

# PEC1205S1Q

## ULTRA LOW CAPACITANCE ESD PROTECTION

**Voltage**

**5 V**

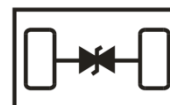
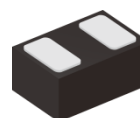
### Features

- IEC61000-4-2(ESD):  $\pm 15\text{kV}$  Air,  $\pm 15\text{kV}$  Contact
- IEC61000-4-4(EFT): 40A(5/50ns)
- IEC61000-4-5(Lightning): 2A(8/20uS)
- 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>	$\pm 15$	kV
ESD IEC61000-4-2(Contact)		$\pm 15$	
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	$V_{RWM}^{(1)}$	-	-	-	5.5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR} = 1 \text{ mA}$	6	-	-	V
Reverse Leakage Current	$I_R$	$V_R = 5 \text{ V}$	-	-	50	nA
Clamping Voltage	$V_{CL}$	$I_{PP} = 1 \text{ A}, t_P = 8/20 \text{ }\mu\text{s}$	-	11	-	V
		$I_{PP} = 2 \text{ A}, t_P = 8/20 \text{ }\mu\text{s}$	-	14	-	
Clamping Voltage TLP	$V_{CL}^{(2)}$	$I_{PP} = 8 \text{ A}, t_P = 100 \text{ ns},$	-	21	-	V
		$I_{PP} = 16 \text{ A}, t_P = 100 \text{ ns},$	-	30	-	
Dynamic Resistance	$R_{DYN}$	$t_P = 100 \text{ ns}$	-	1.1	-	$\Omega$
Off State Junction Capacitance	$C_J$	0Vdc Bias $f = 1 \text{ MHz}$	-	-	0.2	pF

### NOTES :

1. 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.
2. Testing using Transmission Line Pulse (TLP) conditions:  $Z_0 = 50 \text{ }\Omega$ ,  $t_P = 100 \text{ ns}$ .

