



PE1805M4Q

ULTRA LOW CAPACITANCE ESD PROTECTION

Voltage

5 V

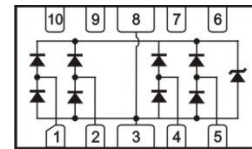
Features

- IEC61000-4-2(ESD): ± 20 kV Air, ± 15 kV Contact
- IEC61000-4-4(EFT): 40 A(5/50 ns)
- IEC61000-4-5(Lightning): 5 A(8/20 μ S)
- Low leakage current, maximum 1 μ A at rated voltage
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case: Molded plastic, DFN2510-10L
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0002 ounces, 0.005 grams

DFN2510-10L



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}	± 20	kV
ESD IEC61000-4-2(Contact)		± 15	
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	$V_{RWM}^{(1)}$	-	-	-	5.5	V
Reverse Breakdown Voltage	V_{BR}	$I_{BR} = 1\text{ mA}$, any I/O to GND	6.5	-	11	V
Reverse Leakage Current	I_R	$V_R = 5.0\text{ V}$	-	-	0.1	μA
Clamping Voltage	V_{CL}	$I_{PP} = 1\text{ A}$, $t_P = 8/20\text{ us}$, any I/O to GND	-	-	12	V
		$I_{PP} = 5\text{ A}$, $t_P = 8/20\text{ us}$, any I/O to GND	-	-	20	
Clamping Voltage TLP	$V_{CL}^{(2)}$	$I_{PP} = 8\text{ A}$, $t_P = 100\text{ ns}$	-	17.1	-	V
		$I_{PP} = 16\text{ A}$, $t_P = 100\text{ ns}$	-	21.4	-	
Dynamic Resistance	R_{DYN}	$t_P = 100\text{ ns}$	-	0.53	-	Ω
Off State Junction Capacitance	C_J	0Vdc Bias $f = 1\text{ MHz}$, Between any I/O to GND	-	-	0.8	pF
		0Vdc Bias $f = 1\text{ MHz}$, Between any I/O pins	-	-	0.4	

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: $Z_0 = 50\Omega$, $t_P = 100\text{ ns}$.



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TYPICAL CHARACTERISTIC CURVES

