



# PEC2605C2C

## VERY LOW CAPACITANCE ESD PROTECTION

**Voltage**

**5 V**

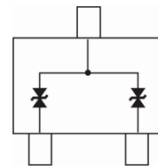
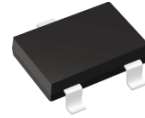
### Features

- 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-323
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0002 ounces, 0.005 grams

SOT-323



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

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air)	$V_{\text{ESD}}$	$\pm 30$	kV
ESD IEC61000-4-2(Contact)		$\pm 30$	
Typical Thermal Resistance	$R_{\theta\text{JA}}^{(1)}$	540	$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	$T_J$	-55~150	$^\circ\text{C}$
Storage Temperature Range	$T_{\text{STG}}$	-55~150	$^\circ\text{C}$



## PEC2605C2C

### 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	$\mu\text{A}$
Clamping Voltage	$V_{CL}$	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$	-	-	9	V
		$I_{PP}=3.5\text{A}, t_p=8/20\mu\text{s}$	-	-	12.5	
Clamping Voltage TLP	$V_{CL}^{(3)}$	$I_{PP}=8\text{A}, t_p=100\text{ns}$	-	8.6	-	V
		$I_{PP}=16\text{A}, t_p=100\text{ns}$	-	9.7	-	
Dynamic Resistance	$R_{DYN}$	$t_p=100\text{ns}$	-	0.27	-	$\Omega$
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

