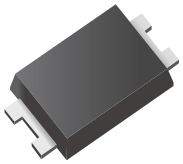
领晨科技
LEADING-TECH

LT12P3 THRU LT120P3

Surface Mount Schottky Barrier Rectifier

Features



- The plastic package carries Underwiters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Metal silicon junction,majority carrier conduction
- Low power loss,high efficiency
- Built-in strain relief,ideal for automated placement
- High forward surge current capability
- Lead free in comply with EU RoHS 2011/65/EU directives

Mechanical Data

- Case:PDFN3620
- Terminal:Leads solderable per MIL-STD-750 Method 2026
- Polarity:Color band denotes cathode end
- Mounting Position:Any

Ordering Information

Part Number	Shipping	Reel
LT12P3 THRU LT120P3	12000PCS 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	LT12P3	LT14P3	LT16P3	LT18P3	LT110P3	LT112P3	LT115P3	LT120P3	Unit
	Marking	P12	P14	P16	P18	P110	P112	P115	P120	
Maximum repetitive peak reverse voltage	V_{RRM}	20	40	60	80	100	120	150	200	V
Maximum RMS voltage	V_{RMS}	14	28	42	56	70	84	105	140	V
Maximum DC blocking voltage	V_{DC}	20	40	60	80	100	120	150	200	V
Maximum instantaneous forward voltage at 1A	V_F	0.5	0.5	0.7	0.85	0.85	0.85	0.9	0.9	V
Maximum average forward rectified current at T_L(see fig.1)	$I_{(AV)}$	1								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30								A
Maximum DC reverse current T_A=25℃ at rated DC blocking voltage T_A=100℃	I_R	0.15 10		0.3 10		0.2 5		0.1 2		mA
Typical Junction Capacitance (Note1)	C_J	110		80						pF
Typical thermal resistance (Note2)	$R_{\theta JA}$	90								℃/W
Operating junction temperature range	T_J	-55 to +125								℃
Storage temperature range	T_{STG}	-55 to +150								℃

Note:(1) Measured at 1MHz and applied reverse voltage of 4.0V D.C.
(2) P.C.B. mounted with 2.0" x 2.0"(5.0cm x 5.0cm) copper pad areas.

