

DESCRIPTION:

LMBJ58CP5 is designed for DC 48V, POE supply equipment, It is used to replace the SMDJ series TVS, also can be solved the POE normal solution which use TSPD.

FEATURES:

- ✧ Low profile package.
- ✧ None negative resistance.
- ✧ Excellent clamping capability.
- ✧ Glass passivated junction.
- ✧ High temperature reflow soldering: 260°C/40s at terminals.
- ✧ Plastic package has underwriters laboratory flammability 94V-0.
- ✧ Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C.
- ✧ Terminal: solder plated, solderable per J-STD-002.
- ✧ For surface mounted applications in order to optimize board space.



SMB



Bi-directional



Uni-direction

Symbol

SURGE LEVEL

- ✧ 10/700μs 40ohm 5KV
- ✧ 1.2/50μs-8/20μs 2ohm 1.5KV

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak power dissipation with a 10/1000μs waveform ⁽¹⁾	P _{PP}	3500	W
Peak pulse current with a 10/1000μs waveform ⁽¹⁾	I _{PP}	See Next Table	A
Power dissipation on infinite heatsink at T _L = 50 °C	P _D	6.5	W
Peak forward surge current, 8.3 ms single half sine-wave unidirectional only ⁽²⁾	I _{FSM}	300	A
Maximum instantaneous forward voltage at 50 A for unidirectional only	V _F	5.0	V
Operating junction and storage temperature range	T _J , T _{STG}	- 55 to +150	°C

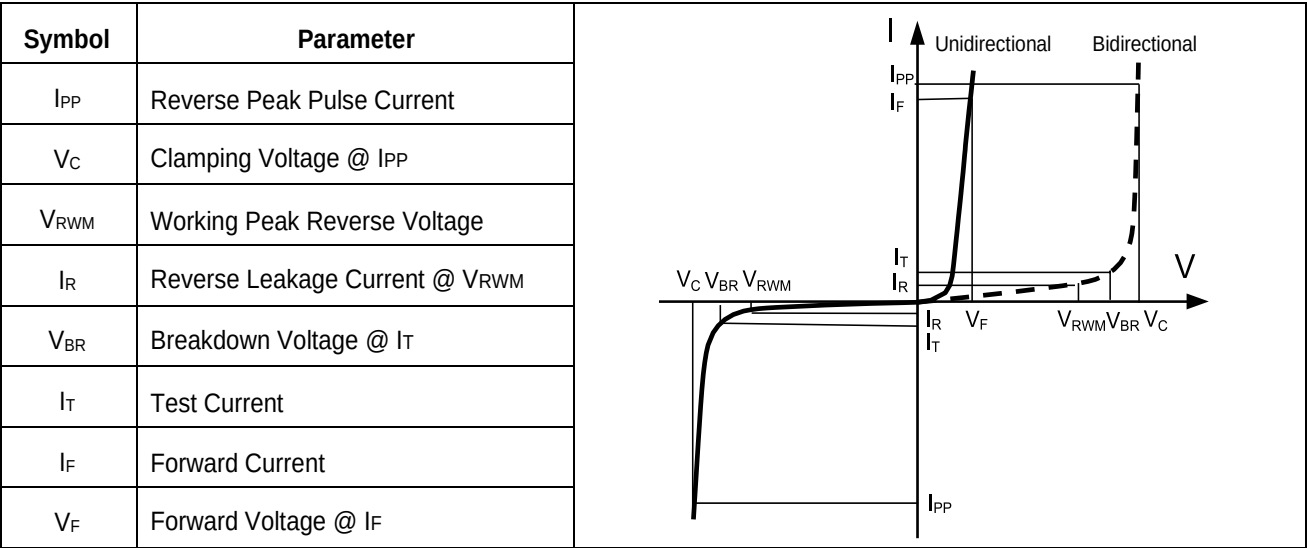
Note:

(1)Non-repetitive current pulse per Fig.5 and derated above T_A= 25 °C per Fig.1

(2)Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum



I-V Curve Characteristics



Electrical Characteristics ($T_A=25^{\circ}C$ unless otherwise noted)

Part Number (Uni)	Part Number (Bi)	Marking (Uni)	Marking (Bi)	Breakdown Voltage V_{BR} @ I_T			Maximum Reverse Leakage I_R @ V_{RWM} (μA)	Working Peak Reverse Voltage V_{RWM} (V)	Maximum Reverse Surge Current I_{PP} (A)	Maximum Clamping Voltage V_C @ I_{PP} (V)
				Min (V)	Max (V)	I_T (mA)				
LMBJ58P5	LMBJ58CP5	3.0SMBJ58A	3.0SMBJ58CA	64.40	71.20	1.0	1.0	58.0	70.0	51.0