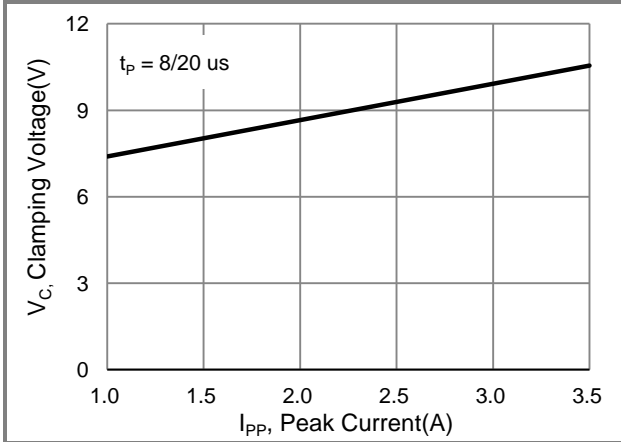


Fig.1 Typical Peak Clamping Voltage

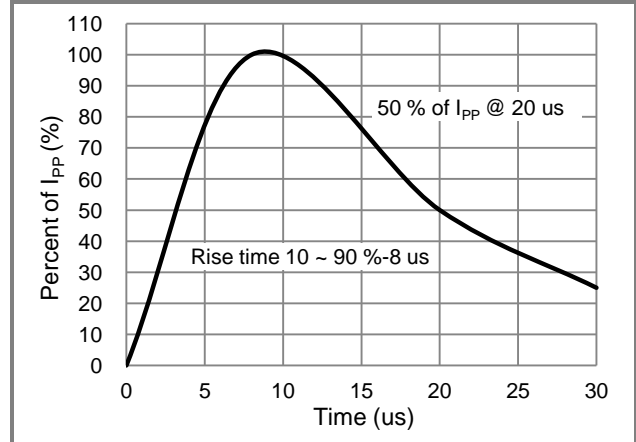


Fig.2 Pulse Waveform

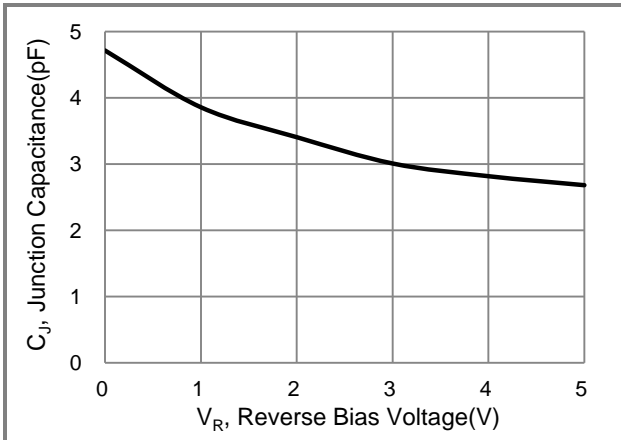


Fig.3 Typical Junction Capacitance

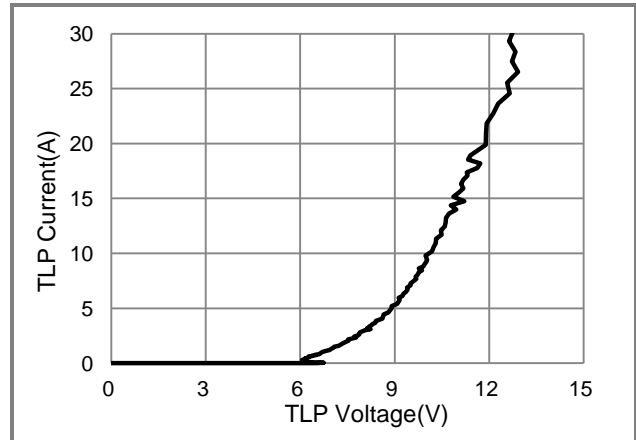


Fig.4 TLP Measurement

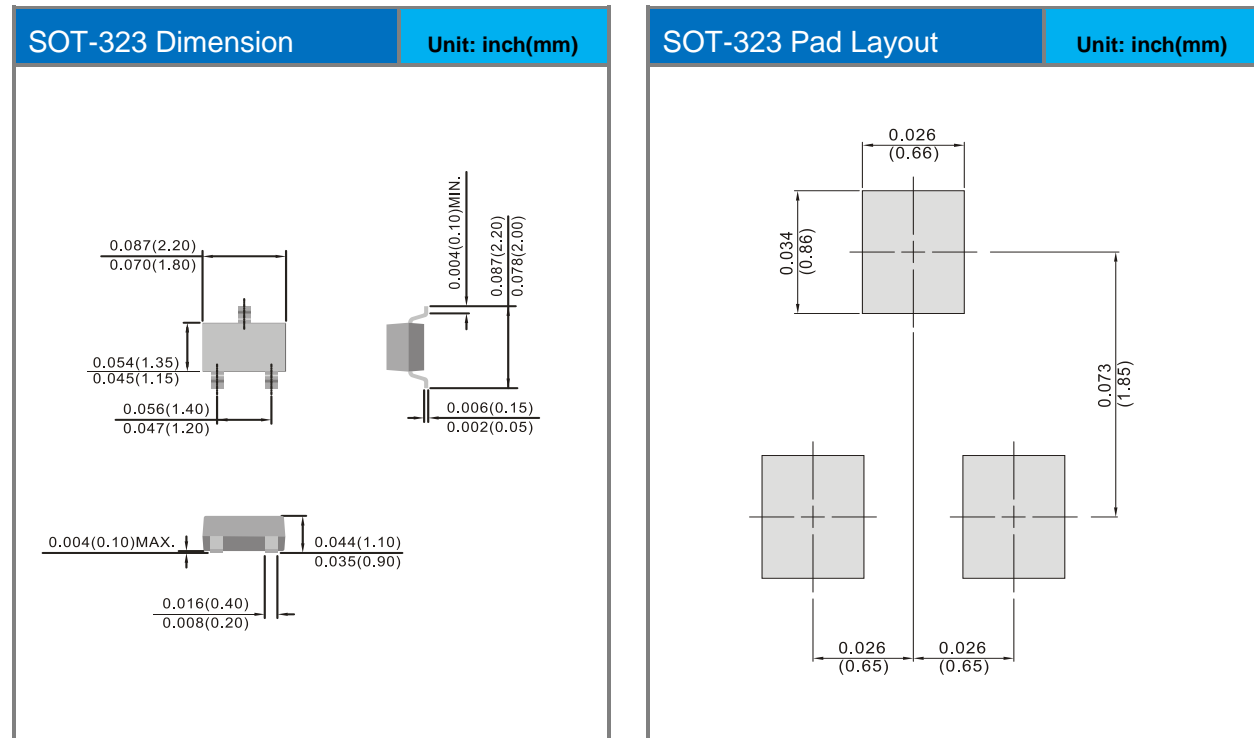


# PEC2605C2C

## Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
PEC2605C2C_R1_00001	SOT-323	3K / 7" Reel	22C	Halogen Free

## Packaging Information & Mounting Pad Layout





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