



PEC2305C2E

VERY LOW CAPACITANCE ESD PROTECTION

Voltage

5 V

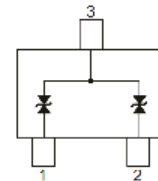
Features

- IEC61000-4-2(ESD): ± 15 kV Air, ± 8 kV Contact
- IEC61000-4-4(EFT): 20 A(5/50 ns)
- IEC61000-4-5(Lightning): 2 A(8/20 μ S)
- Low clamping voltage
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case : Molded plastic, SOT-523
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.002 grams

SOT-523



Maximum Ratings and Thermal Characteristics (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air)	V _{ESD}	± 15	kV
ESD IEC61000-4-2(Contact)		± 8	
Typical Thermal Resistance	R _{θJA} (¹)	630	°C/W
Operating Junction Temperature Range	T _J	-55~150	°C
Storage Temperature Range	T _{STG}	-55~150	°C



PEC2305C2E

Electrical Characteristics (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage	V _{RWM} ⁽²⁾	-	-	-	5	V
Reverse Breakdown Voltage	V _{BR}	I _{BR} = 1 mA	5.5	-	10	V
Reverse Leakage Current	I _R	V _R = 5 V	-	-	100	nA
Clamping Voltage	V _{CL}	I _{PP} = 1 A, t _P = 8/20 μs	-	-	12	V
		I _{PP} = 2 A, t _P = 8/20 μs	-	-	15	
Clamping Voltage TLP	V _{CL} ⁽³⁾	I _{PP} = 8 A, t _P = 100 ns	-	12.1	-	V
		I _{PP} = 16 A, t _P = 100 ns	-	13.7	-	
Dynamic Resistance	R _{DYN}	t _P = 100 ns	-	0.2	-	Ω
Off State Junction Capacitance	C _J	0Vdc Bias f = 1 MHz	-	-	3.5	pF

NOTES :

1. Mounted on a FR4 PCB, Single-sided copper, mini pad.
2. A transient suppressor is selected according to the working peak reverse voltage(V_{RWM}), which should be equal to or greater than the DC or continuous peak operation voltage level.
3. Testing using Transmission Line Pulse (TLP) conditions: Z₀ = 50 Ω, t_P = 100 ns.



