

PE4205M1Q

Hi-Surge ESD Protection

Voltage

5 V

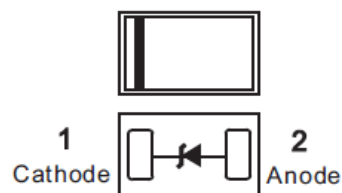
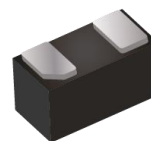
Features

- IEC61000-4-2(ESD) : ± 30 kV Air, ± 30 kV Contact
- IEC61000-4-4(EFT) : 40 A(5/50 ns)
- IEC61000-4-5(Lightning) : 25 A(8/20 μ S)
- Low leakage current, maximum of 1 μ 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 : DFN1006-2L Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0006 grams

DFN1006-2L



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}	± 30	kV
ESD IEC61000-4-2(Contact)		± 30	
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 ^(Note 1)	V_{RWM}	-	-	-	5	V
Reverse Breakdown Voltage	V_{BR}	$I_{BR} = 1\text{ mA}$	6	-	7.5	V
Reverse Leakage Current	I_R	$V_R = 5\text{ V}$	-	-	1	μA
Clamping Voltage	V_{CL}	$I_{PP} = 1\text{ A}$, $t_P = 8/20\text{ }\mu\text{s}$	-	-	8	V
		$I_{PP} = 25\text{ A}$, $t_P = 8/20\text{ }\mu\text{s}$	-	-	13.5	
Clamping Voltage TLP ^(Note 2)	V_{CL}	$I_{PP} = 8\text{ A}$, $t_P = 100\text{ ns}$	-	9.6	-	V
		$I_{PP} = 16\text{ A}$, $t_P = 100\text{ ns}$	-	12.2	-	
Dynamic Resistance	R_{DYN}	$t_P = 100\text{ ns}$	-	0.33	-	Ω
Off State Junction Capacitance	C_J	0 Vdc Bias $f = 1\text{ MHz}$	-	-	250	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: $Z_0 = 50\text{ }\Omega$, $t_P = 100\text{ ns}$.



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TYPICAL CHARACTERISTIC CURVES

