

PEC3205S1Q

ESD PROTECTION

Voltage

5 V

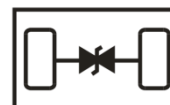
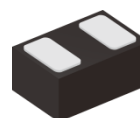
Features

- IEC61000-4-2(ESD): $\pm 25\text{kV}$ Air, $\pm 20\text{kV}$ Contact
- IEC61000-4-4(EFT): 40A(5/50ns)
- IEC61000-4-5(Lightning): 5A(8/20 μs)
- Low leakage current, maximum of 0.5 μA 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 ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air)	V_{ESD}	± 25	kV
ESD IEC61000-4-2(Contact)		± 20	
Typical Thermal Resistance	$R_{\theta\text{JA}}^{(1)}$	500	$^\circ\text{C/W}$
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
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	μA
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	-	Ω
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

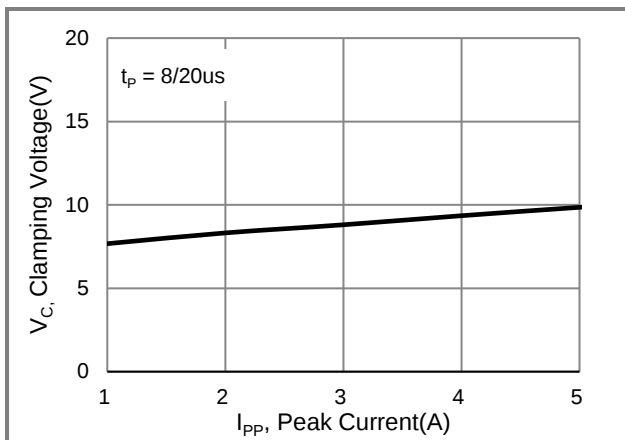


Fig.1 Typical Peak Clamping Voltage

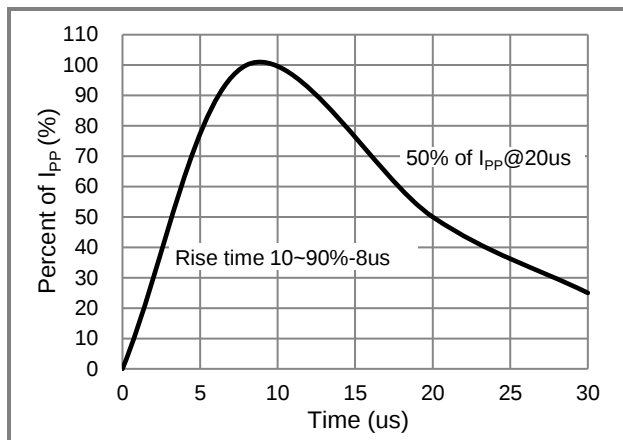


Fig.2 Pulse Waveform

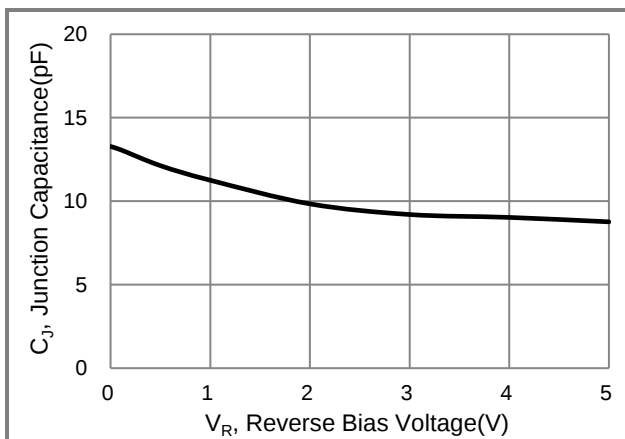


Fig.3 Typical Junction Capacitance

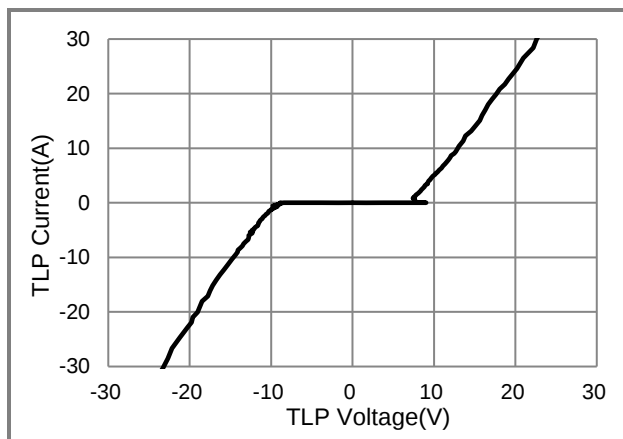


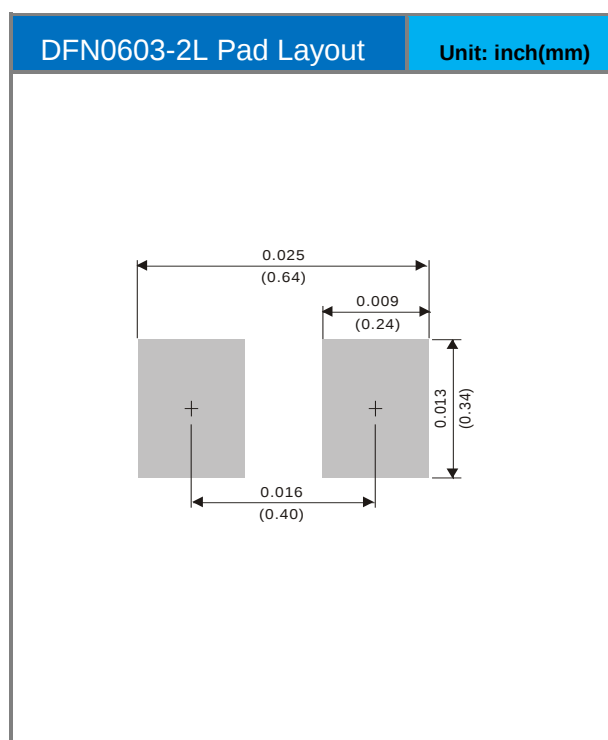
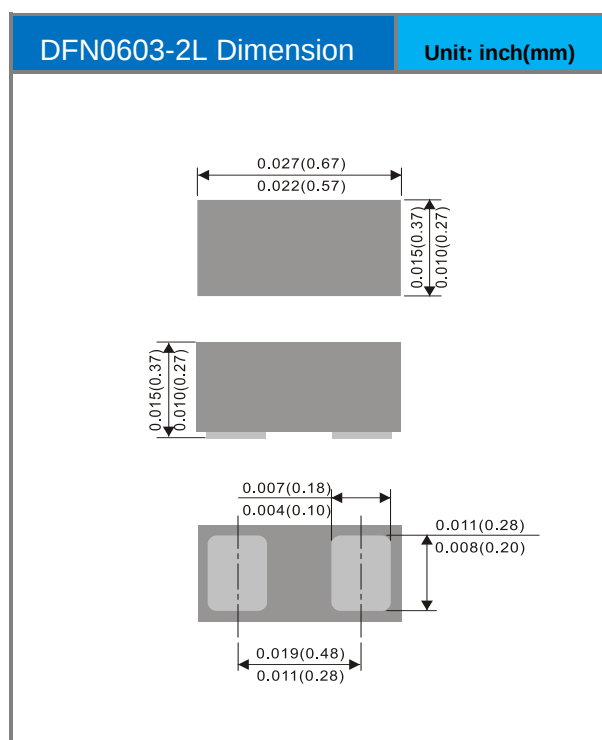
Fig.4 TLP Measurement

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Product and Packing Information

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

Packaging Information & Mounting Pad Layout



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