PEC3112M1Q

ESD Protection

Voltage **12 V**

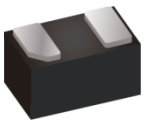
Features

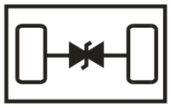
- IEC61000-4-2(ESD)：±30kV Air, ±25kV Contact
- IEC61000-4-4(EFT)：40A(5/50ns)
- IEC61000-4-5(Lightning)：2.5A(8/20uS)
- Low leakage current, maximum of 1uA at rated voltage
- Low clamping voltage
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case: Molded plastic, DFN1006-2L
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00002 ounces, 0.0006 grams

DFN1006-2L





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

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air) ESD IEC61000-4-2(Contact)	V_{ESD}	±30 ±25	kV
Typical Thermal Resistance	$R_{\theta JA}$ (1)	430	°C/W
Operating Junction Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

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Electrical Characteristics (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage	V_{RWM} (2)	-	-	-	12	V
Reverse Breakdown Voltage	V_{BR}	I_{BR} = 1 mA	13	-	16	V
Reverse Leakage Current	I_R	V_R = 12 V	-	-	1	uA
Clamping Voltage	V_{CL}	I_{PP} = 1 A, t_P = 8/20 us	-	-	20	V
		I_{PP} = 2.5 A, t_P = 8/20 us	-	-	25	V
Clamping Voltage TLP	V_{CL} (3)	I_{PP} = 8 A, t_P = 100 ns	-	20.3	-	V
		I_{PP} = 16 A, t_P = 100 ns	-	24.6	-	
Dynamic Resistance	R_{DYN}	t_P = 100 ns	-	0.54	-	Ω
Off State Junction Capacitance	C_J	0 Vdc Bias f = 1 MHz	-	-	10	pF

Note：

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: Z0 = 50Ω, tP = 100 ns.

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TYPICAL CHARACTERISTIC CURVES

