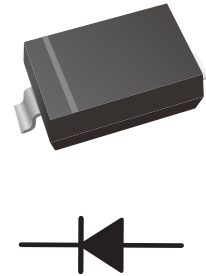


Schottky Barrier Rectifiers

Features

- Metal silicon junction, majority carrier conduction
- Guarding for overvoltage protection
- Low power loss, high efficiency
- High current capability
- low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical Data

- Case: SOD-123
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end

Ordering information

Part Number	Shipping	Reel
LT5817W THRU LT5819W-TR3	3000PCS Tape&Reel	7 inches
LT5817W THRU LT5819W-TR12	12000PCS Tape&Reel	13 inches

Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameters	Symbol	LT5817W	LT5818W	LT5819W	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	V
Maximum RMS voltage	V_{RMS}	14	21	28	V
Maximum DC blocking voltage	V_{DC}	20	30	40	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1			A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed On Rated Load (JEDEC method)	I_{FSM}	25			A
Maximum Instantaneous Forward Voltage at 1 A at 3 A	V_F	0.45 0.75	0.550 0.875	0.60 0.90	V
Maximum Instantaneous Reverse Current at Rated DC Reverse Voltage $T_j = 25^{\circ}C$ $T_j = 100^{\circ}C$	I_R	1 10			mA
Typical Thermal Resistance (Note1)	$R_{\theta JA}$	160			$^{\circ}C/W$
Typical Junction Capacitance	C_j	110			pF
Storage and Operating Junction Temperature Range	T_j, T_{stg}	-55 ~ +125			$^{\circ}C$

Note: (1) P.C.B. mounted with 5mm X 5mm copper pad areas.