Characteristics Curve

FIG.1 FORWARD CURRENT DERATING CURVE

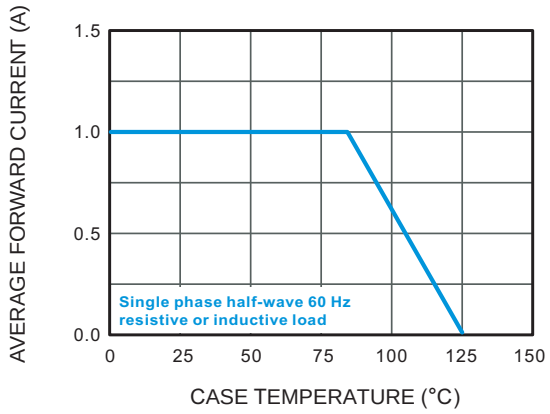


FIG.2 TYPICAL REVERSE CHARACTERISTICS

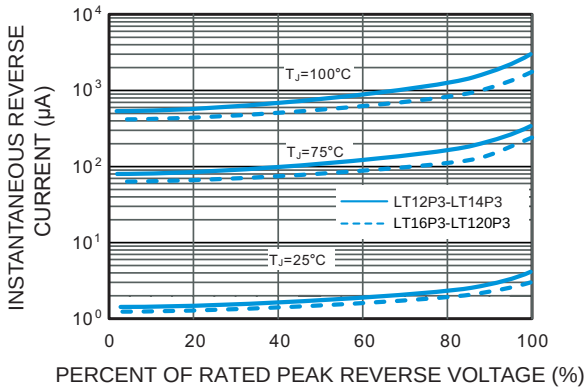


FIG.3 TYPICAL FORWARD CHARACTERISTICS

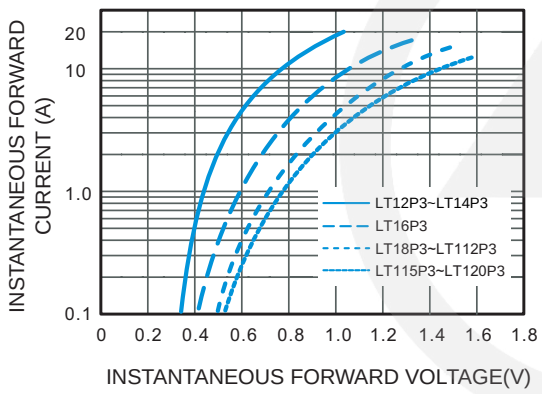


FIG.4 TYPICAL JUNCTION CAPACITANCE

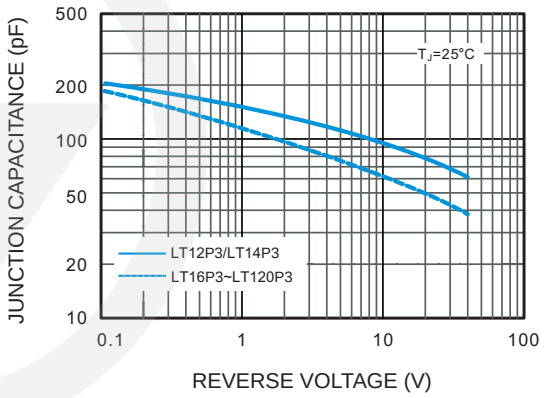


FIG.5 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

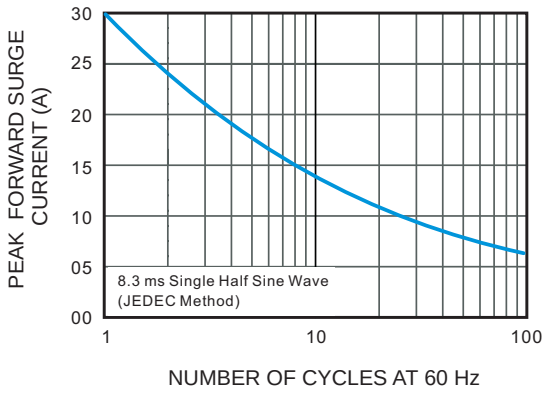
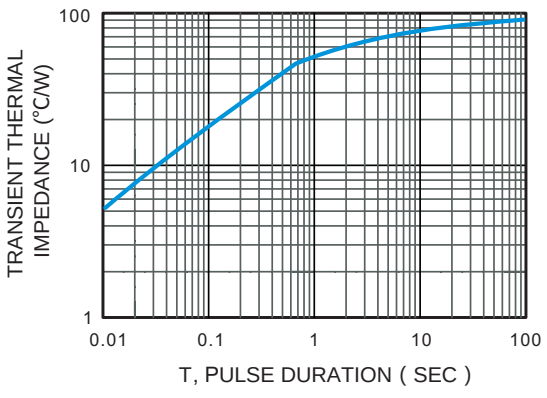


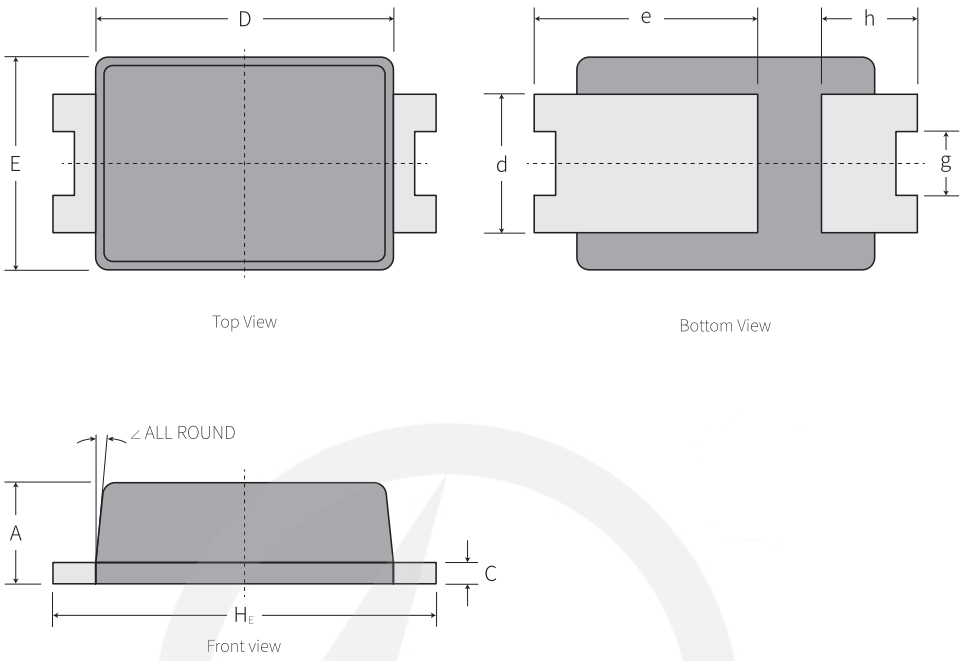
FIG.6 TYPICAL TRANSIENT THERMAL IMPEDANCE



Package Outline

PDFN3620

Unit：mm

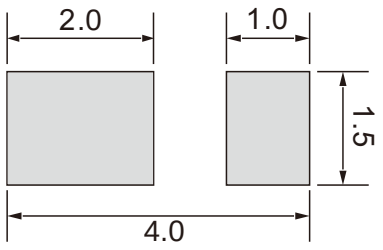


UNIT		A	C	D	E	H_E	d	e	g	h	∠
mm	max	1.15	0.30	3.00	2.20	3.80	1.50	2.30	0.80	1.10	6°
	min	0.75	0.10	2.60	1.80	3.40	1.10	1.70	0.40	0.70	

Suggested Pad Layout

PDFN3620

Unit：mm

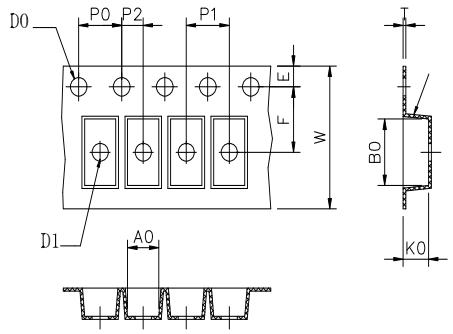


Note:

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

Carrier Tape Dimensions

Unit：mm

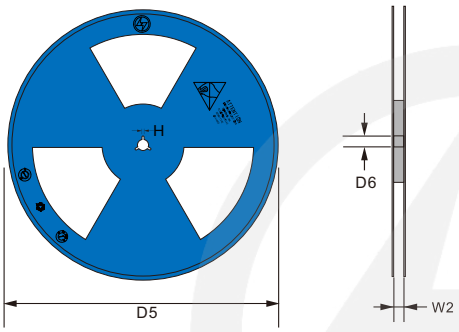


Symbol	Spec	Symbol	Spec
W	8.00±0.10	P1	4.00±0.10
E	1.75±0.10	P2	2.00±0.05
F	3.50±0.05	T	0.22±0.02
D0	1.55±0.05	A0	2.30±0.10
D1	1.50±0.10	B0	3.90±0.10
P0	4.00±0.10	K0	1.15±0.05

Reel Dimensions

Unit：mm

13” Reel

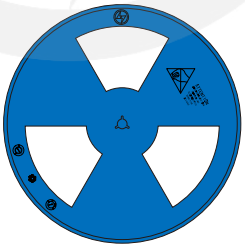


D5	Φ330.0±2.0
D6	Φ13.5±0.5
H	2.5±1.0
W2	12±2.0
Quantity: 12000PCS	

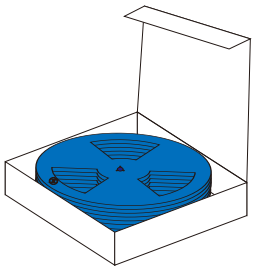
Packaging

PDFN3620

12000PCS/Reel



5Reel/Inner Box
60KPCS/Inner Box



Dim(Unit:mm)
340mm*340mm*85mm

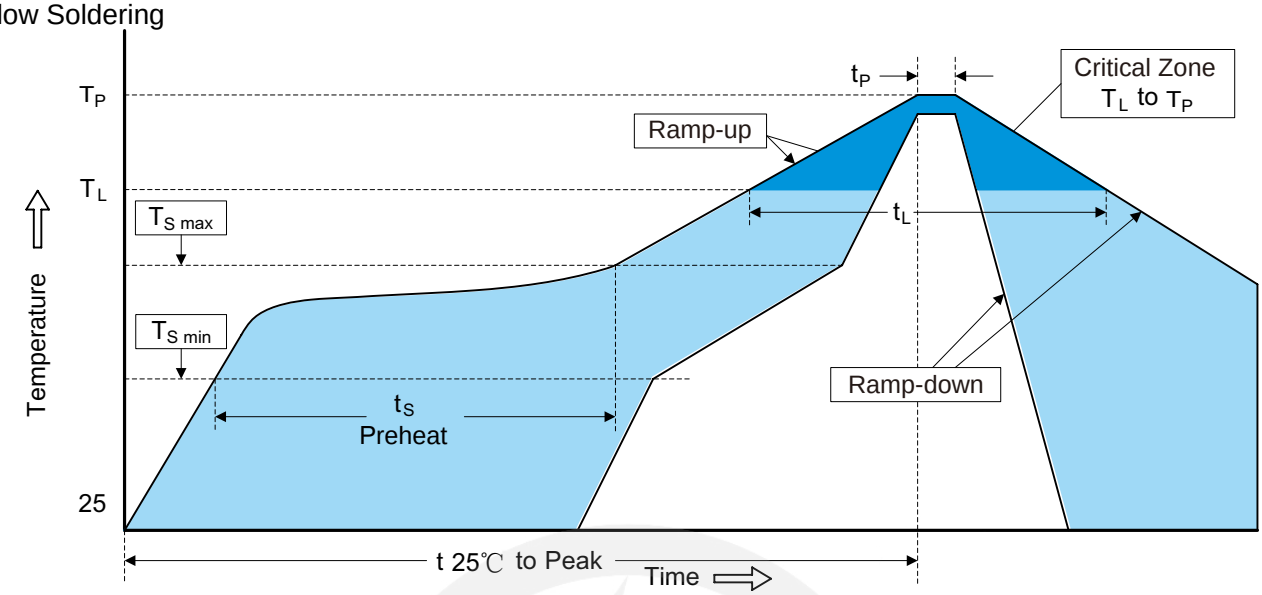
4 Boxs per carton
240 KPCS per carton

Dim(Unit:mm)
360mm*360mm*355mm

13 inchs Reel

Recommended Soldering Conditons

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 Iformation

Series NO.	Enactment/Revision Date	Effective Date	Version	Revision content	Revision Reason	Revision Person	Note
01	2024.3.1	2024.3.1	1.0	New File	/	Ding	
02	2025.4.18	2025.4.18	1.1	1.Revise Marking 2.Package Outline e(min)=1.7	/	Ding	