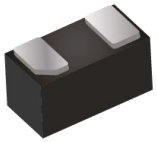
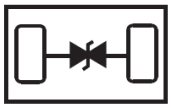
PEC1605M1Q

Ultra Low Capacitance ESD Protection

Voltage 5 V

DFN1006-2L





Features

- IEC61000-4-2(ESD)：±20kV Air, ±15kV Contact
- IEC61000-4-4(EFT)：40A(5/50ns)
- IEC61000-4-5(Lightning)：2A(8/20uS)
- Low leakage current, maximum of 75nA at rated voltage
- Ultra low capacitance
- 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

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

PEC1605M1Q

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage(Note 1)	V_{RWM}	-	-	-	5.5	V
Reverse Breakdown Voltage	V_{BR}	I_{BR} = 1 mA	6.8	7.8	11.2	V
Reverse Leakage Current	I_R	V_R = 5.0 V	-	-	75	nA
Clamping Voltage	V_{CL}	I_{PP} = 1 A, t_P = 8/20us	-	-	12	V
		I_{PP} = 2 A, t_P = 8/20 us	-	11	14	V
Clamping Voltage TLP(Note 2)	V_{CL}	I_{PP} = 8 A, t_P = 100 ns	-	14	-	V
		I_{PP} = 16 A, t_P = 100 ns	-	16	-	V
Dynamic Resistance	R_{DYN}	t_P = 100 ns	-	0.25	-	Ω
Off State Junction Capacitance	C_J	0 Vdc Bias f = 1 MHz	-	-	0.6	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 = 50Ω, t_P = 100 ns.

PEC1605M1Q

TYPICAL CHARACTERISTIC CURVES

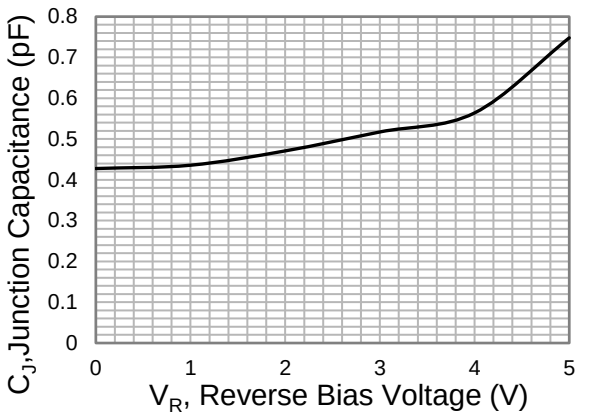


Fig.1 Typical Junction Capacitance

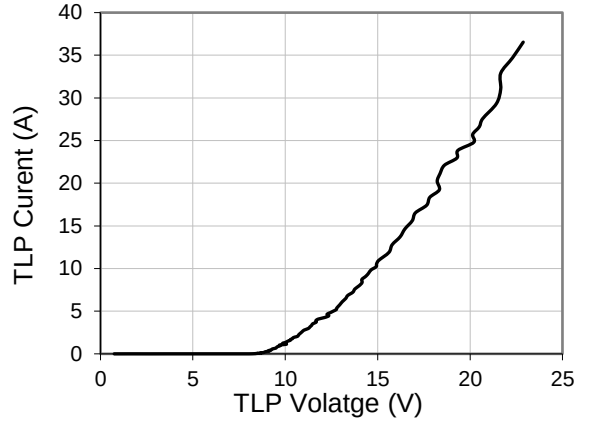


Fig.2 Transmission Line Pulsing (TLP) Measurement

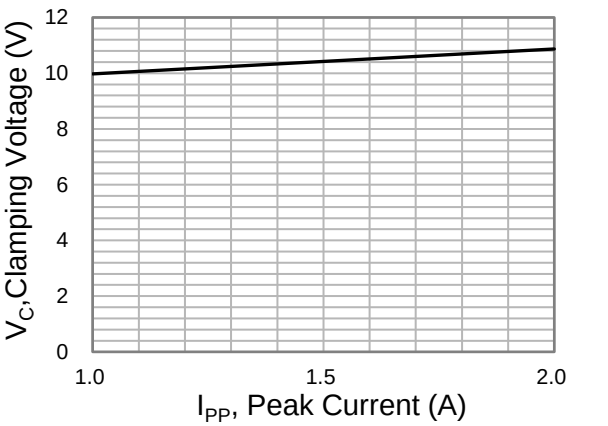


Fig.3 Typical Peak Clamping Voltage(8/20us)

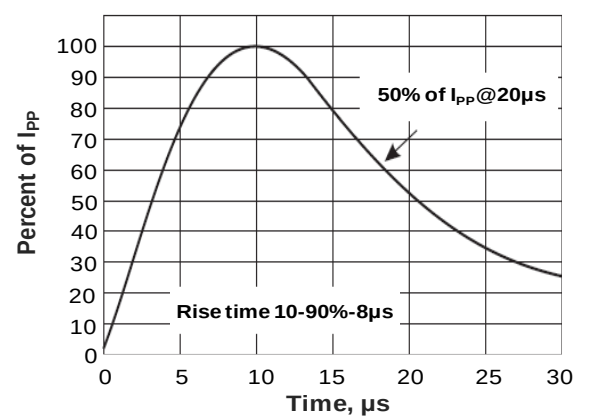


Fig.4 8/20us Pulse Waveform

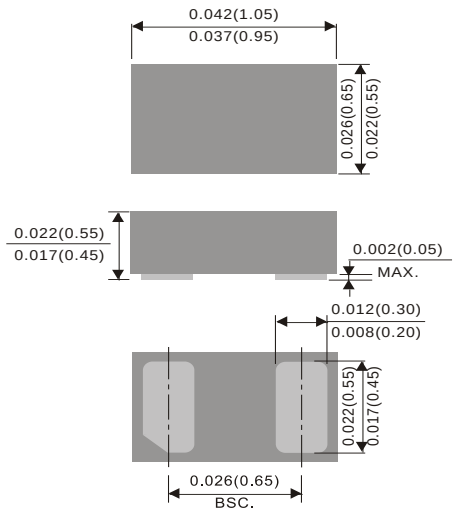
PEC1605M1Q

Product and Packing Information

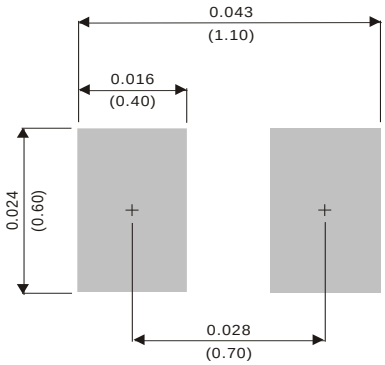
Part No.	Package Type	Packing Type	Marking	Version
PEC1605M1Q	DFN1006-2L	10K pcs / 7" Reel	BF	Halogen free RoHS compliant

Packaging Information & Mounting Pad Layout

DFN1006-2L Dimension — Unit: inch(mm)



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



PEC1605M1Q

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