Characteristics Curve

Fig.1 Forward Current Derating Curve

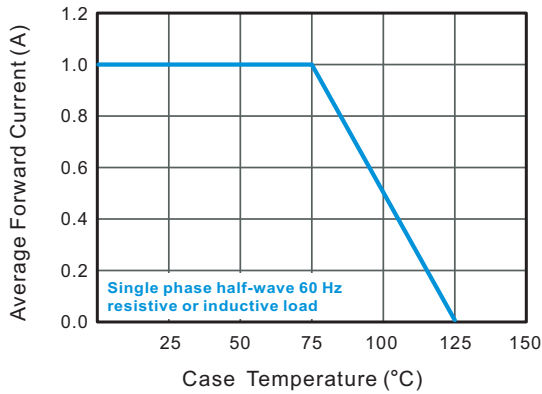


Fig.2 Typical Reverse Characteristics

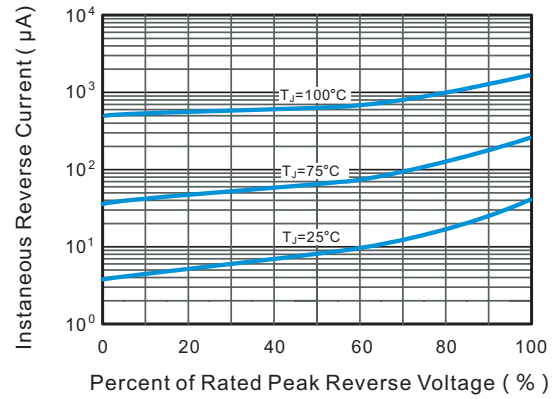


Fig.3 Typical Forward Characteristic

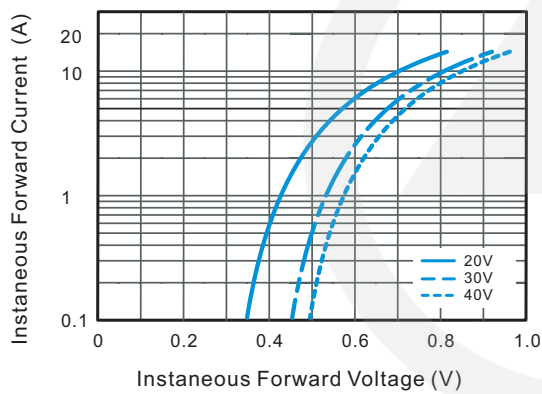


Fig.4 Typical Junction Capacitance

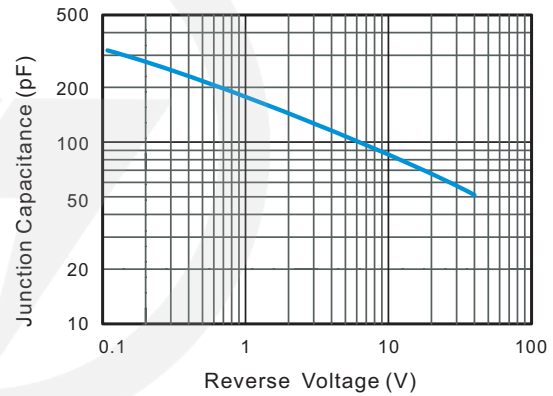


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

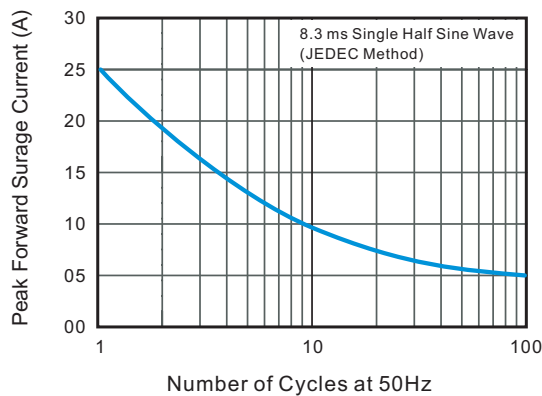
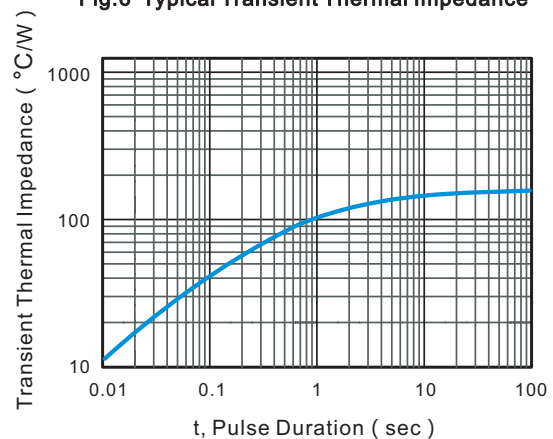
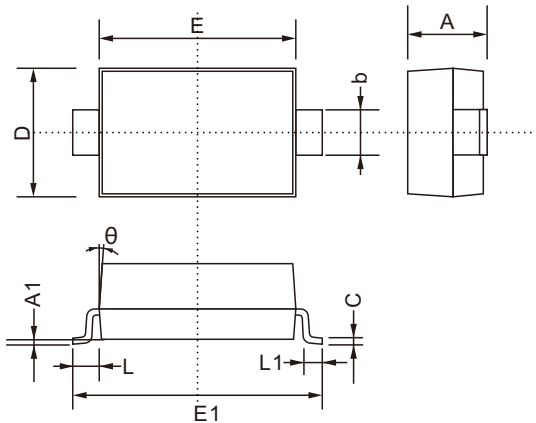


Fig.6 Typical Transient Thermal Impedance



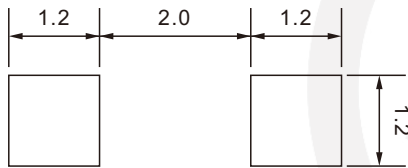
SOD-123 Package Outline

Unit: mm



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.300
A1	0.000	0.200
b	0.450	0.750
C	0.080	0.230
D	1.500	1.800
E	2.500	2.800
E1	3.550	3.900
L1	0.250	0.450
L	0.5REF	
θ	8°	

