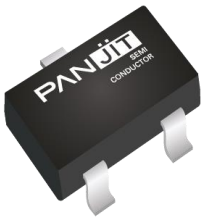
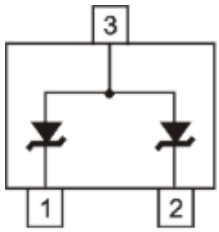
PE4305C2A-AU ~ PE4336C2A-AU Series

ESD Protection

Voltage **5~36 V**

SOT-23





Features

- ISO10605(C=330pF, R=330Ω) :
  ±30kV Air, ±30kV Contact for 5V ~ 24V
  ±25kV Air, ±20kV Contact for 36V
- HBM ≧ ±8KV & CDM ≧ ±2KV
- IEC61000-4-5(Lightning) : 3.3~17.5A(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 : SOT-23 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0084 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)	$R_{\theta JA}$	350	°C/W
Operating Junction Temperature Range	T_J	-55~150	°C
Storage Temperature Range	T_{STG}	-55~150	°C

PE4305C2A-AU ~ PE4336C2A-AU Series

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

PE4305C2A-AU						
PARAMETER	**SYMBOL**	**TEST CONDITION**	**MIN.**	**TYP.**	**MAX.**	**UNITS**
Reverse Stand-Off Voltage(Note 2)	V_{RWM}	-	-	-	5	V
Reverse Breakdown Voltage	V_{BR}	I_{BT} = 1mA	6	-	8.5	V
Reverse Leakage Current	I_R	V_R = 5V	-	-	1	uA
Clamping Voltage	V_{CL}	I_{PP} = 1A, t_P = 8/20us	-	-	8.5	V
		I_{PP} = 17.5A, t_P = 8/20us	-	-	12.4	V
Off State Junction Capacitance	C_J	0Vdc Bias f = 1MHz	-	-	200	pF

PE4309C2A-AU						
PARAMETER	**SYMBOL**	**TEST CONDITION**	**MIN.**	**TYP.**	**MAX.**	**UNITS**
Reverse Stand-Off Voltage(Note 2)	V_{RWM}	-	-	-	9	V
Reverse Breakdown Voltage	V_{BR}	I_{BT} = 1mA	9.9	-	12	V
Reverse Leakage Current	I_R	V_R = 9V	-	-	1	uA
Clamping Voltage	V_{CL}	I_{PP} = 1A, t_P = 8/20us	-	-	13	V
		I_{PP} = 9.5A, t_P = 8/20us	-	-	23	V
Off State Junction Capacitance	C_J	0Vdc Bias f = 1MHz	-	-	120	pF

PE4312C2A-AU						
PARAMETER	**SYMBOL**	**TEST CONDITION**	**MIN.**	**TYP.**	**MAX.**	**UNITS**
Reverse Stand-Off Voltage(Note 2)	V_{RWM}	-	-	-	12	V
Reverse Breakdown Voltage	V_{BR}	I_{BT} = 1mA	13.2	-	15.5	V
Reverse Leakage Current	I_R	V_R = 12V	-	-	1	uA
Clamping Voltage	V_{CL}	I_{PP} = 1A, t_P = 8/20us	-	-	17	V
		I_{PP} = 8.3A, t_P = 8/20us	-	-	26.5	V
Off State Junction Capacitance	C_J	0Vdc Bias f = 1MHz	-	-	90	pF

PE4305C2A-AU ~ PE4336C2A-AU Series

PE4315C2A-AU						
PARAMETER	**SYMBOL**	**TEST CONDITION**	**MIN.**	**TYP.**	**MAX.**	**UNITS**
Reverse Stand-Off Voltage(Note 2)	V_{RWM}	-	-	-	15	V
Reverse Breakdown Voltage	V_{BR}	I_{BT} = 1mA	16.5	-	20	V
Reverse Leakage Current	I_R	V_R = 15V	-	-	1	uA
Clamping Voltage	V_{CL}	I_{PP} = 1A, t_P = 8/20us	-	-	22	V
		I_{PP} = 7.8A, t_P = 8/20us	-	-	28	V
Off State Junction Capacitance	C_J	0Vdc Bias f = 1MHz	-	-	65	pF

