

# PEC3205S1Q

## ESD PROTECTION

Voltage

5 V

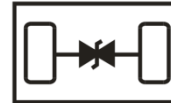
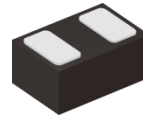
### Features

- IEC61000-4-2(ESD):  $\pm 25$ kV Air,  $\pm 20$ kV Contact
- IEC61000-4-4(EFT): 40A(5/50ns)
- IEC61000-4-5(Lightning): 5A(8/20uS)
- Low leakage current, maximum of  $0.5\mu\text{A}$  at rated voltage
- 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, DFN0603-2L
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00001 ounces, 0.0004 grams

DFN0603-2L



## Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air)	V <sub>ESD</sub>	$\pm 25$	kV
ESD IEC61000-4-2(Contact)		$\pm 20$	
Typical Thermal Resistance	R <sub>θJA</sub> <sup>(1)</sup>	500	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55~150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~150	°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
Reverse Breakdown Voltage	$V_{SB}$	$I_{SB} = 50 \text{ mA}$	5.5	-	8	V
Reverse Leakage Current	$I_R$	$V_R = 5 \text{ V}$	-	-	0.5	$\mu\text{A}$
Clamping Voltage	$V_{CL}$	$I_{PP} = 1 \text{ A}, t_P = 8/20 \text{ }\mu\text{s}$	-	-	10	V
		$I_{PP} = 5 \text{ A}, t_P = 8/20 \text{ }\mu\text{s}$	-	-	13	
Clamping Voltage TLP	$V_{CL}^{(3)}$	$I_{PP} = 8 \text{ A}, t_P = 100 \text{ ns},$	-	11.8	-	V
		$I_{PP} = 16 \text{ A}, t_P = 100 \text{ ns},$	-	15.9	-	
Dynamic Resistance	$R_{DYN}$	$t_P = 100 \text{ ns}$	-	0.51	-	$\Omega$
Off State Junction Capacitance	$C_J$	0Vdc Bias $f = 1 \text{ MHz}$	-	-	20	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:  $Z_0 = 50 \text{ }\Omega$ ,  $t_P = 100 \text{ ns}$ .

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## TYPICAL CHARACTERISTIC CURVES

