



# PEC2605M1Q

## ESD Protection

Voltage

5 V

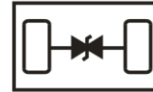
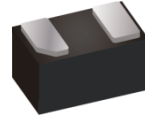
## Features

- IEC61000-4-2(ESD): ± 30 kV Air, ± 30 kV Contact
- IEC61000-4-4(EFT): 40 A(5/50 ns)
- IEC61000-4-5(Lightning): 3.5 A(8/20 uS)
- Low leakage current, maximum of 1uA 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: 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<sub>A</sub> = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air)	V <sub>ESD</sub>	± 30	kV
ESD IEC61000-4-2(Contact)		± 30	
Typical Thermal Resistance	R <sub>θJA</sub> <sup>(1)</sup>	430	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55~150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~150	°C



## PEC2605M1Q

### Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage	$V_{RWM}^{(2)}$	-	-	-	5	V
Snap-Break Voltage	$V_{SB}$	$I_{SB}=50\text{mA}$	5	-	8	V
Reverse leakage current	$I_R$	$V_R=5.0\text{V}$	-	-	0.1	$\mu\text{A}$
Clamping Voltage	$V_{CL}$	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$	-	-	9	V
		$I_{PP}=3.5\text{A}, t_p=8/20\mu\text{s}$	-	-	12.5	V
Clamping Voltage TLP	$V_{CL}^{(3)}$	$I_{PP}=8\text{A}, t_p=100\text{ns}$	-	8.6	-	V
		$I_{PP}=16\text{A}, t_p=100\text{ns}$	-	9.7	-	V
Dynamic Resistance	$R_{DYN}$	$t_p=100\text{ns}$	-	0.27	-	$\Omega$
Off State Junction Capacitance	$C_J$	0Vdc Bias $f=1\text{MHz}$	-	-	6	pF

**NOTES:**

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:  $Z_0 = 50 \Omega$ ,  $t_p = 100 \text{ ns}$ .



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## TYPICAL CHARACTERISTIC CURVES