SOD-123 Suggested Pad Layout



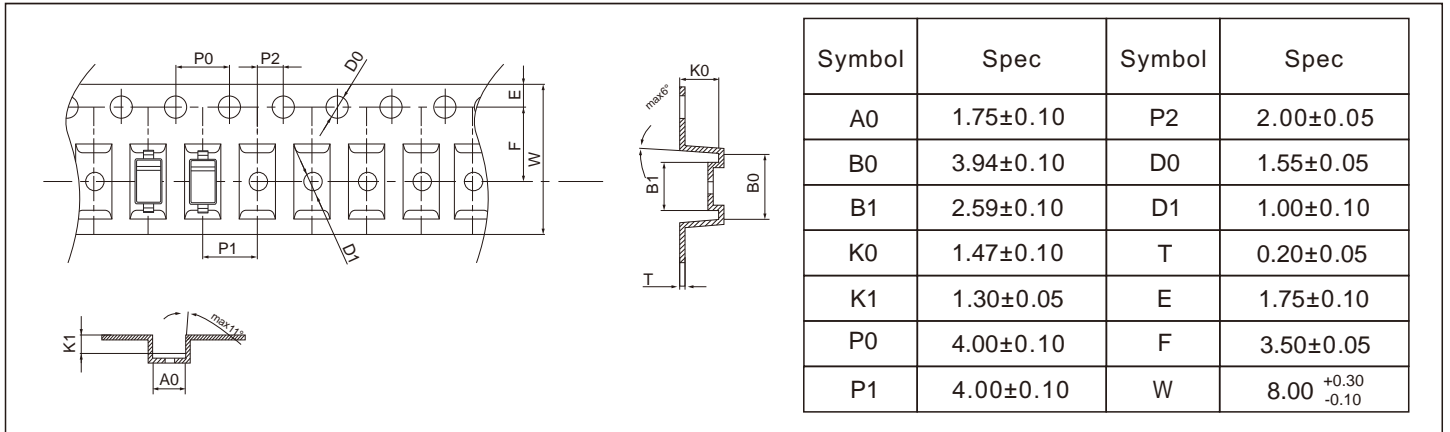
Note:

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

Marking

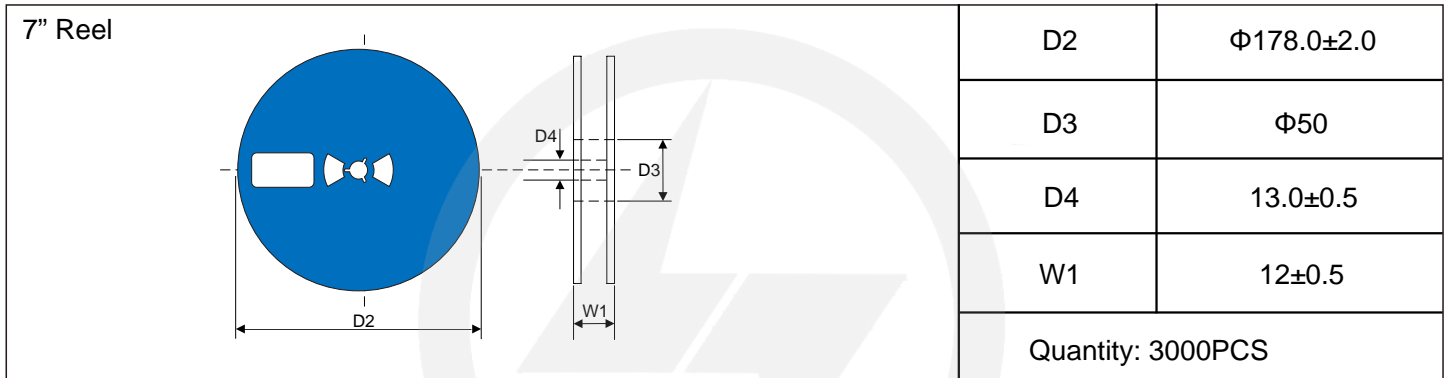
Type number	Marking code
LT5817W	SJ
LT5818W	SK
LT5819W	14A

