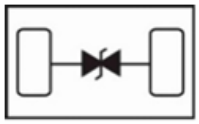
PEC22SD48M1Q-AU

ESD Protection

Voltage **48 V**

DFN1006-2L



Features

- ISO10605(C=330pF, R=330Ω) : ±30kV Air, ±30kV Contact
- HBM ≧ ±8KV & CDM ≧ ±2KV
- 1000 contact discharges (OPEN Alliance specification) with 15 kV (ISO10605 C=150pF, R=330Ω)
- OPEN Alliance 100BASE-T1 and 1000BASE-T1 qualified
- IEC61000-4-5(Lightning) : 2.5A(8/20uS)
- AEC-Q101 qualified
- 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

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

PARAMETER	SYMBOL	LIMIT	UNIT
ESD IEC61000-4-2(Contact)(Note 2)	V_{ESD}	±30	kV
ESD ISO10605 C=150pF, R=2kΩ(Contact)(Note 1)	V_{ESD}	±30	kV
ESD ISO10605 C=330pF, R=330Ω(Contact)(Note 1)	V_{ESD}	±30	kV
ESD ISO10605 C=330pF, R=2kΩ(Contact)(Note 1)	V_{ESD}	±30	kV
ESD ISO10605 C=150pF, R=330Ω(1000 contact discharges) , OPEN Alliance specification(Note 1)	V_{ESD}	±15	kV
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 °C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	48	V
Reverse Leakage Current	I_R	V_R = 48 V	-	-	100	nA
Clamping Voltage	V_{CL}	I_{PP} = 2.3 A, t_P = 8/20 us	-	64	-	V
Clamping Voltage TLP(Note 3)	V_{CL}	I_{PP} = 8 A, t_P = 100 ns	-	59	-	V
		I_{PP} = 16 A, t_P = 100 ns	-	62	-	V
Peak Pulse Current(Note 2)	I_{PP}	t_p = 8/20us	-	2.3	2.5	A
Holding Voltage(Note 3)	V_h	t_p = 100ns	48	-	-	V
Trigger Voltage(Note 3)	V_t	t_p = 100ns	100	-	-	V
Dynamic Resistance(Note 3)	R_{DYM}	t_p = 100ns	-	0.38	-	Ω
Off State Junction Capacitance	C_J	0Vdc Bias f = 1 MHz	-	-	2.3	pF

NOTES :

1. Device stressed with ten non-repetitive ESD pulses.
2. Device stressed with non-repetitive 8/20 us exponential decay waveform.
3. Testing using Transmission Line Pulse (TLP) conditions: Z0 = 50 Ω, tP = 100 ns.

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TYPICAL CHARACTERISTIC CURVES