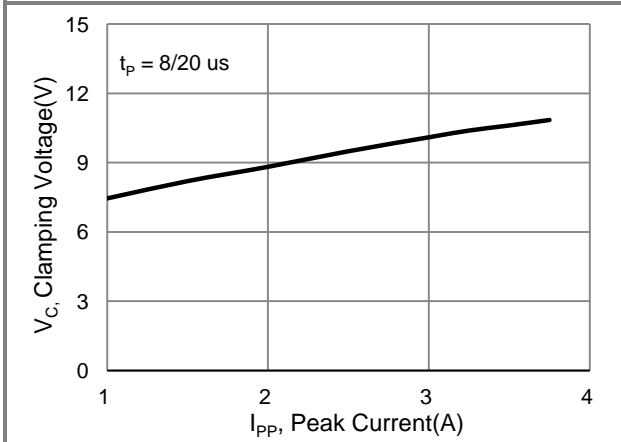


Fig.1 Typical Peak Clamping Voltage

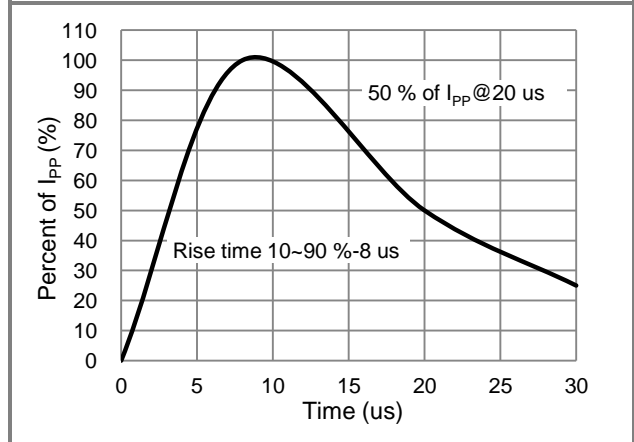


Fig.2 Pulse Waveform

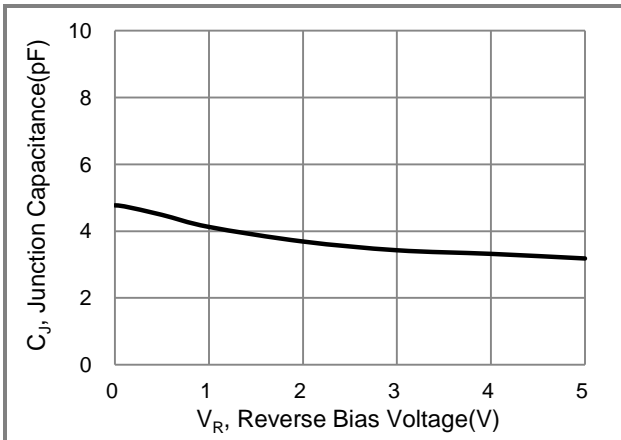


Fig.3 Typical Junction Capacitance

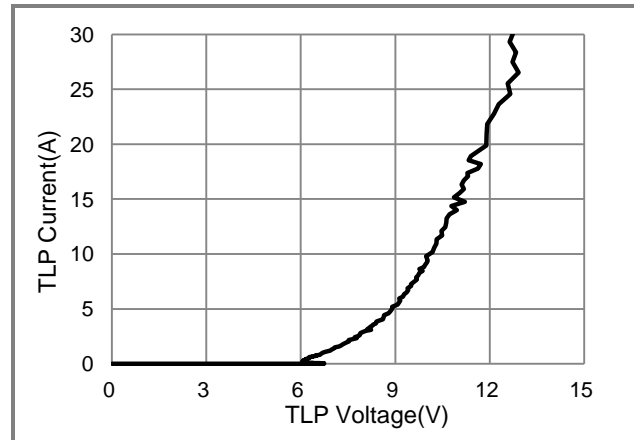


Fig.4 TLP Measurement

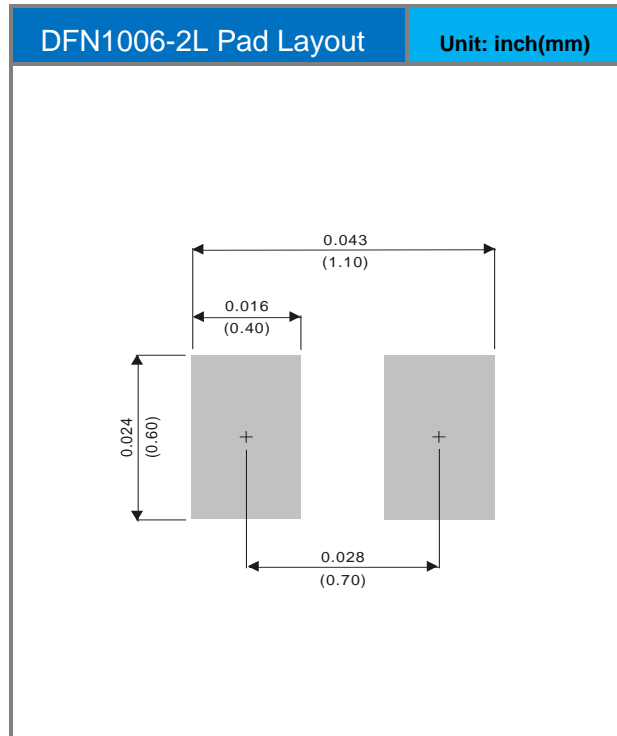
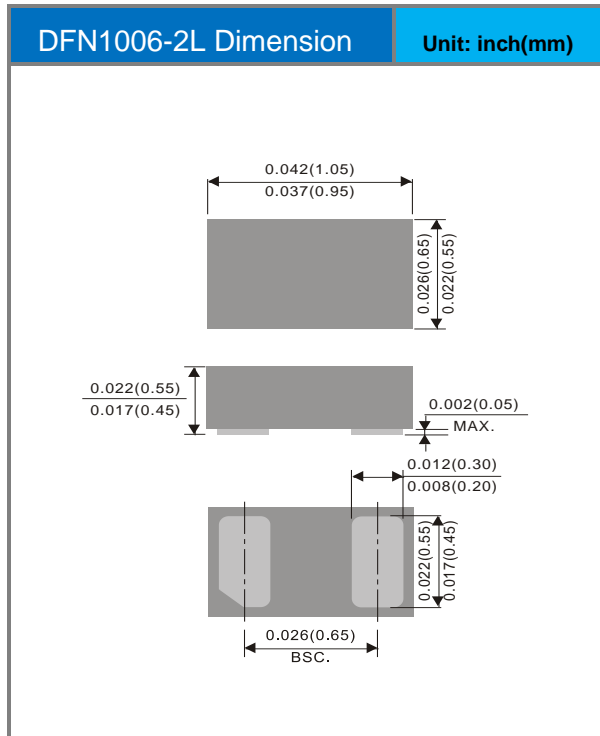


# PEC2605M1Q

## Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
PEC2605M1Q_R1_00001	DFN1006-2L	10K / 7" Reel	HB	Halogen Free

## Packaging Information & Mounting Pad Layout





## PEC2605M1Q

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