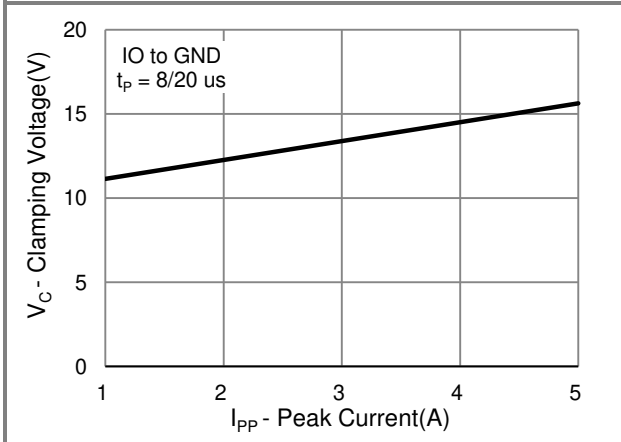


Fig.1 Typical Peak Clamping Voltage

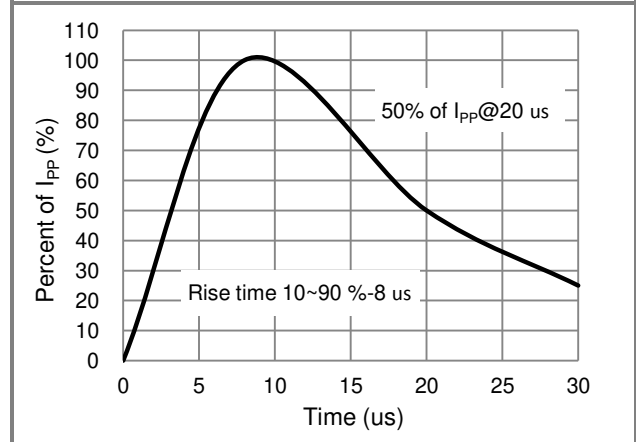


Fig.2 Pulse Waveform

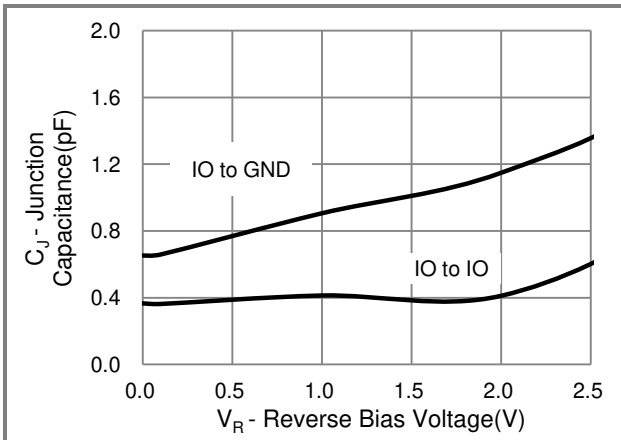


Fig.3 Typical Junction Capacitance

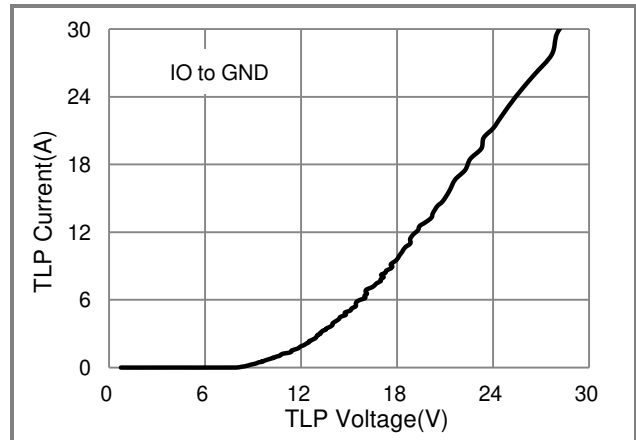


Fig.4 TLP Measurement

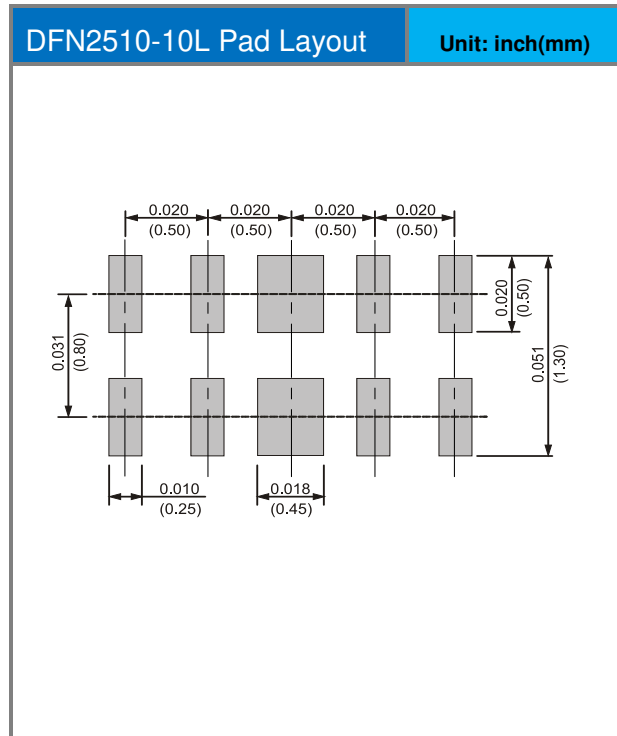
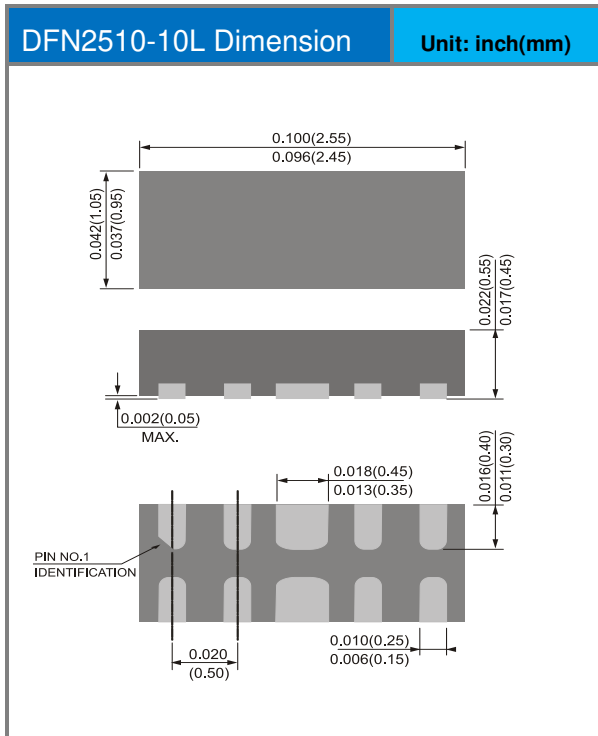


PE1805M4Q

Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
PE1805M4Q_R1_00001	DFN2510-10L	5K / 7" Reel	5M4Q	Halogen Free

Packaging Information & Mounting Pad Layout





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