



PE1605S1Q

ULTRA LOW CAPACITANCE ESD PROTECTION

Voltage

5 V

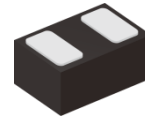
Features

- IEC61000-4-2(ESD): ±20kV Air, ±15kV Contact
- IEC61000-4-4(EFT): 40A(5/50ns)
- IEC61000-4-5(Lightning): 3A(8/20uS)
- Low leakage current, maximum of 50nA at rated voltage
- Low clamping voltage
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

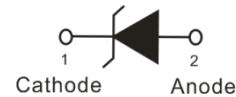
Mechanical Data

- 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



LAX



Maximum Ratings and Thermal Characteristics (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air)	V _{ESD}	±20	kV
ESD IEC61000-4-2(Contact)		±15	
Typical Thermal Resistance	R _{θJA} ⁽¹⁾	500	°C/W
Operating Junction Temperature Range	T _J	-55~150	°C
Storage Temperature Range	T _{STG}	-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_{BR}	$I_{BR} = 1\text{ mA}$	5.5	-	-	V
Reverse Leakage Current	I_R	$V_R = 5\text{ V}$	-	-	50	nA
Clamping Voltage	V_{CL}	$I_{PP} = 1\text{ A}, t_p = 8/20\text{ us}$	-	-	10	V
		$I_{PP} = 3\text{ A}, t_p = 8/20\text{ us}$	-	-	15	
Clamping Voltage TLP	$V_{CL}^{(3)}$	$I_{PP} = 8\text{ A}, t_p = 100\text{ ns},$	-	16	-	V
		$I_{PP} = 16\text{ A}, t_p = 100\text{ ns},$	-	23.5	-	
Dynamic Resistance	R_{DYN}	$t_p = 100\text{ ns}$	-	0.94	-	Ω
Off State Junction Capacitance	C_J	2.5Vdc Bias $f = 1\text{ MHz}$	-	0.3	-	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