Note:
1.Add suffix ' CA ' after part number to specify Bi-directional devices

Ratings and Characteristics Curves ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

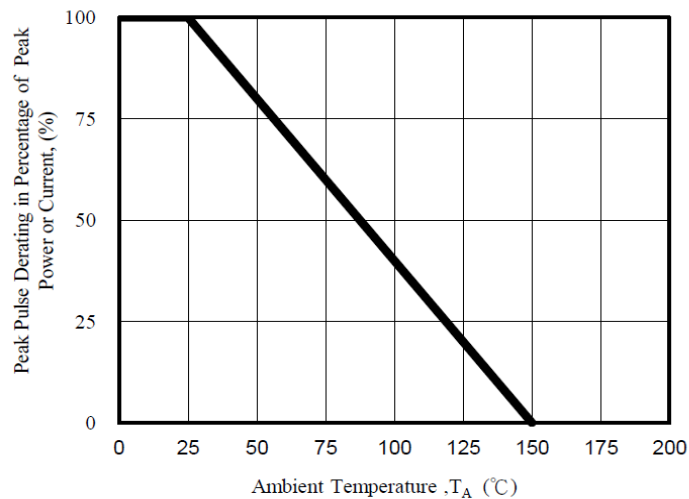


Fig. 1 - Pulse Derating Curve

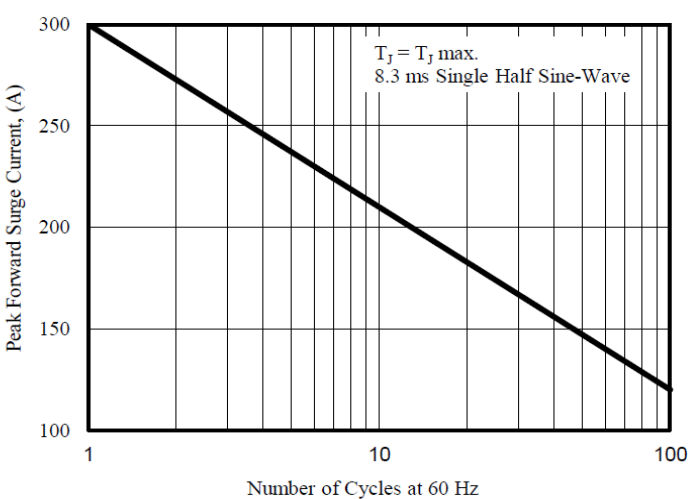


Fig. 2 - Maximum Non-Repetitive Surge Current