PE4318C2A-AU						
PARAMETER	**SYMBOL**	**TEST CONDITION**	**MIN.**	**TYP.**	**MAX.**	**UNITS**
Reverse Stand-Off Voltage(Note 2)	V_{RWM}	-	-	-	18	V
Reverse Breakdown Voltage	V_{BR}	I_{BT} = 1mA	19.8	-	23.5	V
Reverse Leakage Current	I_R	V_R = 18V	-	-	1	uA
Clamping Voltage	V_{CL}	I_{PP} = 1A, t_P = 8/20us	-	-	26.5	V
		I_{PP} = 7A, t_P = 8/20us	-	-	36	V
Off State Junction Capacitance	C_J	0Vdc Bias f = 1MHz	-	-	60	pF

PE4322C2A-AU						
PARAMETER	**SYMBOL**	**TEST CONDITION**	**MIN.**	**TYP.**	**MAX.**	**UNITS**
Reverse Stand-Off Voltage(Note 2)	V_{RWM}	-	-	-	22	V
Reverse Breakdown Voltage	V_{BR}	I_{BT} = 1mA	24.2	-	30	V
Reverse Leakage Current	I_R	V_R = 22V	-	-	0.05	uA
Clamping Voltage	V_{CL}	I_{PP} = 1A, t_P = 8/20us	-	-	34	V
		I_{PP} = 5A, t_P = 8/20us	-	-	44	V
Off State Junction Capacitance	C_J	0Vdc Bias f = 1MHz	-	-	45	pF

PE4305C2A-AU ~ PE4336C2A-AU Series

PE4324C2A-AU						
PARAMETER	**SYMBOL**	**TEST CONDITION**	**MIN.**	**TYP.**	**MAX.**	**UNITS**
Reverse Stand-Off Voltage(Note 2)	V_{RWM}	-	-	-	24	V
Reverse Breakdown Voltage	V_{BR}	I_{BT} = 1mA	26.4	-	31	V
Reverse Leakage Current	I_R	V_R = 24V	-	-	0.05	uA
Clamping Voltage	V_{CL}	I_{PP} = 1A, t_P = 8/20us	-	-	35	V
		I_{PP} = 4.8A, t_P = 8/20us	-	-	45	V
Off State Junction Capacitance	C_J	0Vdc Bias f = 1MHz	-	-	42	pF

PE4336C2A-AU						
PARAMETER	**SYMBOL**	**TEST CONDITION**	**MIN.**	**TYP.**	**MAX.**	**UNITS**
Reverse Stand-Off Voltage(Note 2)	V_{RWM}	-	-	-	36	V
Reverse Breakdown Voltage	V_{BR}	I_{BT} = 1mA	39.6	-	47	V
Reverse Leakage Current	I_R	V_R = 36V	-	-	0.05	uA
Clamping Voltage	V_{CL}	I_{PP} = 1A, t_P = 8/20us	-	-	51	V
		I_{PP} = 3.3A, t_P = 8/20us	-	-	65	V
Off State Junction Capacitance	C_J	0Vdc Bias f = 1MHz	-	-	20	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.