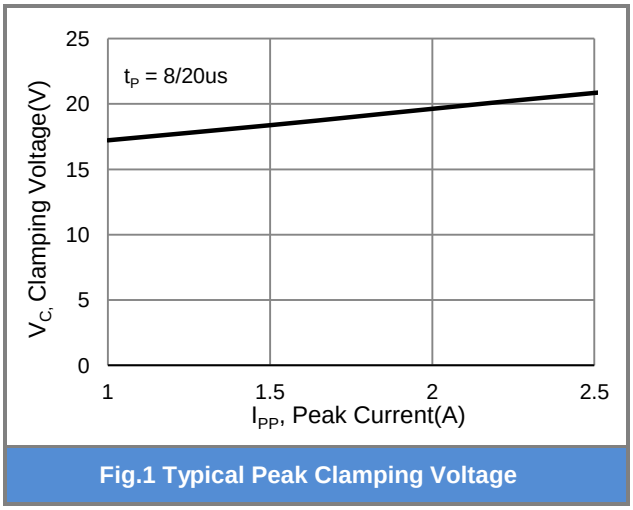

Fig.1 Typical Peak Clamping Voltage

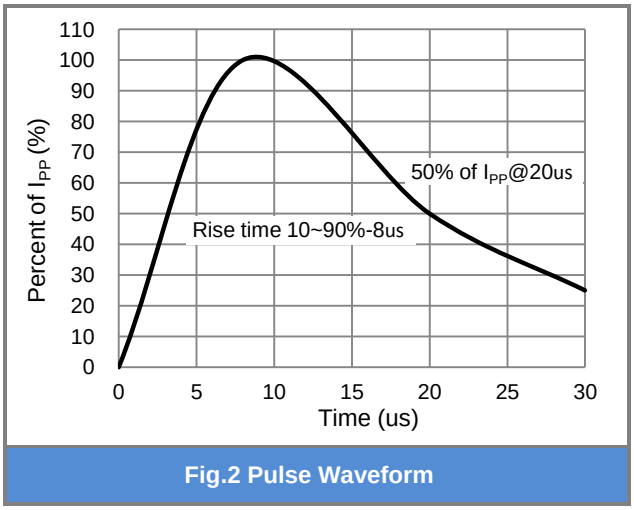

Fig.2 Pulse Waveform

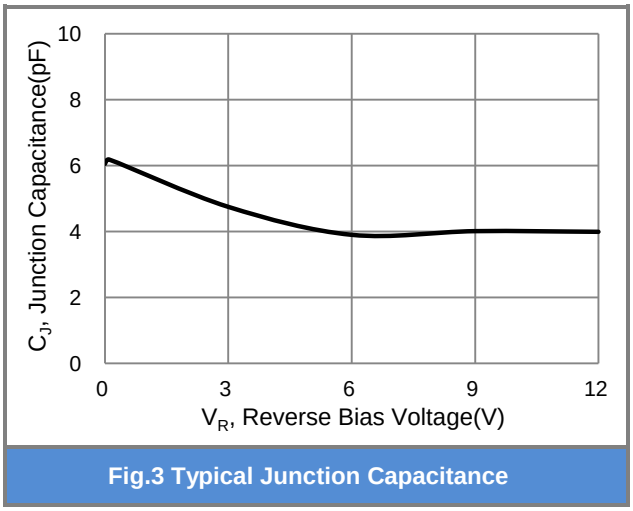

Fig.3 Typical Junction Capacitance

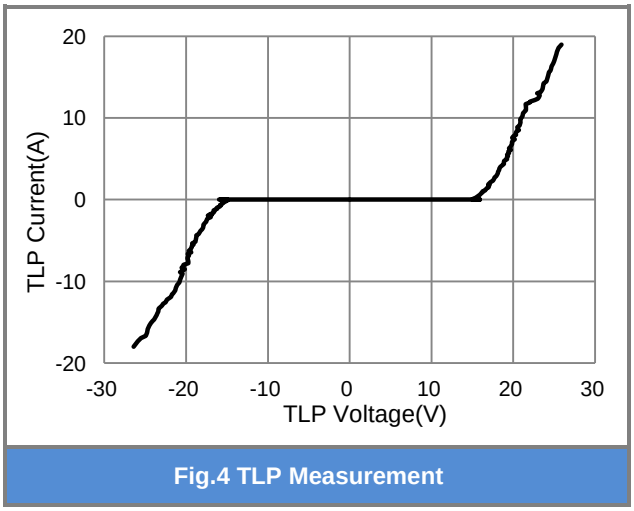

Fig.4 TLP Measurement

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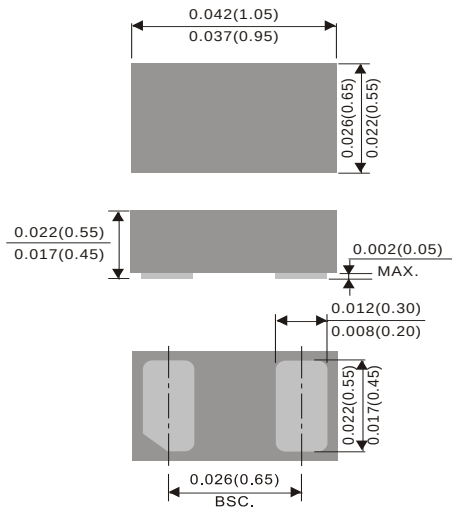
Part No Packing Code Version

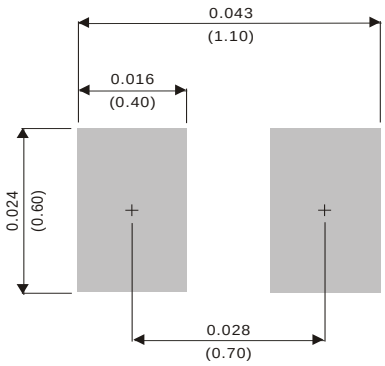
Part No Packing Code	Package Type	Packing Type	Marking	Version
PEC3112M1Q _R1_00001	DFN1006-2L	10K pcs / 7” reel	HF	Halogen free

Packaging Information & Mounting Pad Layout

DFN1006-2L Dimension — Unit: inch(mm)



DFN1006-2L Pad Layout — Unit: inch(mm)



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