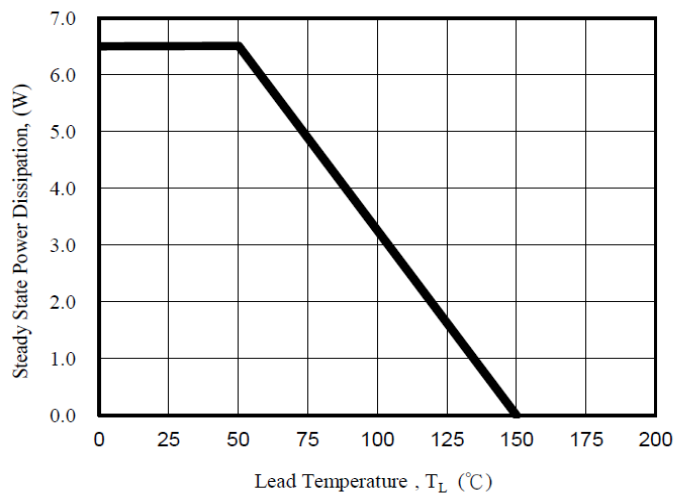


Fig. 3 - Steady State Power Derating Curve

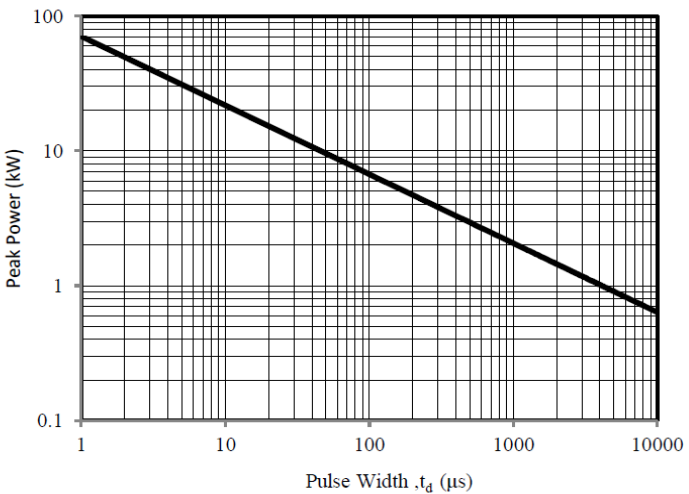


Fig. 4 - Peak Pulse Power Rating Curve

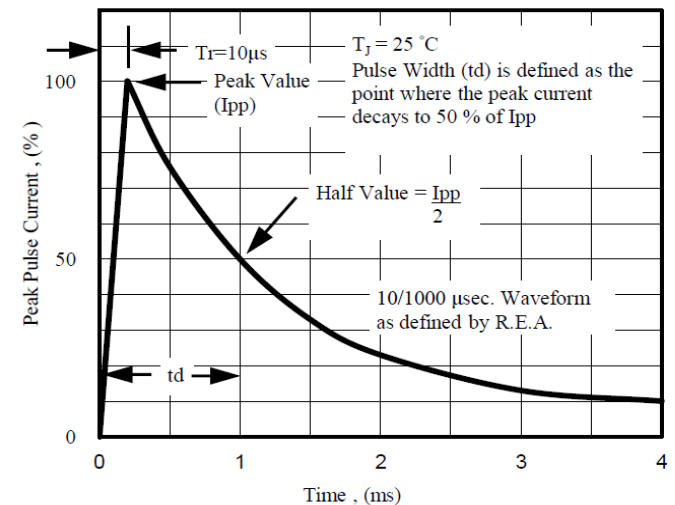


Fig. 5 - Pulse Waveform

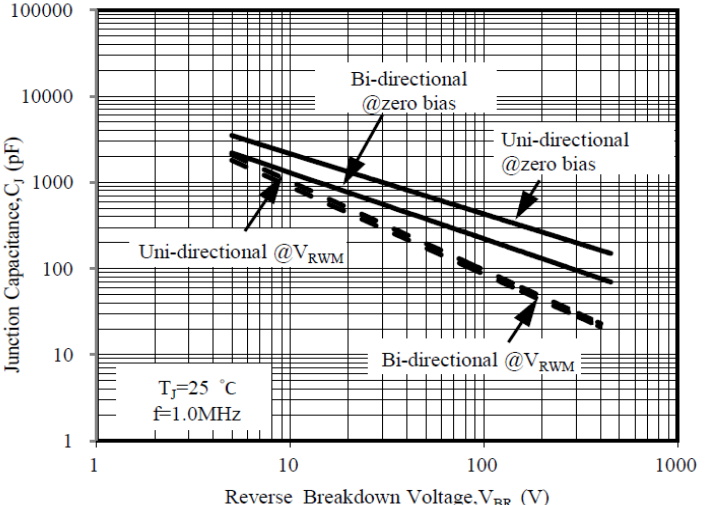
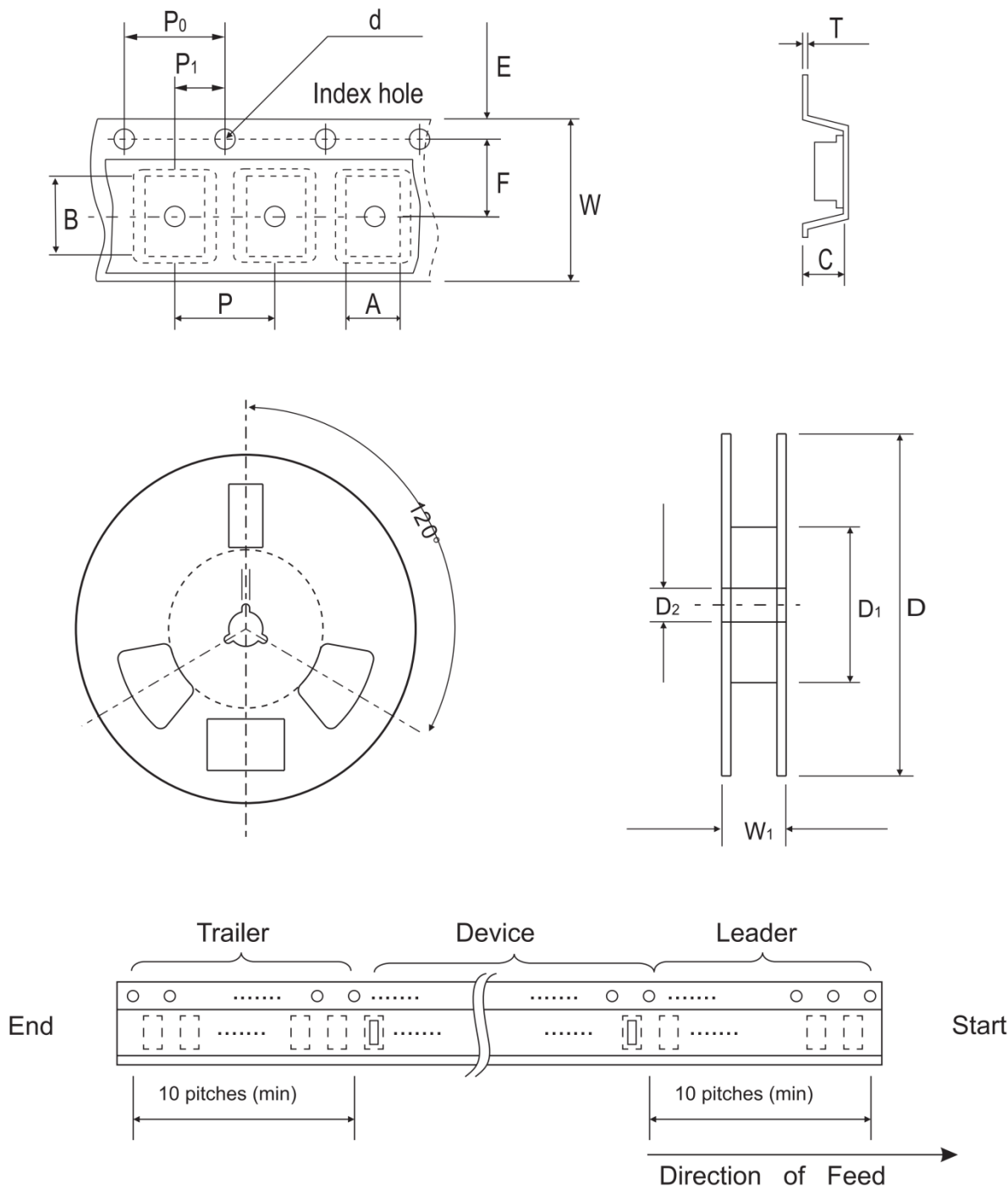