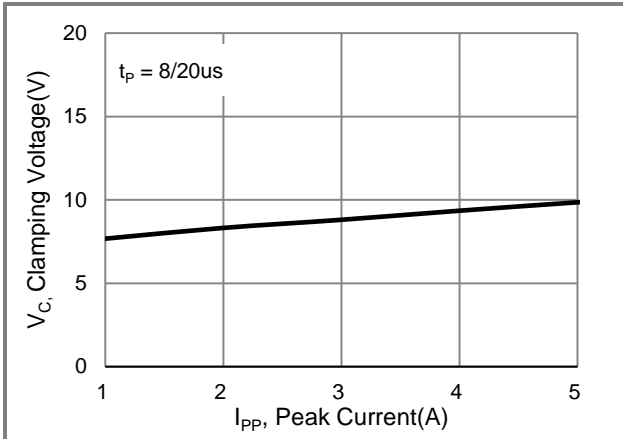


Fig.1 Typical Peak Clamping Voltage

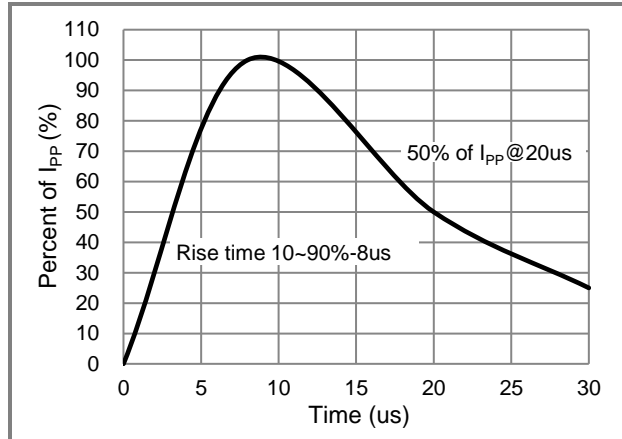


Fig.2 Pulse Waveform

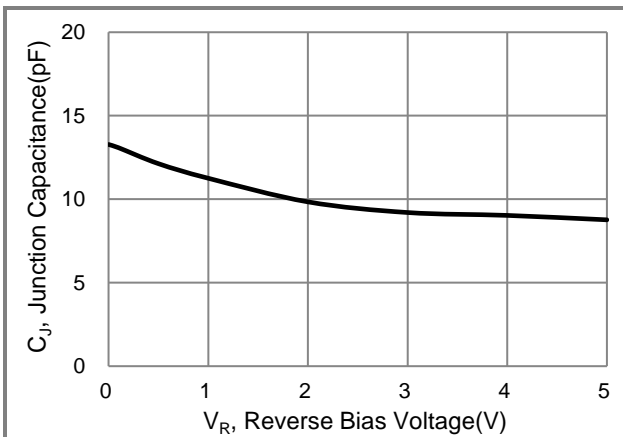


Fig.3 Typical Junction Capacitance

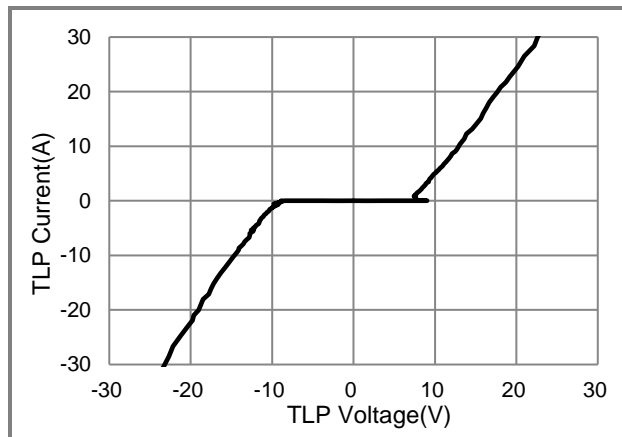


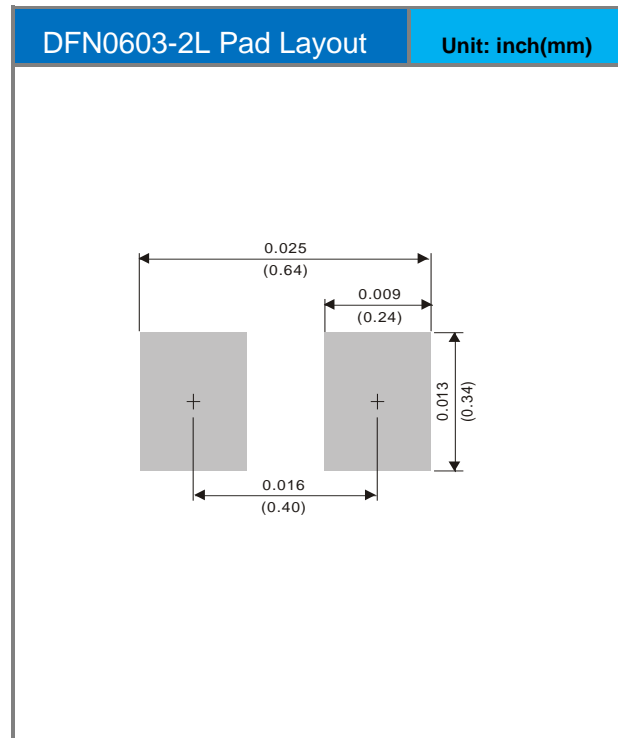
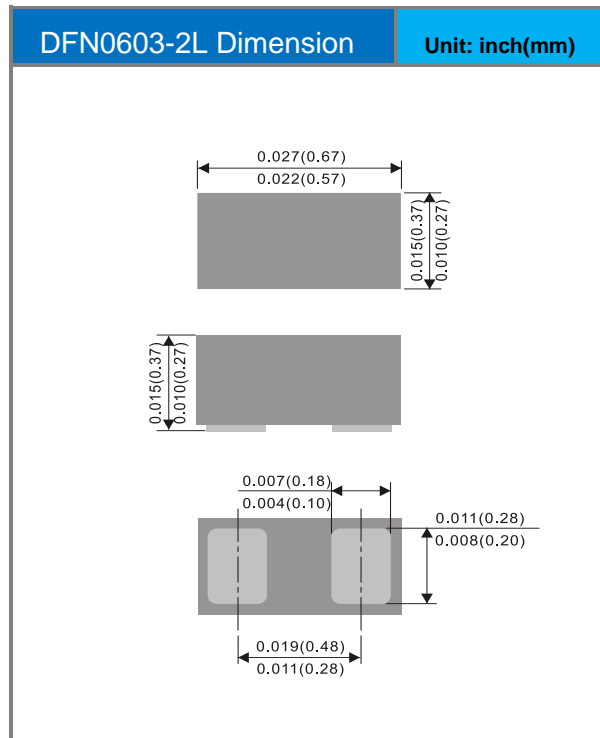
Fig.4 TLP Measurement

# PEC3205S1Q

## Product and Packing Information

Part No.	Package Type	Packing Type	Marking
PEC3205S1Q	DFN0603-2L	10K / 7" Reel	HA

## Packaging Information & Mounting Pad Layout



## PEC3205S1Q

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