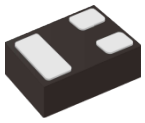
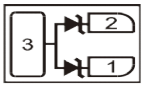
PE1605M2AQ

Very Low Capacitance Esd Protection

Voltage **5 V**

DFN1006-3L





Features

- IEC61000-4-2(ESD) : ±20kV Air, ±15kV Contact
- IEC61000-4-4(EFT) : 40A(5/50ns)
- IEC61000-4-5(Lightning) : 4A(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, DFN1006-3L
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.00002 ounces, 0.0007 grams

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}	±20 ±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.	UNITS
Reverse Stand-Off Voltage	V_{RWM} (1)	-	-	-	5	V
Reverse Breakdown Voltage	V_{BR}	I_{BR} = 1mA	5.5	-	-	V
Reverse Leakage Current	I_R	V_R = 5V	-	-	50	nA
Clamping Voltage	V_{CL}	I_{PP} = 1A, t_P = 8/20us any I/O pins to GND	-	-	10	V
		I_{PP} = 4A, t_P = 8/20us any I/O pins to GND	-	-	15	
Clamping Voltage TLP	V_{CL}(2)	I_{PP} = 8A, t_P = 100ns any I/O pins to GND	-	16	-	V
		I_{PP} = 16A, t_P = 100ns any I/O pins to GND	-	23.5	-	
Dynamic Resistance	R_{DYN}	t_P = 100ns	-	0.94	-	Ω
Off State Junction Capacitance	C_J	2.5Vdc Bias f=1MHz, any I/O pins to GND	-	0.3	0.35	pF
		2.5Vdc Bias f=1MHz, Between any I/O pins	-	0.2	-	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: Z0 = 50Ω, t_P = 100 ns.

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TYPICAL CHARACTERISTIC CURVES

