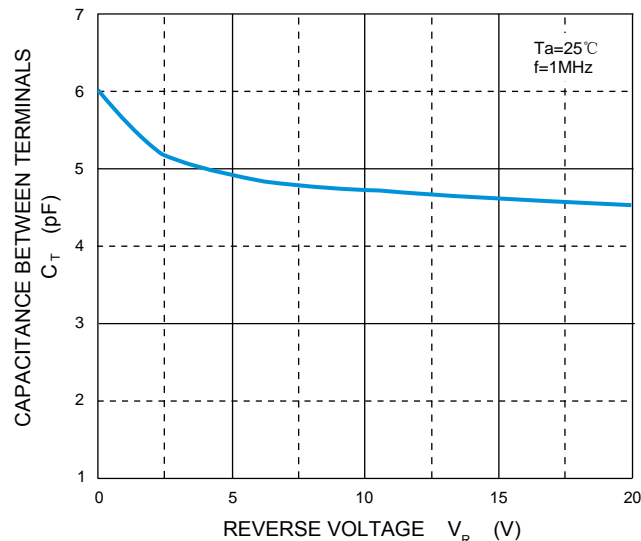
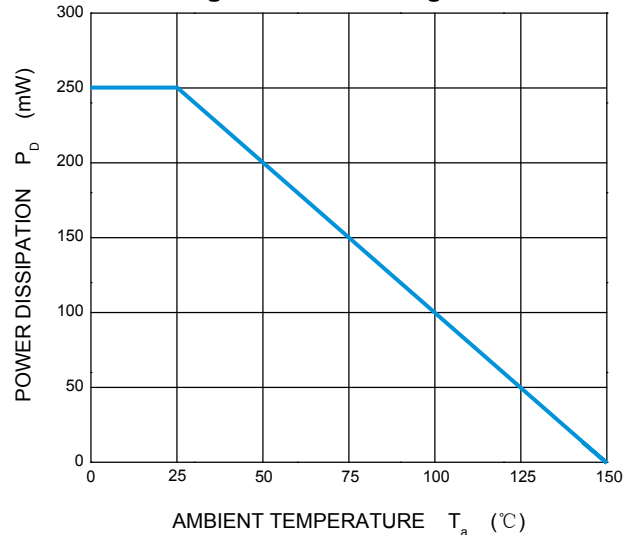


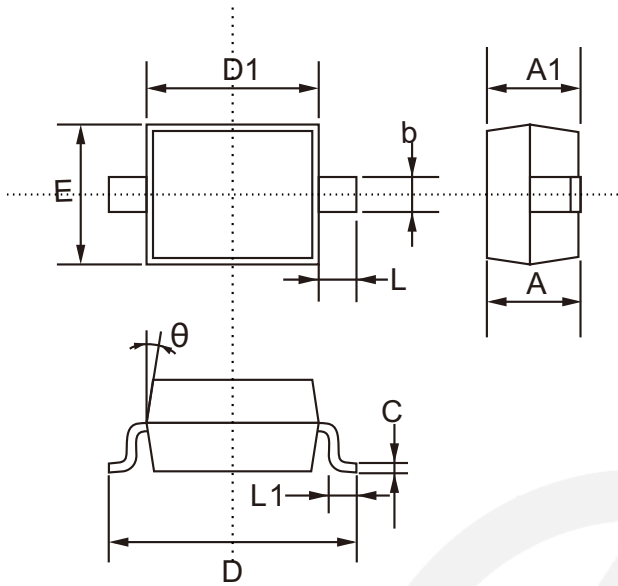
Fig.4 Power Derating Curve





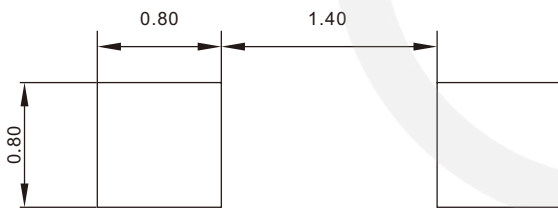
SOD-323 Package Outline

Unit: mm



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.800	1.100
A1	0.800	0.900
b	0.250	0.400
C	0.080	0.177
D	2.300	2.800
D1	1.400	1.800
E	1.150	1.400
L1	0.100	0.400
L	0.475 TYP.	
θ	8°	