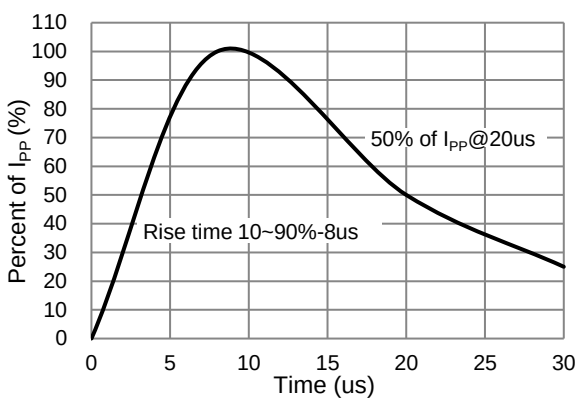

Fig.1 Pulse Waveform

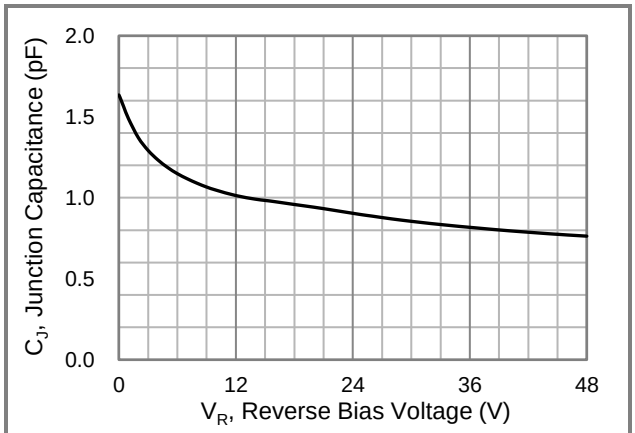

Fig.2 Typical Peak Clamping Voltage

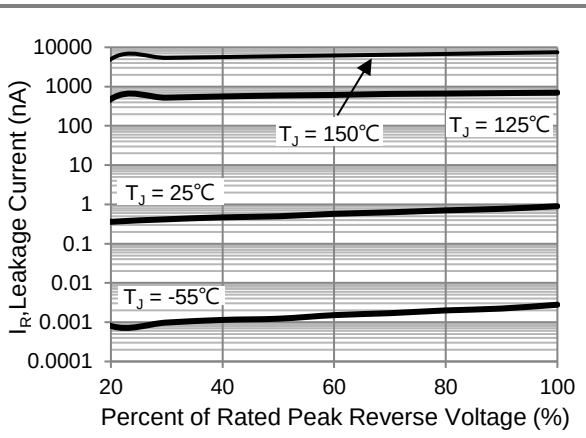

Fig.3 Typical Reverse Characteristics

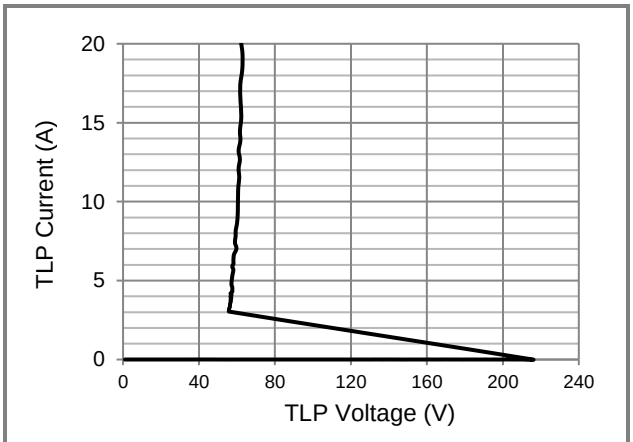

Fig.4 TLP Measurement

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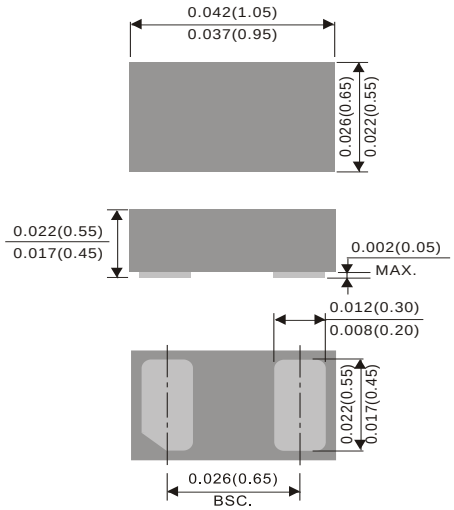
Product and Packing Information

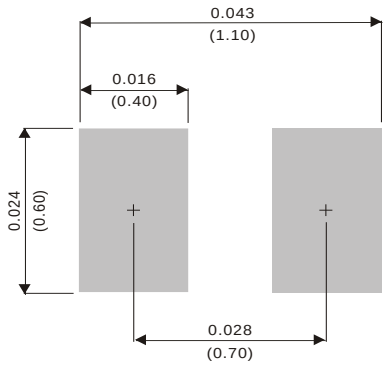
Part No.	Package Type	Packing Type	Marking
PEC22SD48M1Q-AU	DFN1006-2L	10K pcs / 7” reel	YK

Packaging Information & Mounting Pad Layout

DFN1006-2L Dimension — Unit: inch(mm)



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



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