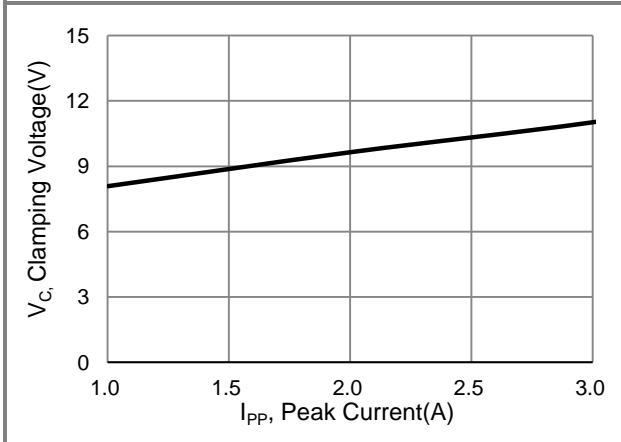


Fig.1 Typical Peak Clamping Voltage

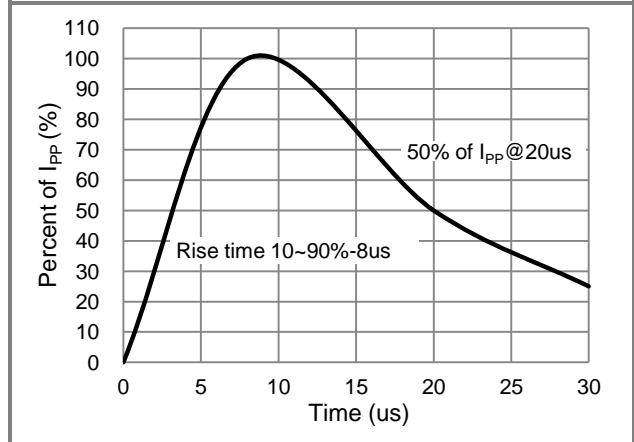


Fig.2 Pulse Waveform

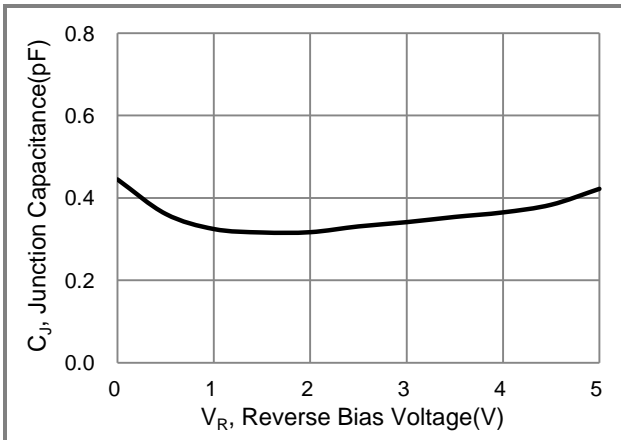


Fig.3 Typical Junction Capacitance

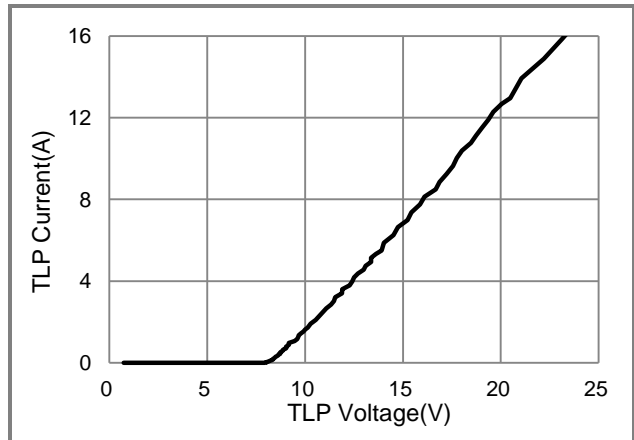


Fig.4 TLP Measurement

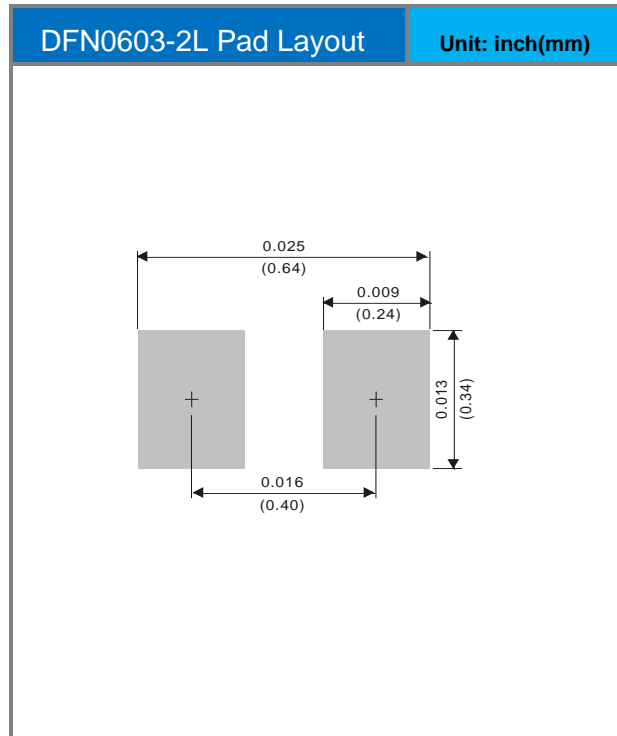
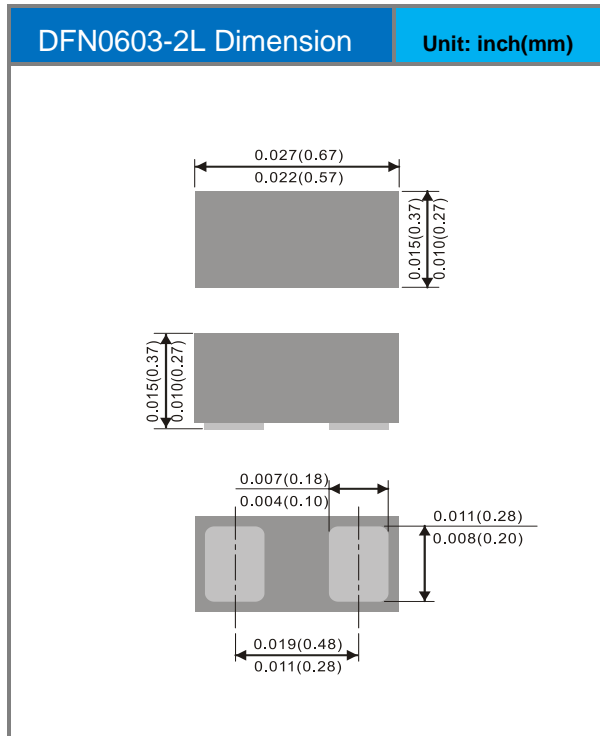


PE1605S1Q

Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
PE1605S1Q_R1_00001	DFN0603-2L	10K / 7" Reel	LA	Halogen Free

Packaging Information & Mounting Pad Layout





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