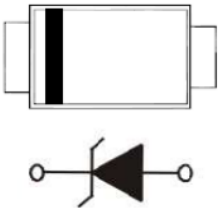
PE4305AS-AU ~ PE4336AS-AU Series

ESD Protection

Voltage **5~36 V**

SOD-123



Features

- IEC61000-4-2 : ±30kV Air, ±30kV Contact
- 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 : SOD-123 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0104 grams

Maximum Ratings and Thermal Characteristics (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNIT
ESD IEC61000-4-2(Air) ESD IEC61000-4-2(Contact)	V_{ESD}	±30 ±30	kV
Typical Thermal Resistance(Note 1)	$R_{\theta JA}$	510	°C/W
Operating Junction Temperature Range	T_J	-55~150	°C
Storage Temperature Range	T_{STG}	-55~150	°C

PE4305AS-AU ~ PE4336AS-AU Series

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

PE4305AS-AU						
PARAMETER	**SYMBOL**	**TEST CONDITION**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
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

PE4307AS-AU						
PARAMETER	**SYMBOL**	**TEST CONDITION**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
Reverse Stand-Off Voltage(Note 2)	V_{RWM}	-	-	-	7	V
Reverse Breakdown Voltage	V_{BR}	I_{BT} = 1mA	7.7	-	10	V
Reverse Leakage Current	I_R	V_R = 7V	-	-	1	uA
Clamping Voltage	V_{CL}	I_{PP} = 1A, t_P = 8/20us	-	-	12	V
		I_{PP} = 12.9A, t_P = 8/20us	-	-	16.8	V
Off State Junction Capacitance	C_J	0Vdc Bias f = 1MHz	-	-	160	pF

PE4309AS-AU						
PARAMETER	**SYMBOL**	**TEST CONDITION**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
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

PE4305AS-AU ~ PE4336AS-AU Series

PE4312AS-AU						
PARAMETER	**SYMBOL**	**TEST CONDITION**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
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

PE4315AS-AU						
PARAMETER	**SYMBOL**	**TEST CONDITION**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
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

PE4320AS-AU						
PARAMETER	**SYMBOL**	**TEST CONDITION**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
Reverse Stand-Off Voltage(Note 2)	V_{RWM}	-	-	-	20	V
Reverse Breakdown Voltage	V_{BR}	I_{BT} = 1mA	22	-	26	V
Reverse Leakage Current	I_R	V_R = 20V	-	-	1	uA
Clamping Voltage	V_{CL}	I_{PP} = 1A, t_P = 8/20us	-	-	29	V
		I_{PP} = 5.8A, t_P = 8/20us	-	-	38	V
Off State Junction Capacitance	C_J	0Vdc Bias f = 1MHz	-	-	55	pF

PE4305AS-AU ~ PE4336AS-AU Series

PE4324AS-AU						
PARAMETER	**SYMBOL**	**TEST CONDITION**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
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

PE4336AS-AU						
PARAMETER	**SYMBOL**	**TEST CONDITION**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
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.