PE4305C2A-AU ~ PE4336C2A-AU Series

TYPICAL CHARACTERISTIC CURVES

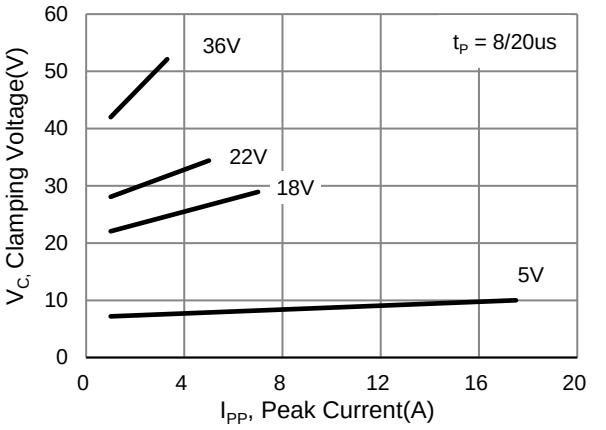


Fig.1 Typical Peak Clamping Voltage

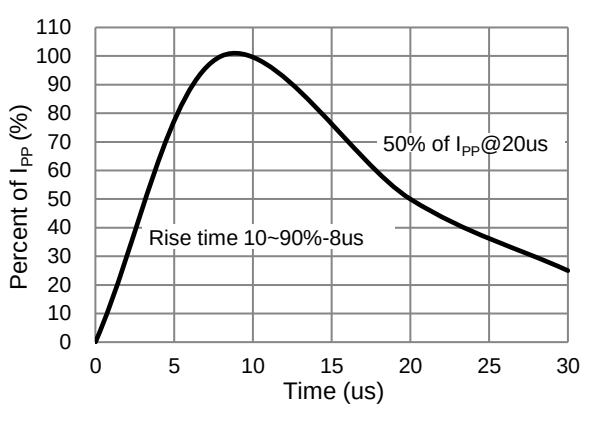


Fig.2 Pulse Waveform

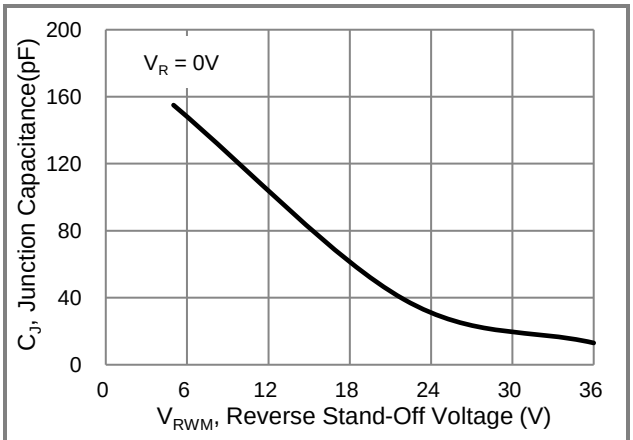


Fig.3 Typical Junction Capacitance

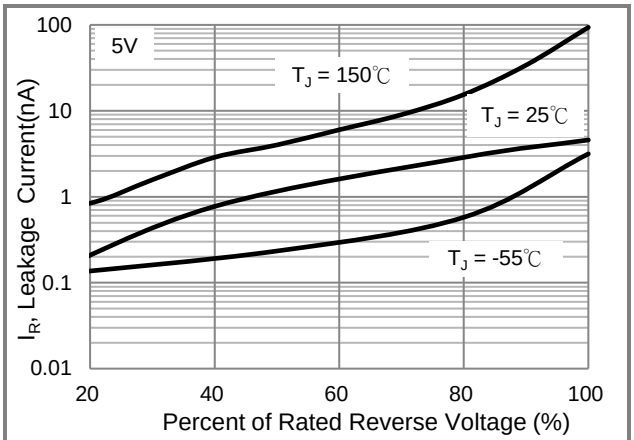


Fig.4 Typical Reverse Characteristics

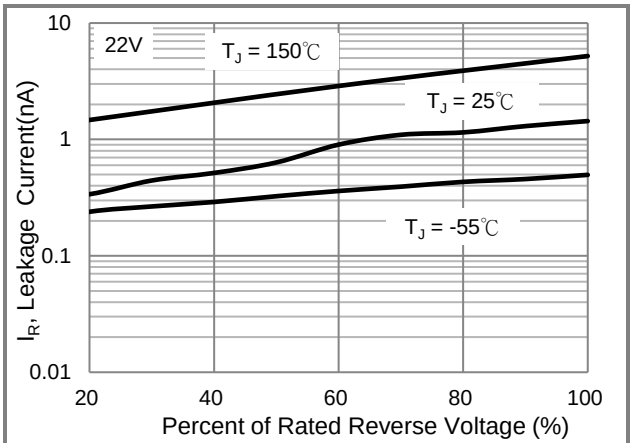


Fig.5 Typical Reverse Characteristics

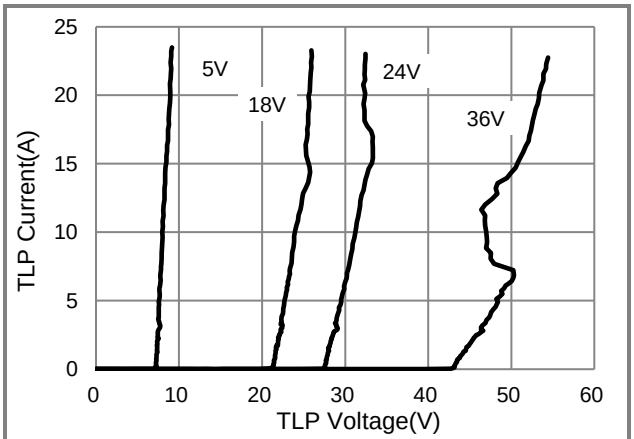


Fig.6 TLP Measurement

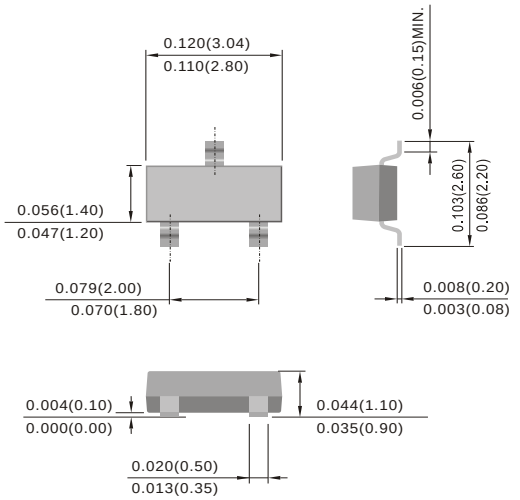
PE4305C2A-AU ~ PE4336C2A-AU Series

Product and Packing Information