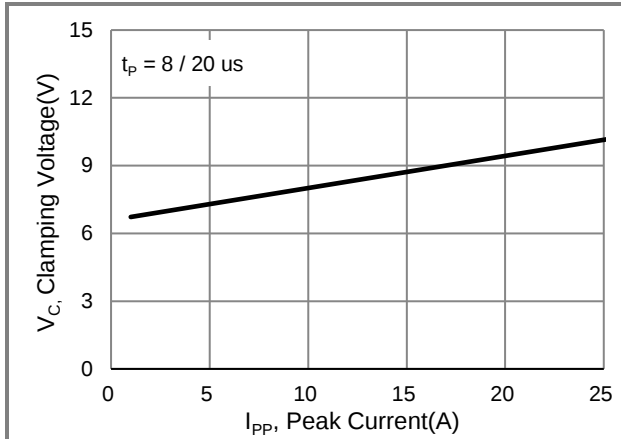


Fig.1 Typical Peak Clamping Voltage

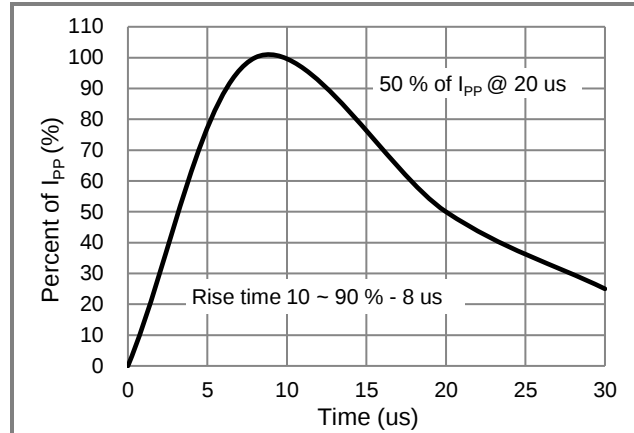


Fig.2 Pulse Waveform

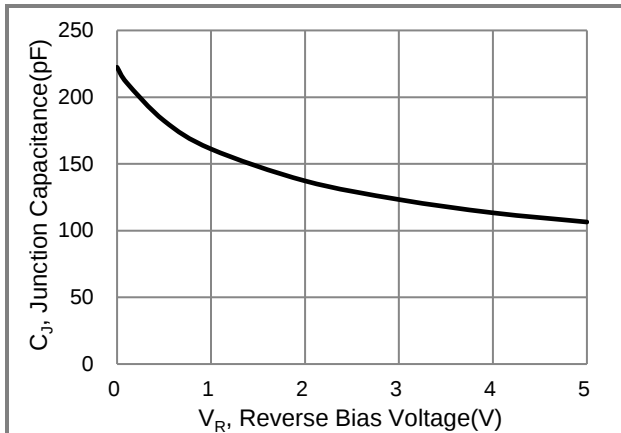


Fig.3 Typical Junction Capacitance

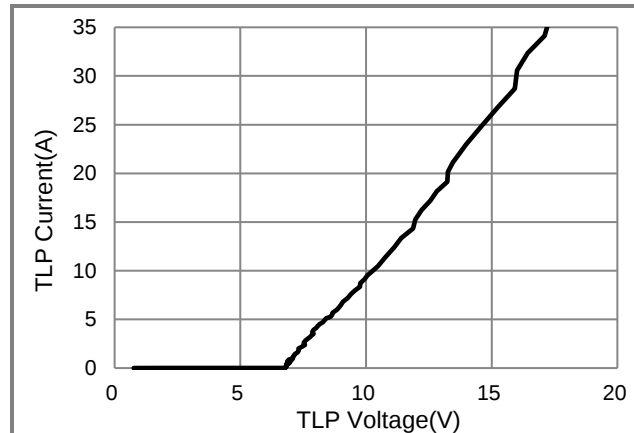


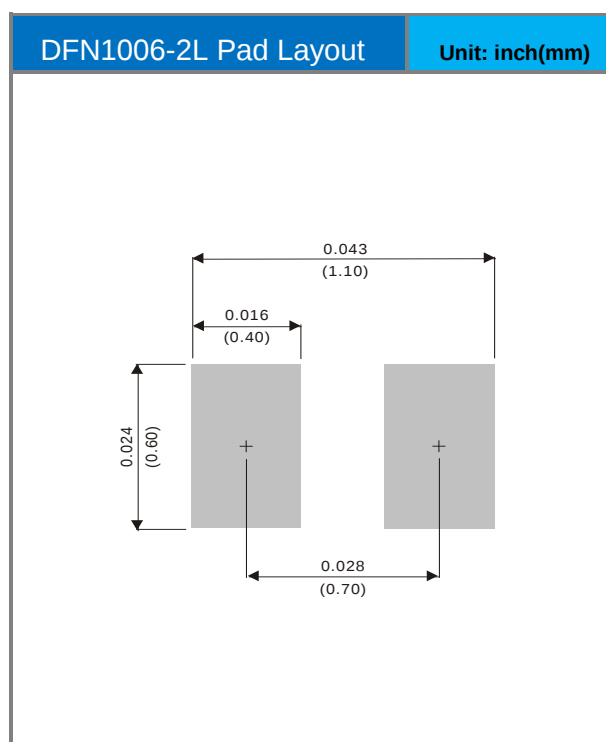
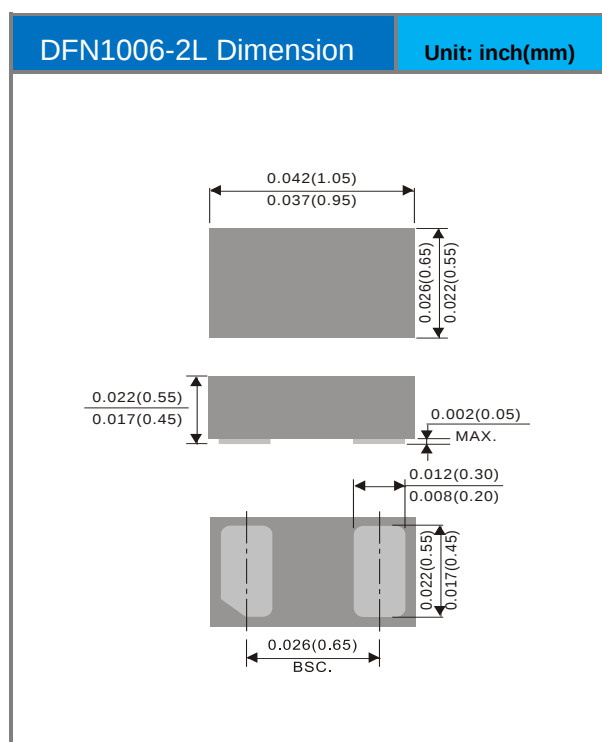
Fig.4 TLP Measurement

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking	Version
PE4205M1Q	DFN1006-2L	10K pcs / 7" Reel	HA	Halogen free RoHS compliant

Packaging Information & Mounting Pad Layout





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