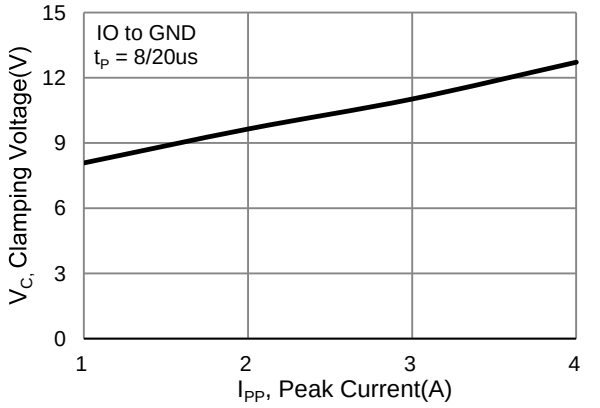

Fig.1 Typical Peak Clamping Voltage

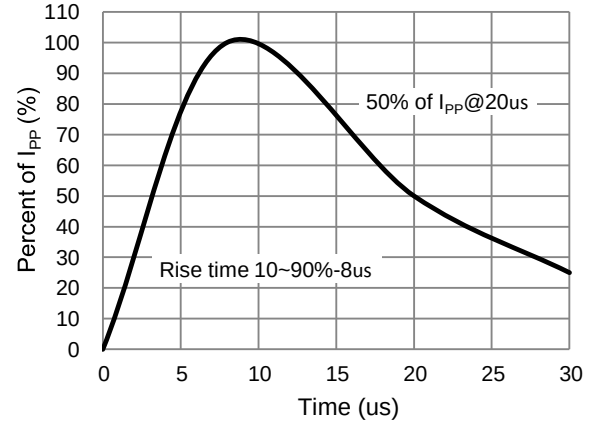

Fig.2 Pulse Waveform

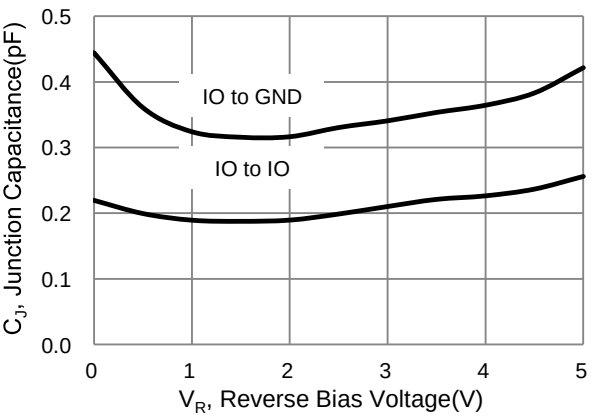

Fig.3 Typical Junction Capacitance

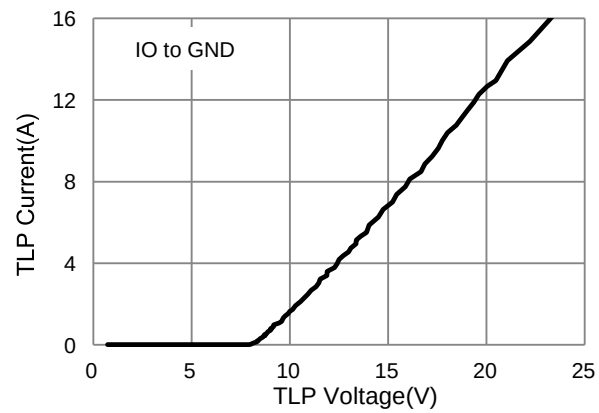

Fig.4 TLP Measurement

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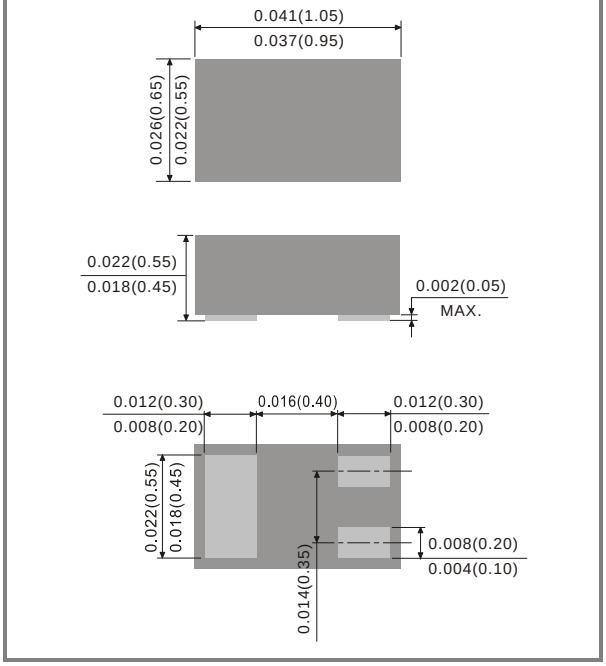
Part No. Packing Code Version

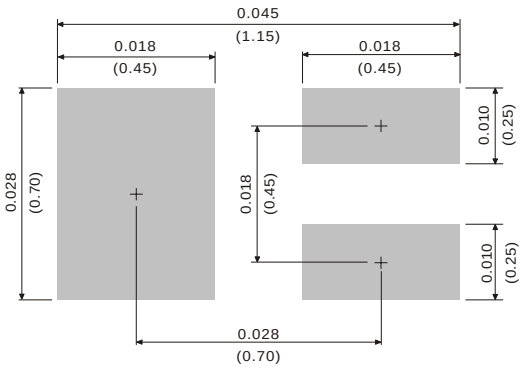
Part No. Packing Code	Package Type	Packing Type	Marking	Version
PE1605M2AQ_R1_00001	DFN1006-3L	10K / 7" Reel	HB	Halogen free RoHS compliant

Packaging Information & Mounting Pad Layout

DFN1006-3L Dimension — Unit: inch(mm)



DFN1006-3L Pad Layout — Unit: inch(mm)



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