



PEC2605C2E

VERY LOW CAPACITANCE ESD PROTECTION

Voltage

5 V

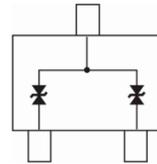
Features

- IEC61000-4-2(ESD): $\pm 15\text{kV}$ Air, $\pm 8\text{kV}$ Contact Compliance with the capability up to $\pm 30\text{kV}$
- IEC61000-4-4(EFT): $40\text{A}(5/50\text{ns})$
- IEC61000-4-5(Lightning): $3.5\text{A}(8/20\mu\text{s})$
- 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: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00007 ounces, 0.002 grams

SOT-523



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

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air)	V_{ESD}	± 30	kV
ESD IEC61000-4-2(Contact)		± 30	
Typical Thermal Resistance	$R_{\theta\text{JA}}^{(1)}$	630	$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_J	-55~150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55~150	$^\circ\text{C}$



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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage	$V_{RWM}^{(2)}$	-	-	-	5	V
Snap-Break Voltage	V_{SB}	$I_{SB} = 50\text{ mA}$	5	-	8	V
Reverse leakage current	I_R	$V_R = 5.0\text{ V}$	-	-	0.1	μA
Clamping Voltage	V_{CL}	$I_{PP} = 1\text{ A}, t_P = 8/20\text{ }\mu\text{s}$	-	-	9	V
		$I_{PP} = 3.5\text{ A}, t_P = 8/20\text{ }\mu\text{s}$	-	-	12.5	
Clamping Voltage TLP	$V_{CL}^{(3)}$	$I_{PP} = 8\text{ A}, t_P = 100\text{ ns}$	-	10	-	V
		$I_{PP} = 16\text{ A}, t_P = 100\text{ ns}$	-	12	-	
Dynamic Resistance	R_{DYN}	$t_P = 100\text{ ns}$	-	0.25	-	Ω
Off State Junction Capacitance	C_J	0Vdc Bias $f = 1\text{ MHz}$	-	-	6	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: $Z_0 = 50\ \Omega$, $t_P = 100\text{ ns}$.



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TYPICAL CHARACTERISTIC CURVES