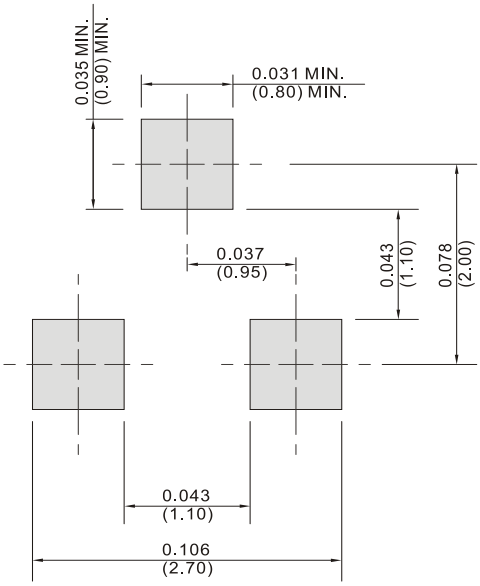
Part No.	Package Type	Packing Type	Marking
PE4305C2A-AU	SOT-23	3K pcs / 7” reel	AA2
PE4309C2A-AU	SOT-23	3K pcs / 7” reel	AA3
PE4312C2A-AU	SOT-23	3K pcs / 7” reel	AA4
PE4315C2A-AU	SOT-23	3K pcs / 7” reel	AA5
PE4318C2A-AU	SOT-23	3K pcs / 7” reel	AA9
PE4322C2A-AU	SOT-23	3K pcs / 7” reel	AA6
PE4324C2A-AU	SOT-23	3K pcs / 7” reel	AA7
PE4336C2A-AU	SOT-23	3K pcs / 7” reel	AA8

Packaging Information & Mounting Pad Layout

SOT-23 Dimension — Unit: inch(mm)



SOT-23 Pad Layout — Unit: inch(mm)



PE4305C2A-AU ~ PE4336C2A-AU Series

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