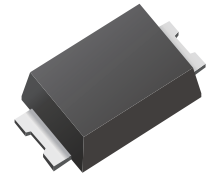


Surface Mount Schottky Barrier Rectifier

Features

- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications



Mechanical Data

- Case: PDFN4828
- Terminals: Solderable per MIL-STD-750, Method 2026



Ordering Information

Part Number	Shipping	Reel
LT54P4 THRU LT520P4-TR10	10000PCS Tape&Reel	13inchs

Absolute 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	LT54P4	LT56P4	LT510P4	LT515P4	LT520P4	Units
	Marking	SS54	SS56	SS510	SS515	SS520	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	40	60	100	150	200	V
Maximum RMS voltage	V_{RMS}	28	42	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	40	60	100	150	200	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5.0					A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	120					A
Max Instantaneous Forward Voltage at 5 A	V_F	0.55	0.70	0.85	0.95		V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 100^\circ\text{C}$	I_R	1.0 50					mA
Typical Junction Capacitance ⁽¹⁾	C_j	500	300				pF
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$	60					°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 3.81 cm X 3.81 cm copper pad areas.



Characteristics Curve

Fig.1 Forward Current Derating Curve

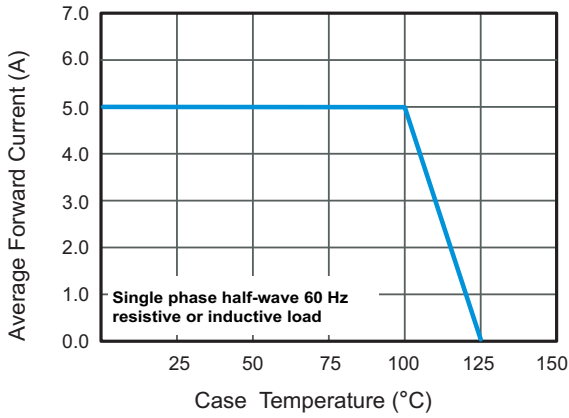


Fig.2 Typical Reverse Characteristics

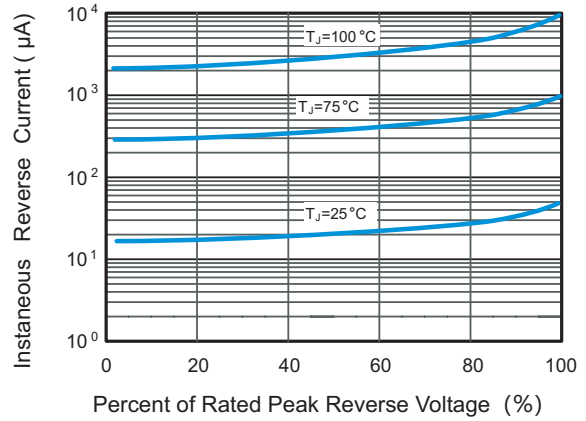


Fig.3 Typical Forward Characteristic

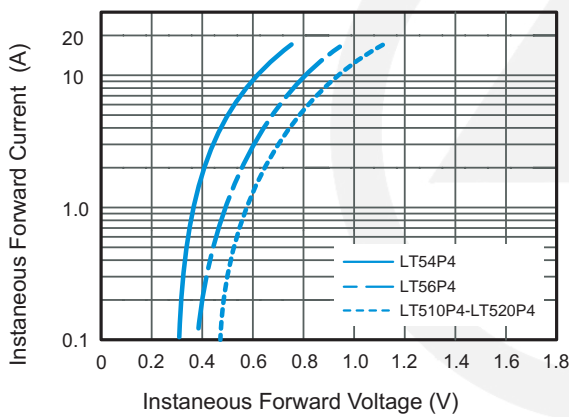


Fig.4 Typical Junction Capacitance

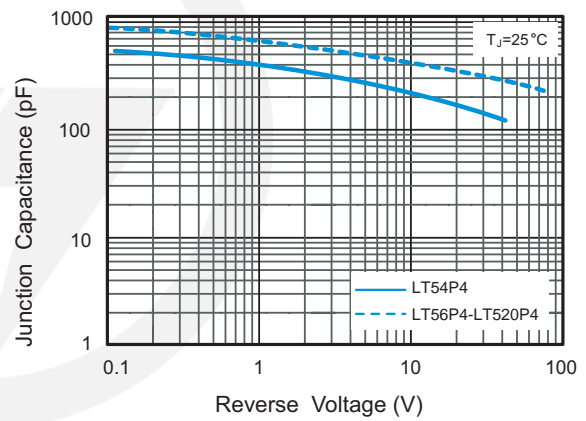


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

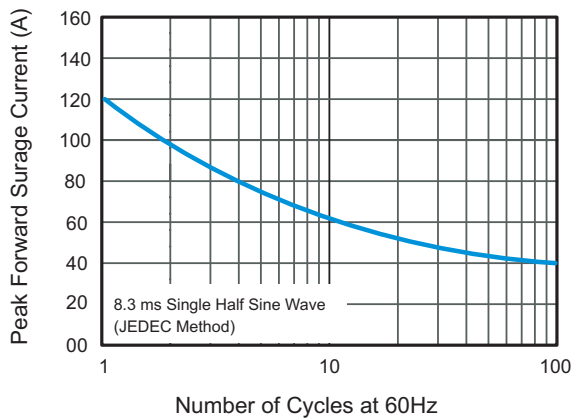
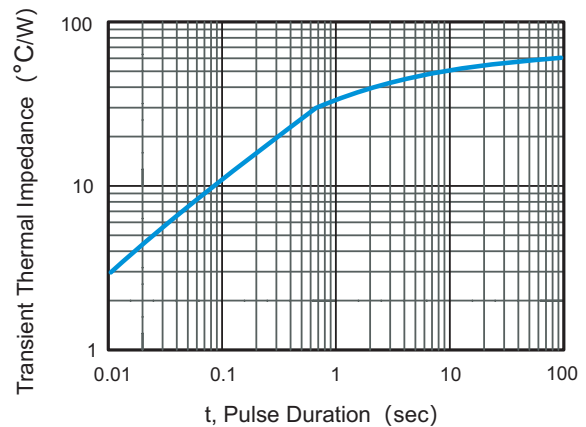
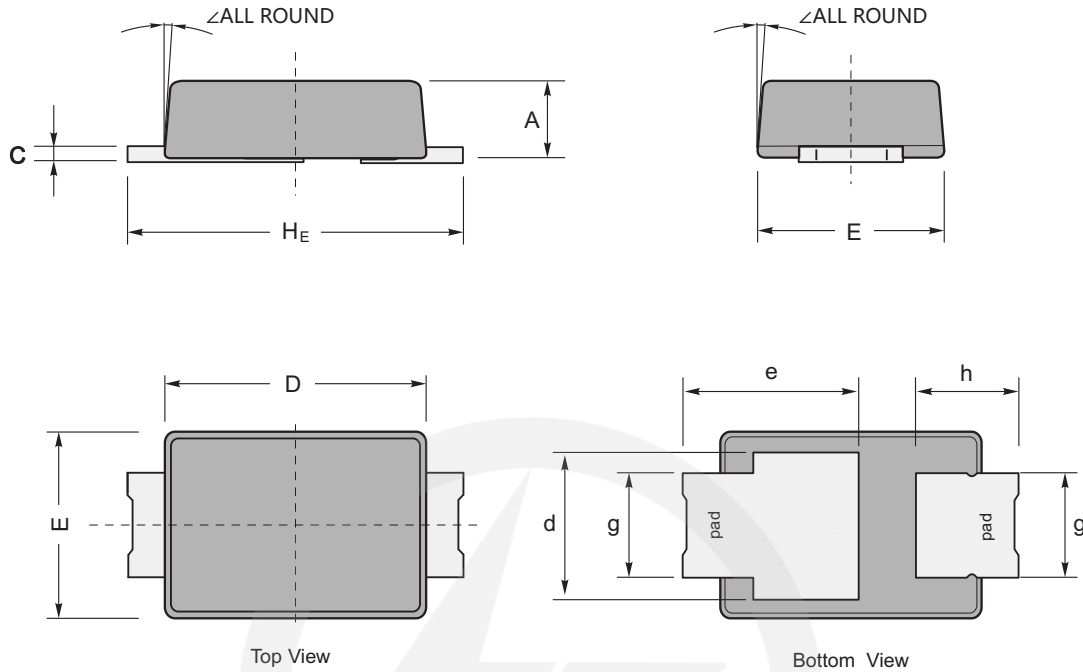
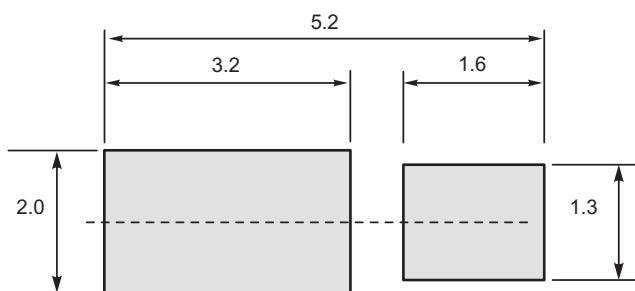


