



# PEC2605C1ES

## VERY LOW CAPACITANCE ESD PROTECTION

**Voltage**

**5 V**

### Features

- IEC61000-4-2(ESD):  $\pm 15$  kV Air,  $\pm 8$  kV Contact  
Compliance with the capability up to  $\pm 30$  kV
- IEC61000-4-4(EFT): 40 A (5/50 ns)
- IEC61000-4-5(Lightning): 3.5 A(8/20  $\mu$ 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, SOD-523
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00005 ounces, 0.0014 grams

SOD-523



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

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air)	$V_{ESD}$	$\pm 30$	kV
ESD IEC61000-4-2(Contact)		$\pm 30$	
Typical Thermal Resistance	$R_{\theta JA}^{(1)}$	710	$^\circ\text{C/W}$
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	$I_R$	$V_R = 5\text{ V}$	-	-	0.1	$\mu\text{A}$
Clamping Voltage	$V_{CL}$	$I_{PP} = 1\text{ A}, t_P = 8/20\mu\text{s}$	-	-	9	V
		$I_{PP} = 3.5\text{ A}, t_P = 8/20\text{ }\mu\text{s}$	-	-	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	-	$\Omega$
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

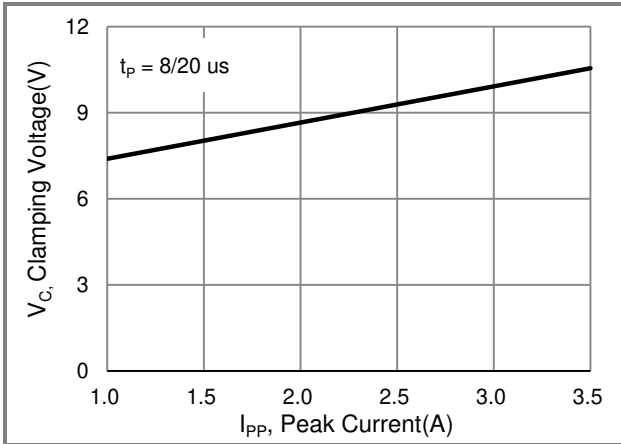


Fig.1 Typical Peak Clamping Voltage

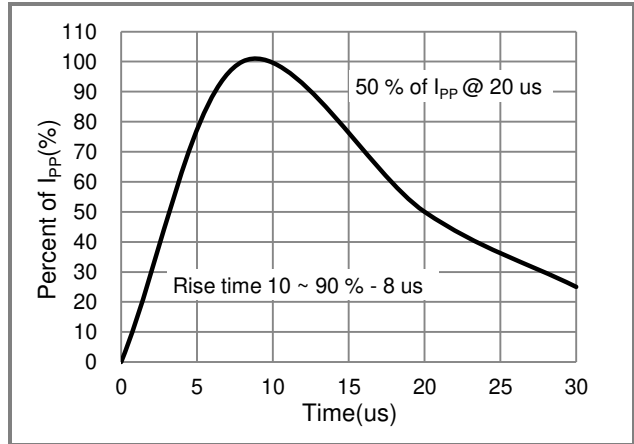


Fig.2 Pulse Waveform

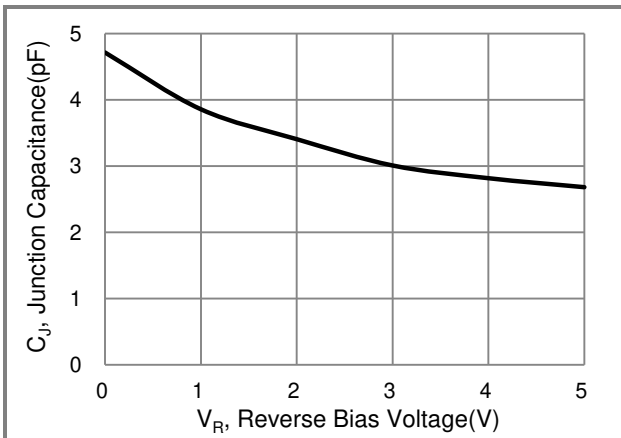


Fig.3 Typical Junction Capacitance

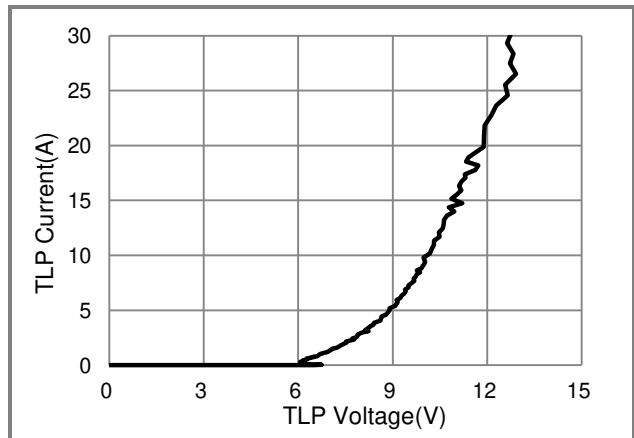


Fig.4 TLP Measurement

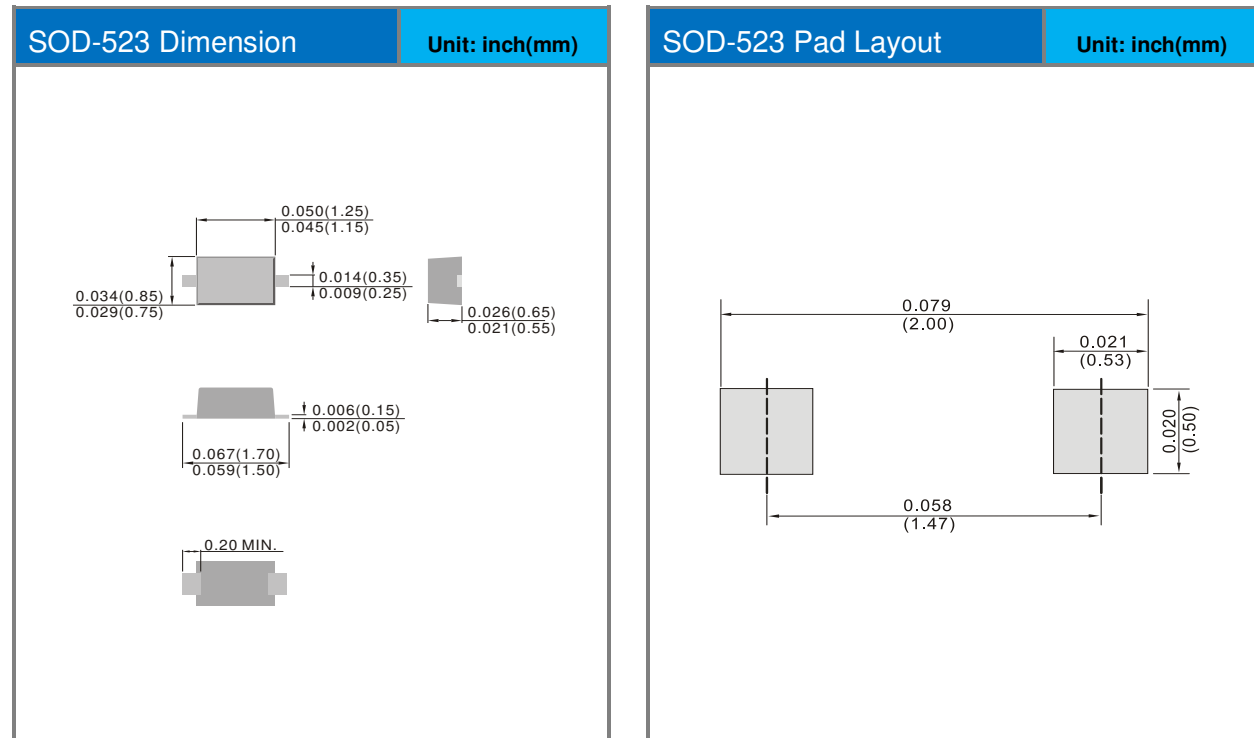


# PEC2605C1ES

## Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
PEC2605C1ES_R1_00001	SOD-523	5K / 7" Reel	2S	Halogen Free

## Packaging Information & Mounting Pad Layout





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