SOD-323 Suggested Pad Layout



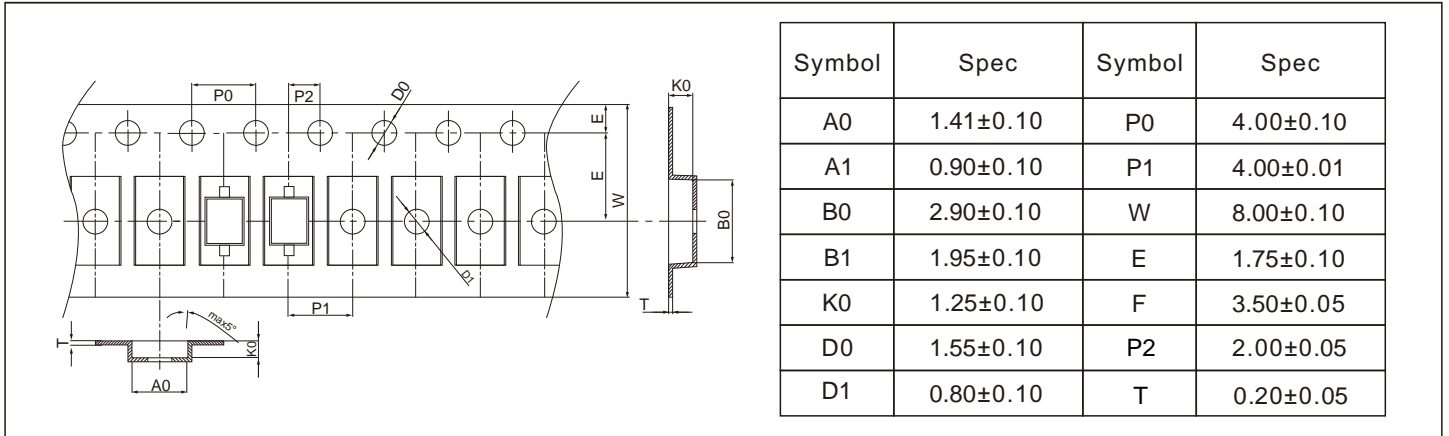
Note:
 1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$
 3. The pad layout is for reference purpose only.