PE4305AS-AU ~ PE4336AS-AU Series

TYPICAL CHARACTERISTIC CURVES

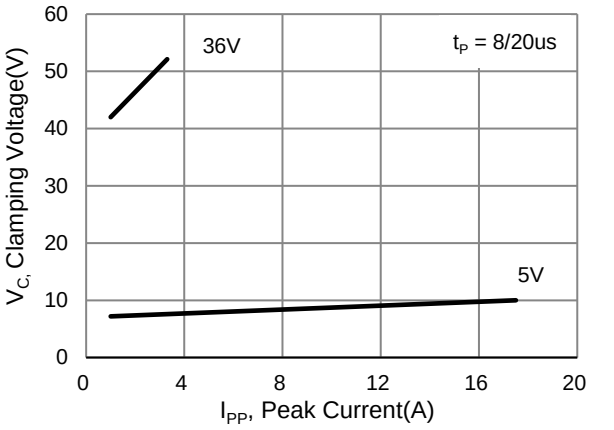


Fig.1 Typical Peak Clamping Voltage

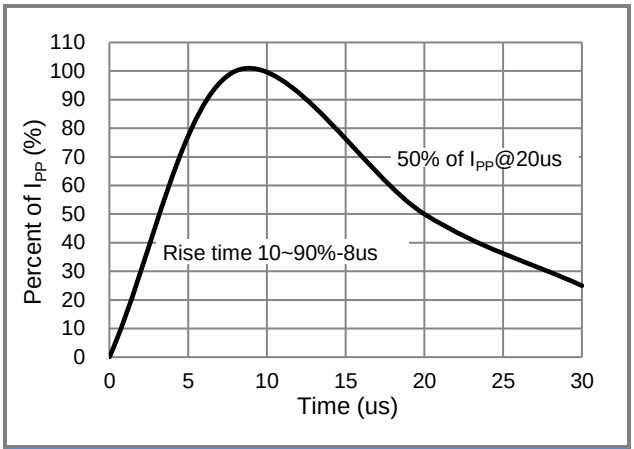


Fig.2 Pulse Waveform

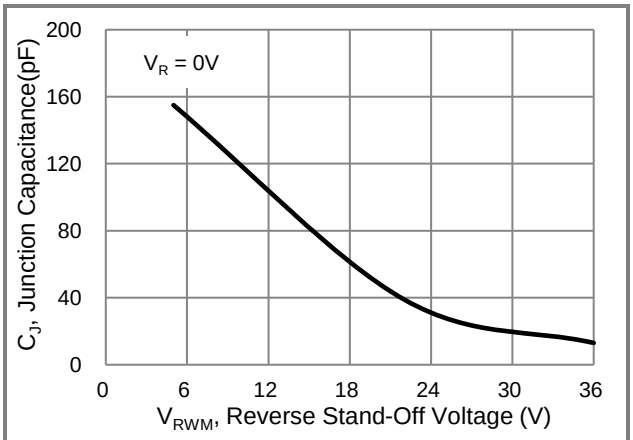


Fig.3 Typical Junction Capacitance

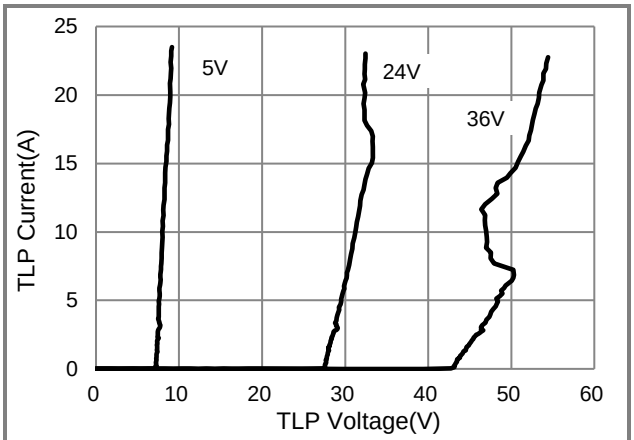


Fig.4 TLP Measurement

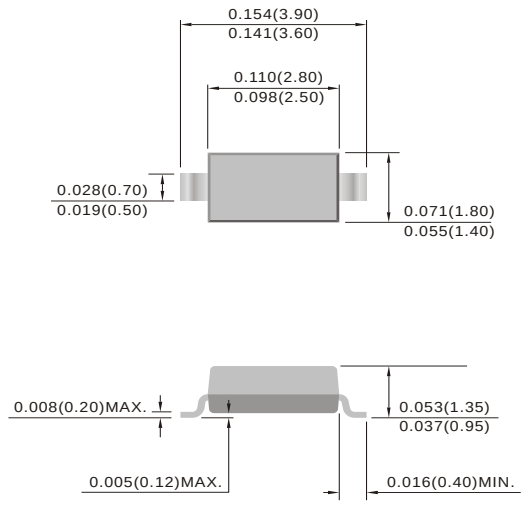
PE4305AS-AU ~ PE4336AS-AU Series

Product and Packing Information

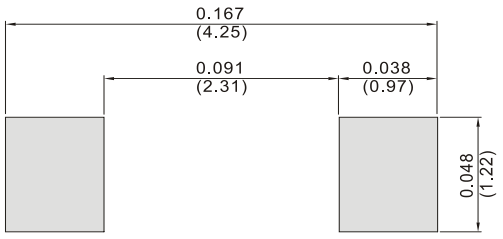
Part No.	Package Type	Packing Type	Marking
PE4305AS-AU	SOD-123	3K pcs / 7” reel	ACG
PE4307AS-AU	SOD-123	3K pcs / 7” reel	ACJ
PE4309AS-AU	SOD-123	3K pcs / 7” reel	ACK
PE4312AS-AU	SOD-123	3K pcs / 7” reel	ACL
PE4315AS-AU	SOD-123	3K pcs / 7” reel	ACM
PE4320AS-AU	SOD-123	3K pcs / 7” reel	ACN
PE4324AS-AU	SOD-123	3K pcs / 7” reel	ACP
PE4336AS-AU	SOD-123	3K pcs / 7” reel	ACR

Packaging Information & Mounting Pad Layout

SOD-123 Dimension — Unit: inch(mm)



SOD-123 Pad Layout — Unit: inch(mm)



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