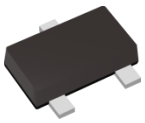
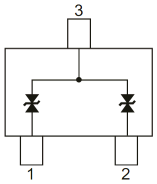
PEC2305C2E

VERY LOW CAPACITANCE ESD PROTECTION

Voltage **5 V**

SOT-523





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 uS)
- 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

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

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air) ESD IEC61000-4-2(Contact)	V_{ESD}	± 15 ± 8	kV
Typical Thermal Resistance	$R_{\theta JA}$(1)	630	°C/W
Operating Junction Temperature Range	T_J	-55~150	°C
Storage Temperature Range	T_{STG}	-55~150	°C

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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 us	-	-	12	V
		I_{PP} = 2 A, t_P = 8/20 us	-	-	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.

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TYPICAL CHARACTERISTIC CURVES

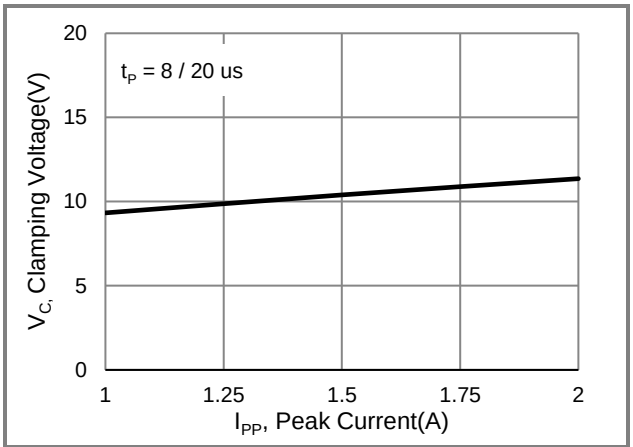

Fig.1 Typical Peak Clamping Voltage

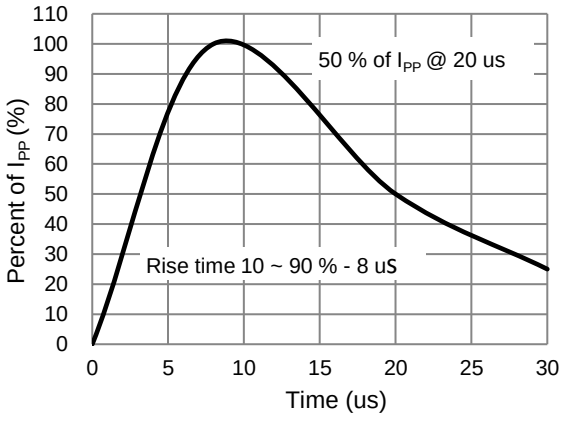

Fig.2 Pulse Waveform

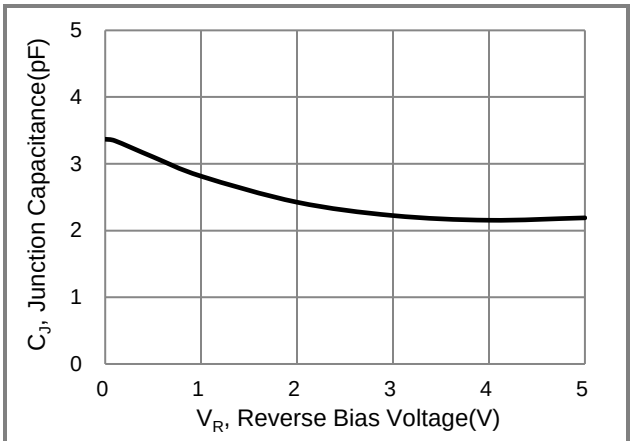

Fig.3 Typical Junction Capacitance

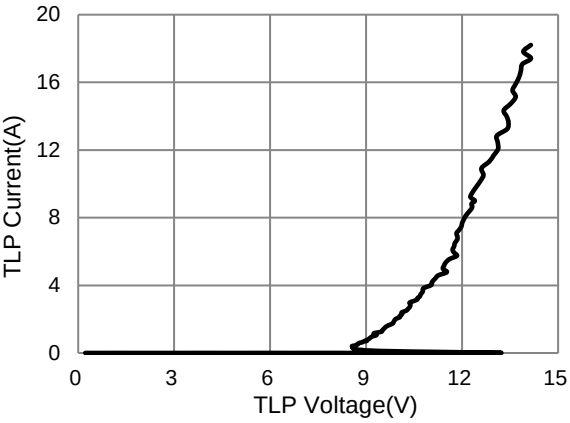

Fig.4 TLP Measurement

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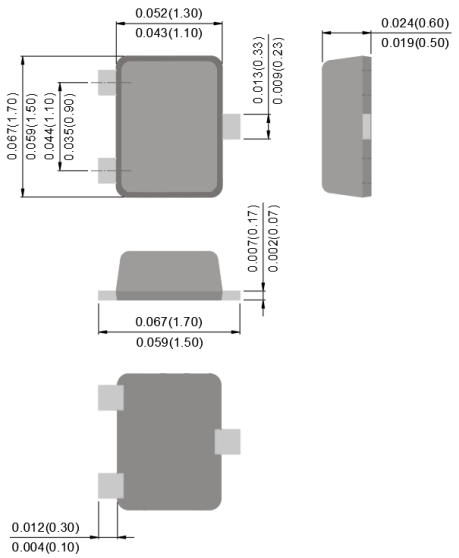
Part No. Packing Code Version

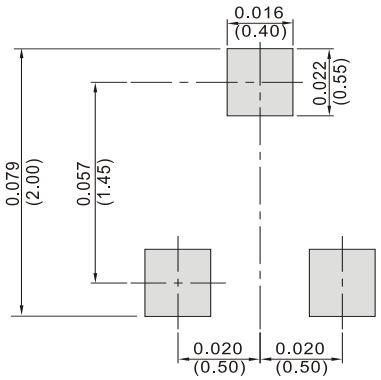
Part No. Packing Code	Package Type	Packing Type	Marking	Version
PEC2305C2E_R1_00001	SOT-523	4K / 7" Reel	32E	Halogen free RoHS compliant

Packaging Information & Mounting Pad Layout

SOT-523 Dimension — Unit: inch(mm)



SOT-523 Pad Layout — Unit: inch(mm)



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