PEC2305C2E

TYPICAL CHARACTERISTIC CURVES

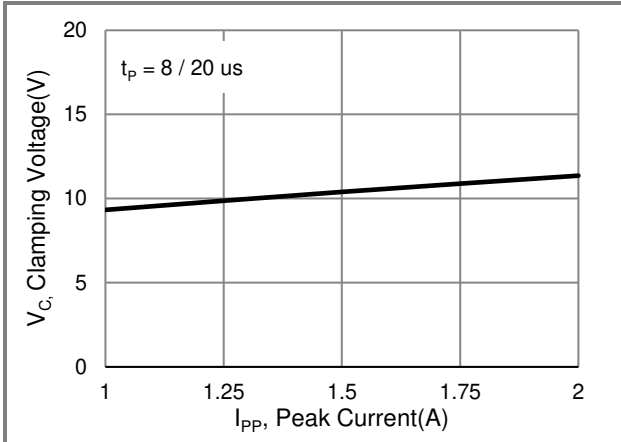


Fig.1 Typical Peak Clamping Voltage

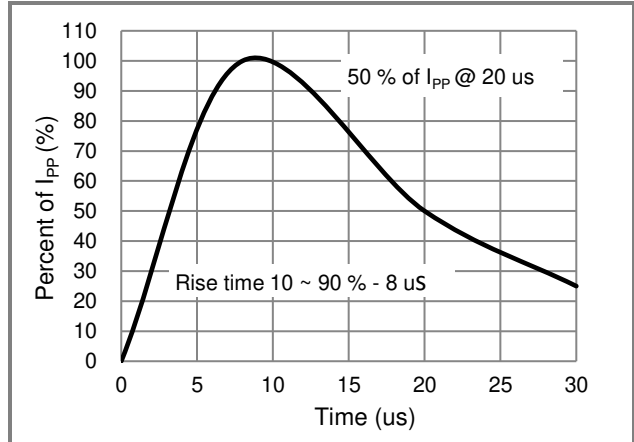


Fig.2 Pulse Waveform

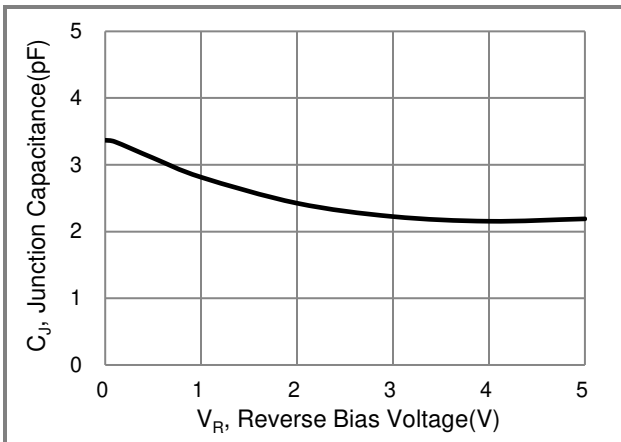


Fig.3 Typical Junction Capacitance

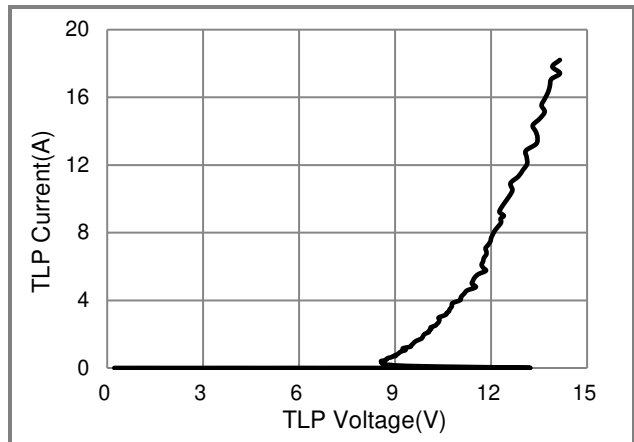


Fig.4 TLP Measurement

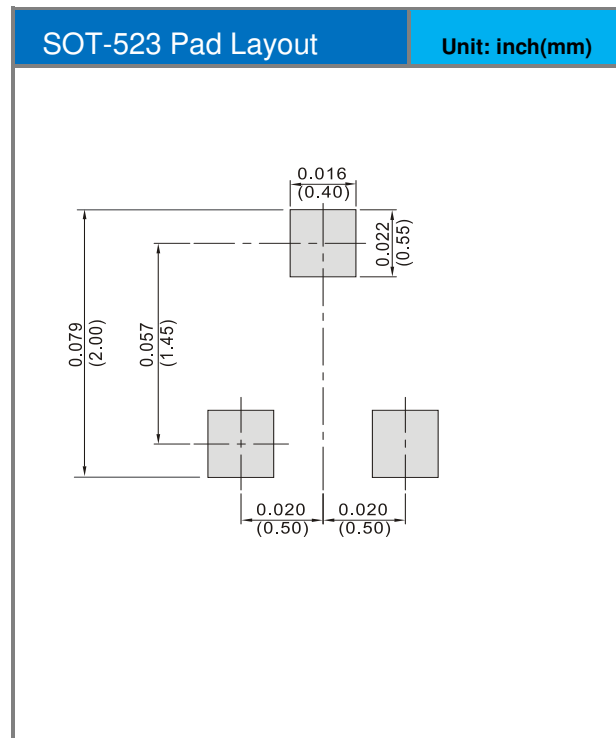
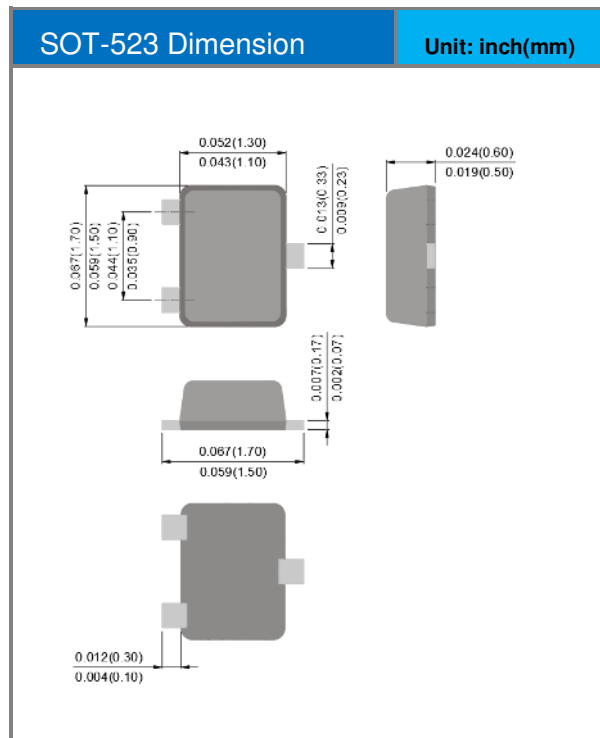


PEC2305C2E

Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
PEC2305C2E_R1_00001	SOT-523	4K / 7" Reel	32E	Halogen free RoHS compliant

Packaging Information & Mounting Pad Layout





PEC2305C2E

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.