## PEC1205S1Q

### TYPICAL CHARACTERISTIC CURVES

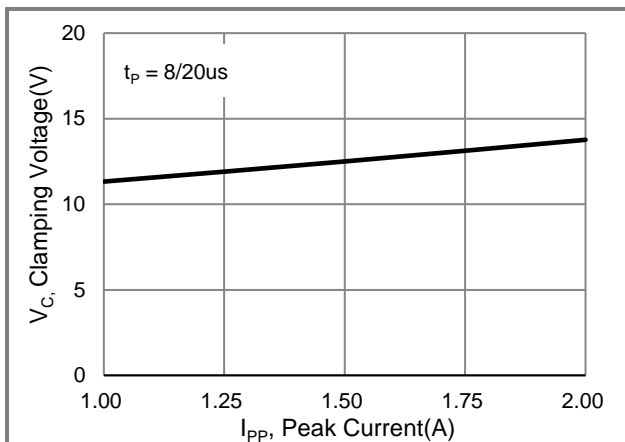


Fig.1 Typical Peak Clamping Voltage

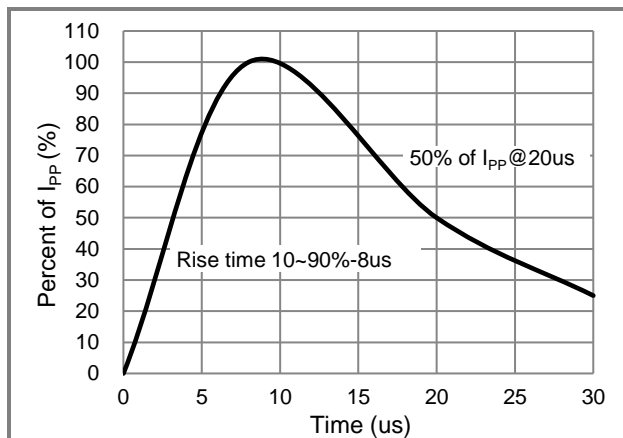


Fig.2 Pulse Waveform

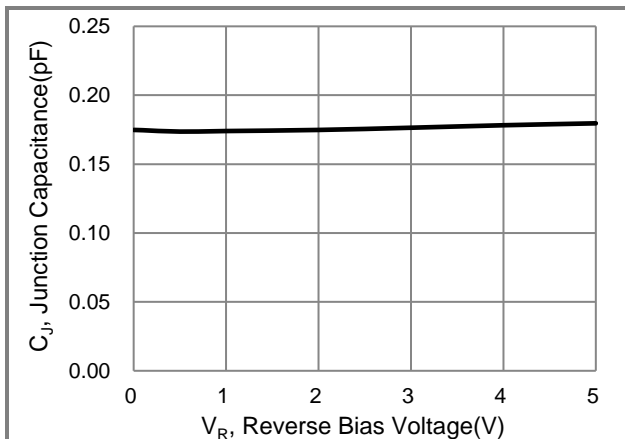


Fig.3 Typical Junction Capacitance

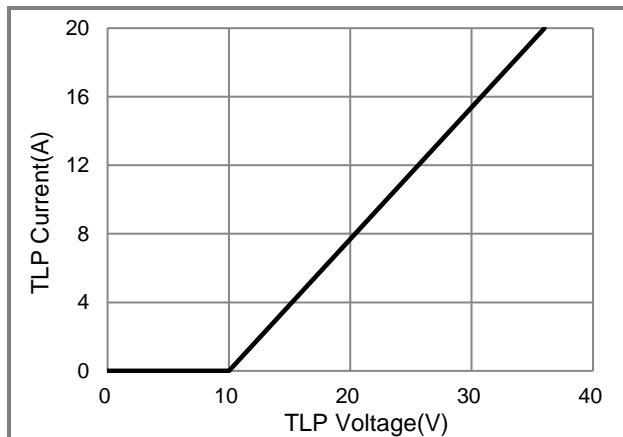


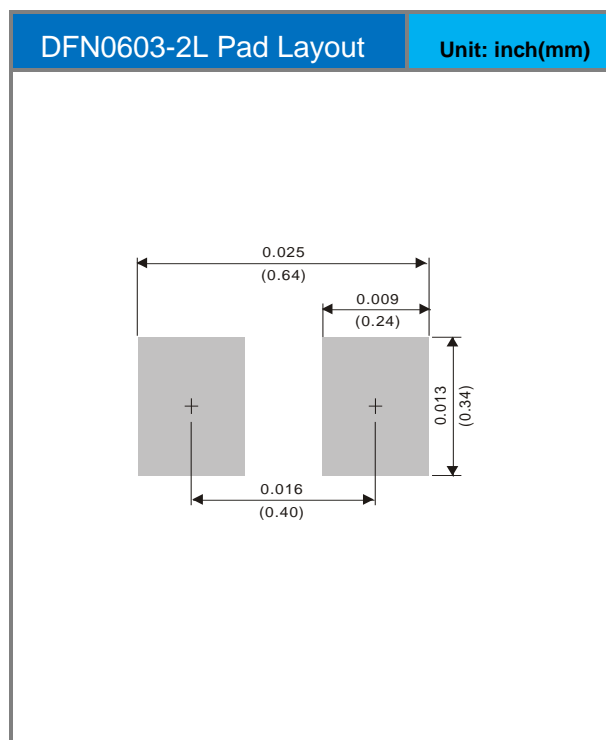
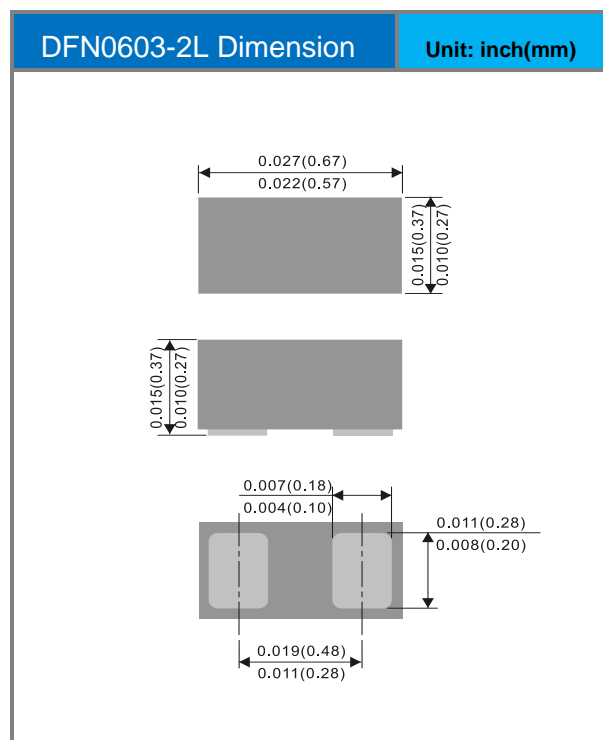
Fig.4 TLP Measurement

# PEC1205S1Q

## Product and Packing Information

Part No.	Package Type	Packing Type	Marking
PEC1205S1Q	DFN0603-2L	10K / 7" Reel	5SP

## Packaging Information & Mounting Pad Layout



## PEC1205S1Q

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