Carrier Tape Dimensions



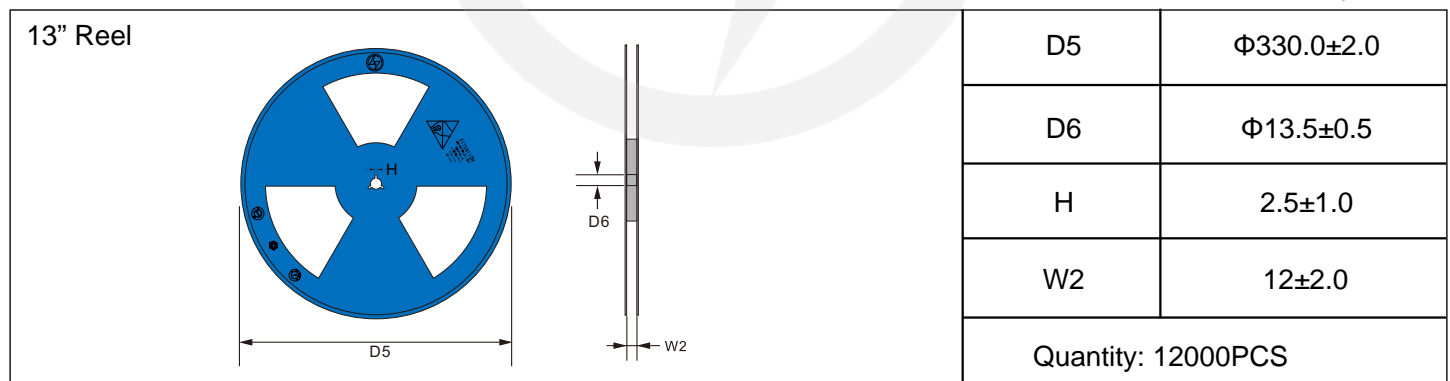
Reel Dimensions

Unit : mm

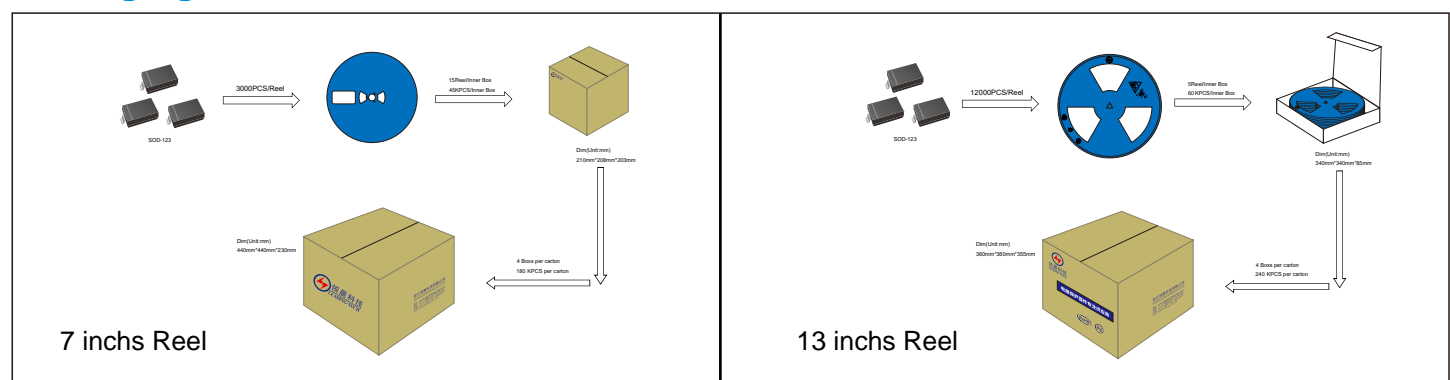


Reel Dimensions

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	2024.3.18	2024.3.18	3.0	New File	/	Ding	
02	2025.06.12	2025.06.12	3.1	Update packaging information	/	Ding	