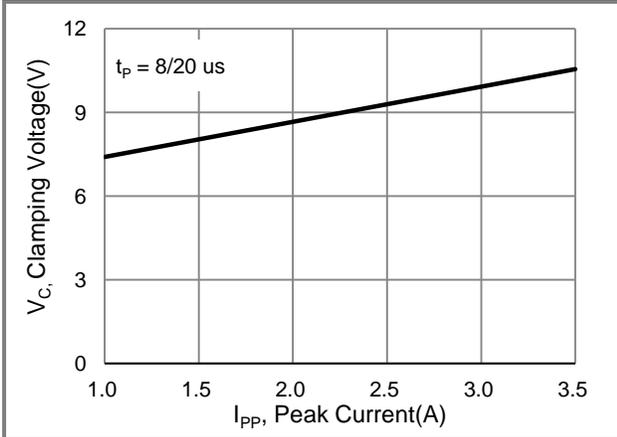


Fig.1 Typical Peak Clamping Voltage

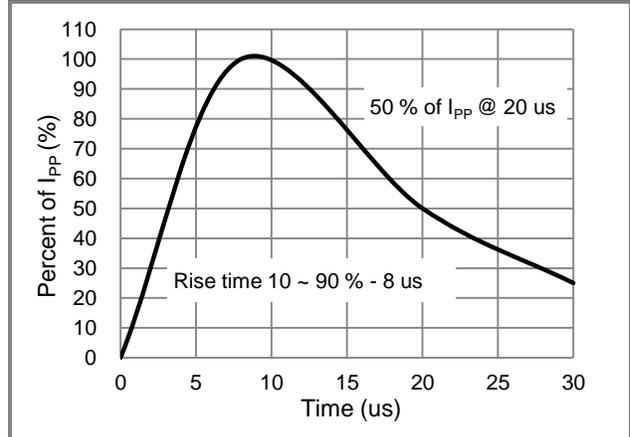


Fig.2 Pulse Waveform

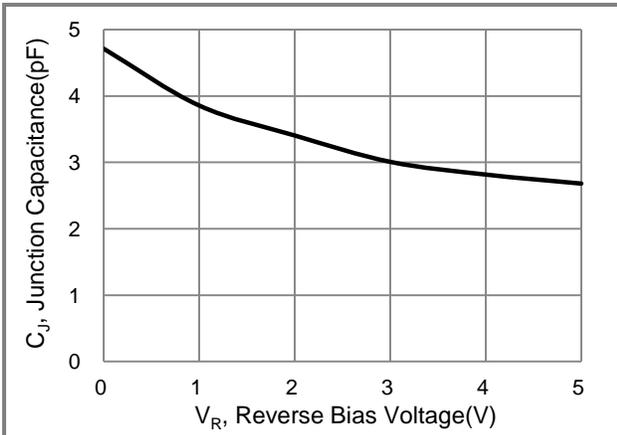


Fig.3 Typical Junction Capacitance

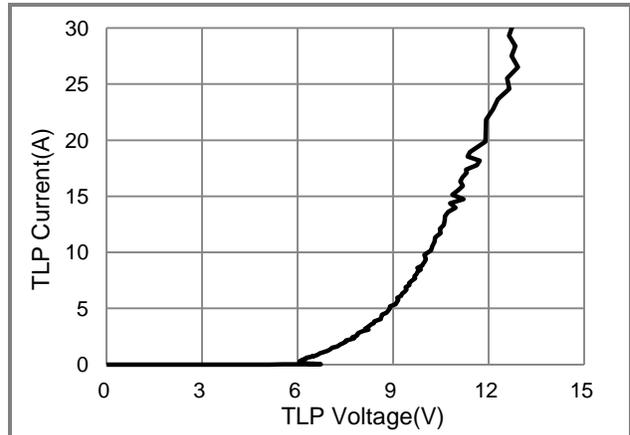


Fig.4 TLP Measurement

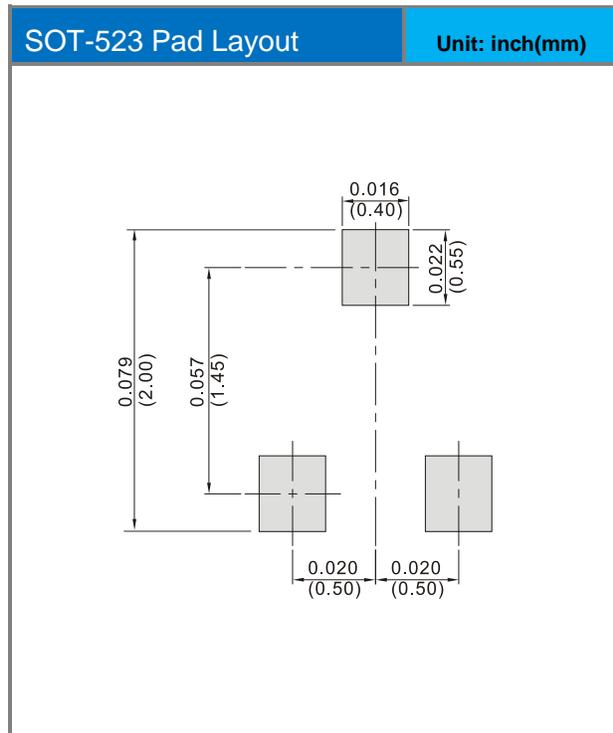
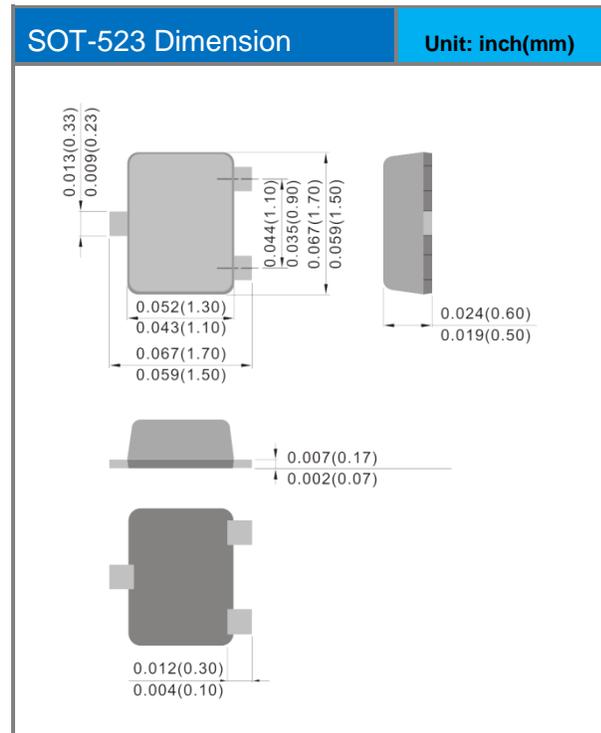


PEC2605C2E

Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
PEC2605C2E_R1_00001	SOT-523	4K / 7" Reel	22E	Halogen Free

Packaging Information & Mounting Pad Layout





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