PEC4102CS ~ PEC4105CS Series

ESD Protection

Voltage **2.5~5 V**

SOD-323

Features

- IEC61000-4-2(ESD): ± 15 kV Air, ± 8 kV Contact Compliance with the capability up to ± 30 kV
- IEC61000-4-5(Lightning) : 20~30A(8/20uS)
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case : SOD-323 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0041 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}	±30 ±30	kV
Typical Thermal Resistance(Note 1)	$R_{\theta JA}$	650	°C/W
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)

PEC4102CS						
PARAMETER	**SYMBOL**	**TEST CONDITION**	**MIN.**	**TYP.**	**MAX.**	**UNITS**
Reverse Stand-Off Voltage(Note 2)	V_{RWM}	-	-	-	2.5	V
Reverse Breakdown Voltage	V_{BR}	I_{BR} = 50 mA	2.6	-	4	V
Reverse Leakage Current	I_R	V_R = 2.5 V	-	-	0.5	uA
Clamping Voltage	V_{CL}	I_{PP} = 1 A, t_P = 8/20 us	-	-	4.5	V
		I_{PP} = 30 A, t_P = 8/20 us	-	-	9	
Off State Junction Capacitance	C_J	0Vdc Bias f = 1 MHz	-	-	120	pF

PEC4103CS						
PARAMETER	**SYMBOL**	**TEST CONDITION**	**MIN.**	**TYP.**	**MAX.**	**UNITS**
Reverse Stand-Off Voltage(Note 2)	V_{RWM}	-	-	-	3.3	V
Reverse Breakdown Voltage	V_{BR}	I_{BR} = 50 mA	3.5	-	4.5	V
Reverse Leakage Current	I_R	V_R = 3.3 V	-	-	0.5	uA
Clamping Voltage	V_{CL}	I_{PP} = 1 A, t_P = 8/20 us	-	-	5.5	V
		I_{PP} = 30 A, t_P = 8/20 us	-	-	9	
Off State Junction Capacitance	C_J	0Vdc Bias f = 1 MHz	-	-	100	pF

PEC4105CS						
PARAMETER	**SYMBOL**	**TEST CONDITION**	**MIN.**	**TYP.**	**MAX.**	**UNITS**
Reverse Stand-Off Voltage(Note 2)	V_{RWM}	-	-	-	5	V
Reverse Breakdown Voltage	V_{BR}	I_{SB} = 50 mA	5.5	-	8	V
Reverse Leakage Current	I_R	V_R = 5 V	-	-	0.5	uA
Clamping Voltage	V_{CL}	I_{PP} = 1 A, t_P = 8/20 us	-	-	10	V
		I_{PP} = 20 A, t_P = 8/20 us	-	-	13	
Off State Junction Capacitance	C_J	0Vdc Bias f = 1 MHz	-	-	80	pF

NOTES :

1. Mounted on a FR4 PCB, single-sided copper, standard footprint.
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.

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TYPICAL CHARACTERISTIC CURVES

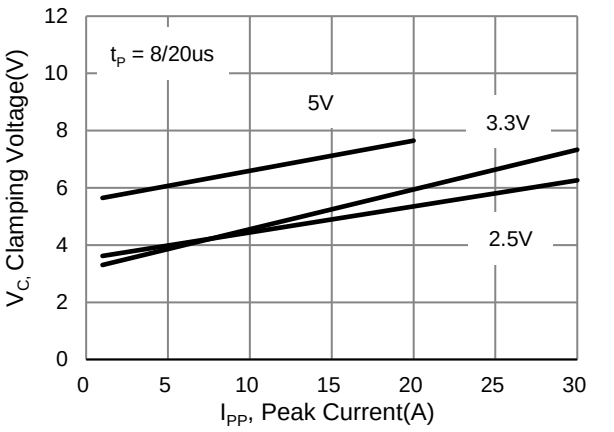

Fig.1 Typical Peak Clamping Voltage

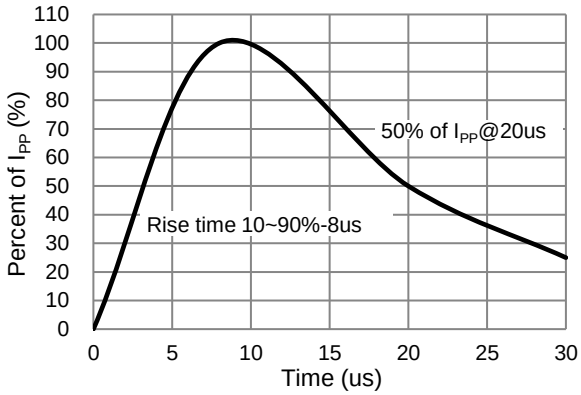

Fig.2 Pulse Waveform

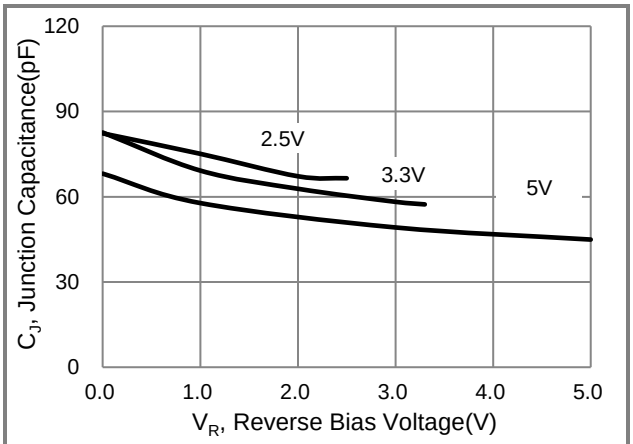

Fig.3 Typical Junction Capacitance

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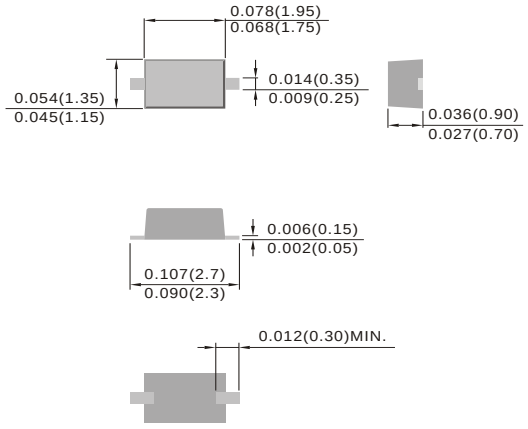
Product and Packing Information

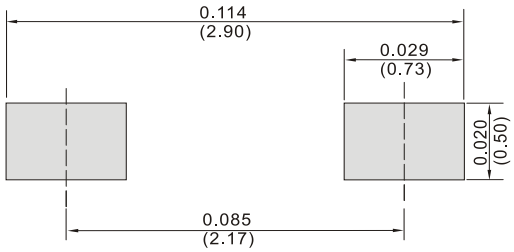
Part No.	Package Type	Packing Type	Marking
PEC4102CS	SOD-323	5K pcs / 7" reel	ACA
PEC4103CS	SOD-323	5K pcs / 7" reel	ACB
PEC4105CS	SOD-323	5K pcs / 7" reel	ACC

Packaging Information & Mounting Pad Layout

SOD-323 Dimension — Unit: inch(mm)



SOD-323 Pad Layout — Unit: inch(mm)



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