Fig.6 Typical Transient Thermal Impedance



Package Outline
PDFN4828
Unit : mm


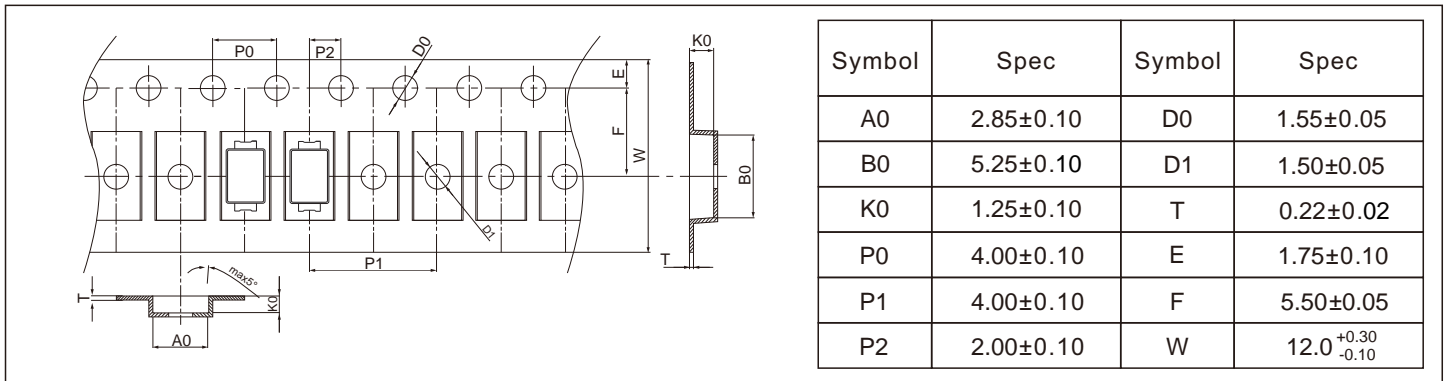
UNIT		A	C	D	E	HE	d	e	g	h	\angle
mm	max	1.20	0.35	4.10	2.80	5.20	2.00	3.05	2.00	1.20	12°
	min	0.90	0.20	3.70	2.30	4.60	1.70	2.75	1.30	0.80	

Suggested Pad Layout
PDFN4828
Unit : mm

Note:

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

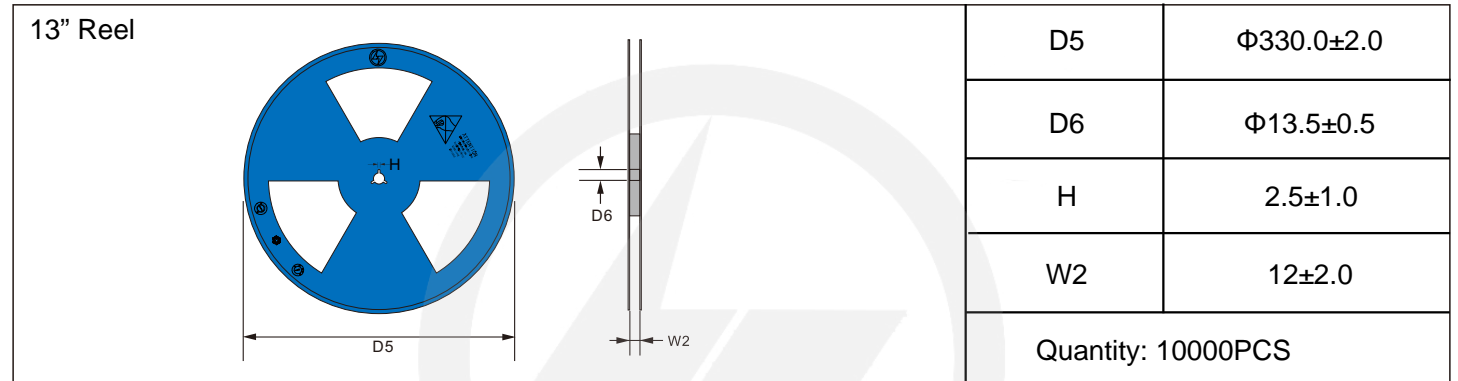
Carrier Tape Dimensions

Unit : mm

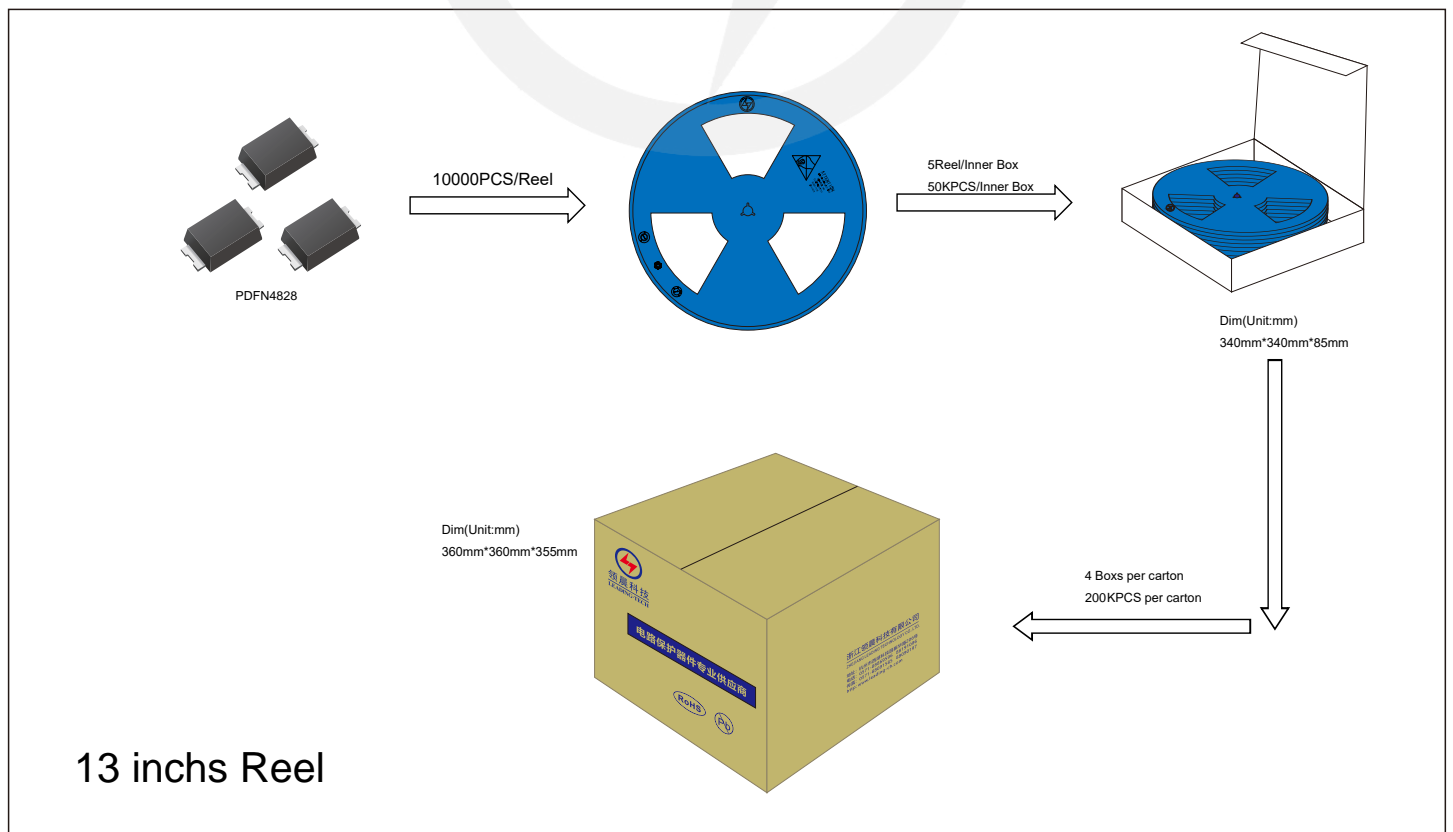


Reel Dimensions

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.

Important Notice and Disclaimer

Leading-Tech reserves the right to make changes to this document and its products and specifications at any time without notice.

Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

Leading-Tech makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, not does Leading-Tech assume any liability for application assistance or customer product design.

Leading-tech does not warrant or accept any liability with products which are purchase or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of Leading-Tech.

Leading-Tech products are not authorized for use as critical components in life support devices or systems without express written approval of Leading-tech.

Version Update Information

Series NO.	Enactment/Revision Date	Effective Date	Version	Revision content	Revision Reason	Revision Person	Note
01	2024.06.26	2024.06.26	1.0	New File	/	Ding	