Marking

Type number	Marking code
LT19SW	A8
LT20SW	T2
LT21SW	T3

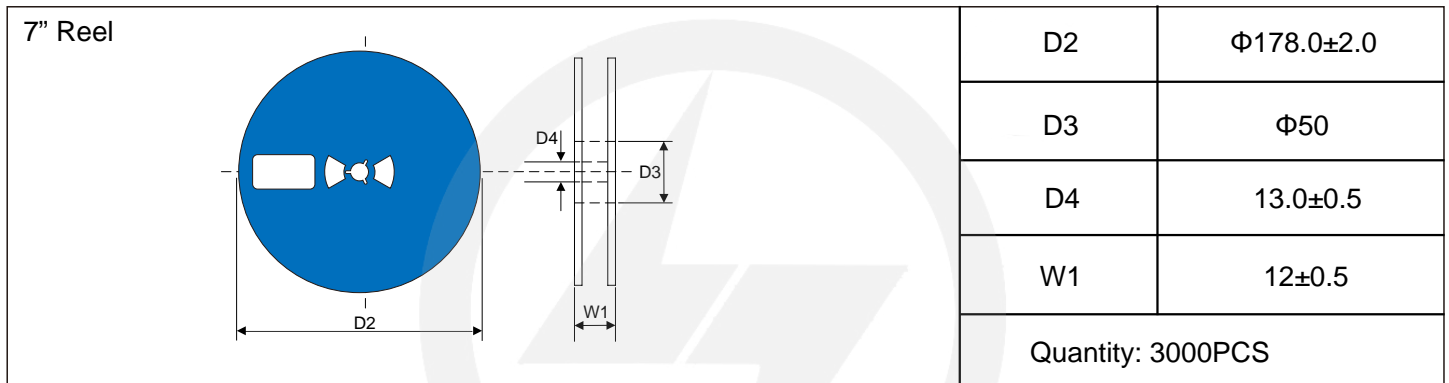
Carrier Tape Dimensions

Unit : mm



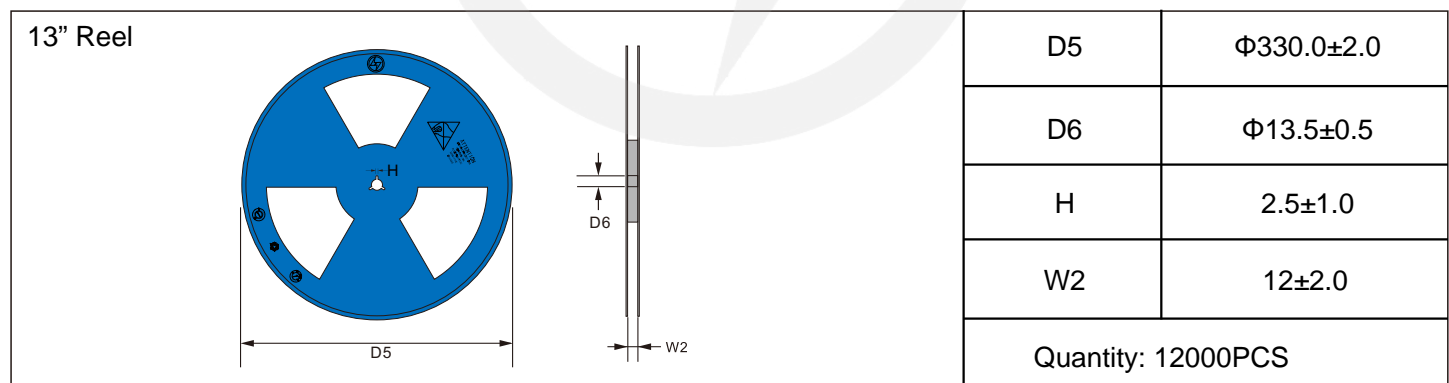
Reel Dimensions

Unit : mm

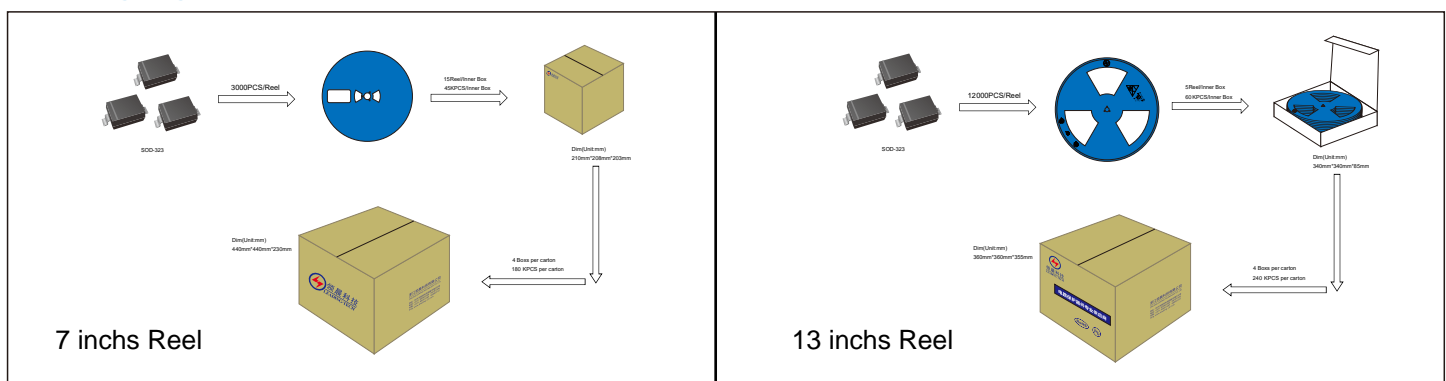


Reel Dimensions

Unit : mm



Packaging





Recommended Soldering Conditions



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T _L to T _P)	3°C/second max.
Preheat	
-Temperature Min (T _{S min})	150°C
-Temperature Max (T _{S max})	200°C
-Time (min to max) (t _s)	60-180 seconds
T _{S max} to T _L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T _L)	217°C
-Time (t _L)	60-150 seconds
Peak Temperature (T _P)	260°C
Time within 5°C of actual Peak Temperature (t _p)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C 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	2024.5.12	2024.5.12	3.0	New File	/	Ding	
02	2025.06.16	2025.06.16	3.1	Update packaging information	/	Ding	
03	2025.07.01	2025.07.01	3.2	Modify Absolute Maximum Rating	/	Ding	