Fig. 6 - Typical Junction Capacitance

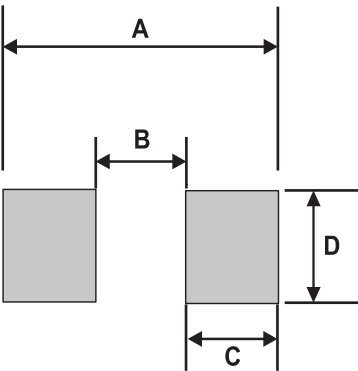
Reel Taping Specification



DO-214AA (SMB)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.67 ± 0.10	5.69 ± 0.10	4.50 (max)	1.55 ± 0.10	330	50.00 (min)	13.00 ± 1.00
	(inch)	0.144 ± 0.004	0.224 ± 0.004	0.177 (max)	0.061 ± 0.004	13	1.969 (min)	0.512 ± 0.039
	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	5.50 ± 0.05	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	12.00 ± 0.30	18.40 (max)
	(inch)	0.069 ± 0.004	0.217 ± 0.002	0.315 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.472 ± 0.012	0.724 (max)



Suggested PAD Layout

SIZE	DO-214AA(SMB)		
	(mm)	(inch)	
A	5.60	0.220	
B	2.16 MAX	0.085 MAX	
C	1.52 MIN	0.060 MIN	
D	2.18 MIN	0.086 MIN	

Ordering Information

Part Number	Package	Weight	Base qty	Reel Size	Delivery mode
		grams(approx.)	(pcs)	(inch)	
LMBJ58P5(CP)	DO-214AA (SMB)	0.108	3000	13	Tape and reel

NOTICE

Leiditech reserves the right to make modifications,enhancements,improvements,corrections or other changes without further notice to any product herein. Leiditech does not assume any liability arising out of the application or use of any product described herein.

Shanghai Leiditech Electronic Co.,Ltd
Email: sale1@leiditech.com
Tel : +86- 021 50828806
Fax : +86- 021 50477059