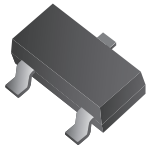
SMD ESD Protection Diode



Features

Common anode ESD protection

IEC 61000-4-2 8kV(contact), 15kV(air).

Surface mount package.

High component density.

Mechanical data

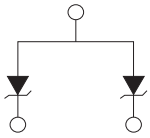
Case: SOT-23 Standard package , molded plastic.

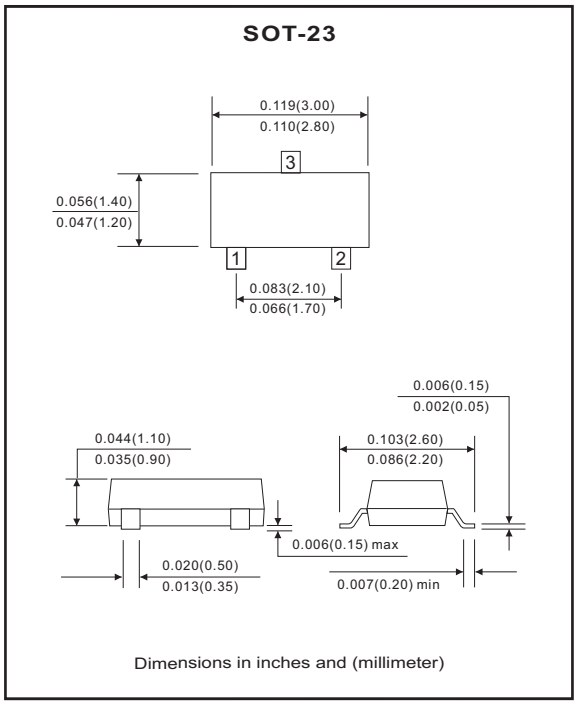
Terminals: Gold plated, solderable per MIL-STD-750, method 2026.

Marking Code: E5U

Mounting position: Any.

Weight: 0.003 gram (approx.).





(at TA=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Diode breakdown voltage	V_{BD}	I_Z = 1mA	6.1		7.1	V
Leakage current	I_L	V_R = 3V		0.1	1.0	uA
Forward voltage	V_F	I_F = 5uA			1.2	V
Junction capacitance	C_T	V_R = 0V,f = 1MHz		60	80	pF
Clamping voltage	V_C	I_{PP} = 1A,T_P=8/20us I_{PP} = 8A,T_P=8/20us			8 10	V
ESD capability	V_{ESD}	C = 150pF, R = 300ohm, forward and reverse 10 pulses	8			kV
Peak pulse power	P_{PK}				80	W
Storage and junction temperature	T_{STG},T_J		-55		150	°C
Power dissipation	P_D				225	mW

RATING AND CHARACTERISTIC CURVES (CPDT-5V0U)

Fig. 1 - 8/20us Peak pulse current wave form acc. IEC 61000-4-5

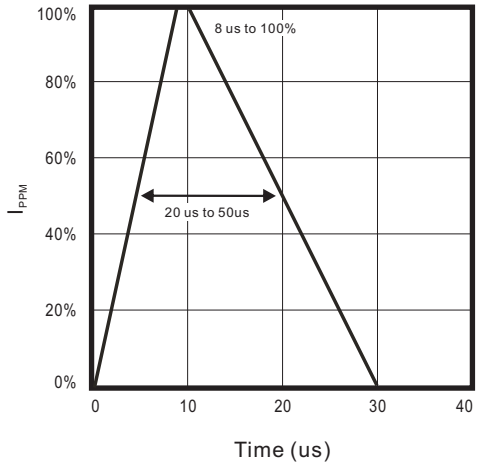


Fig. 2 - Power rating derating curve

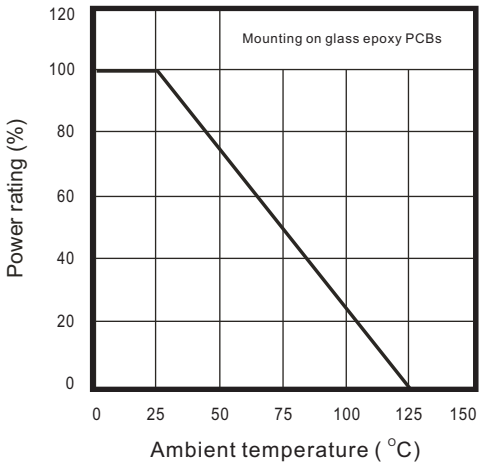


Fig. 3 - Clamping volatage vs. peak pulse current

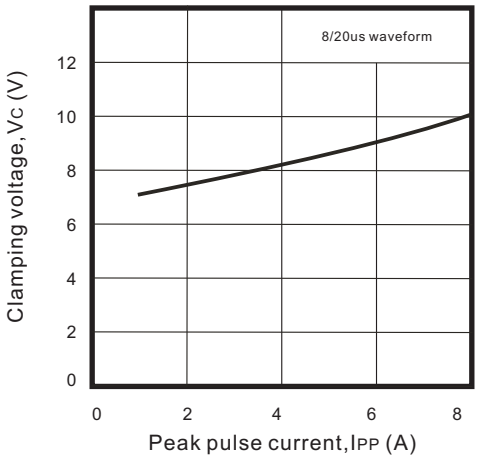


Fig. 4 - Capacitance between terminals characteristics

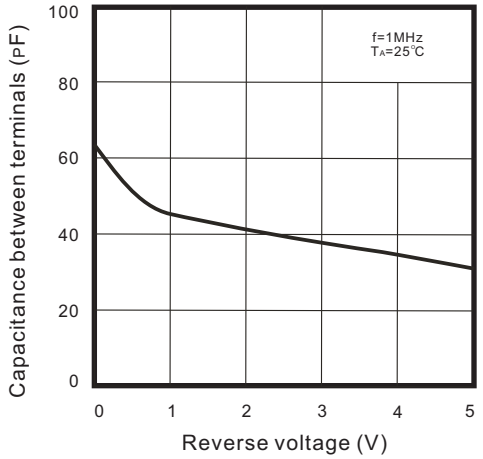
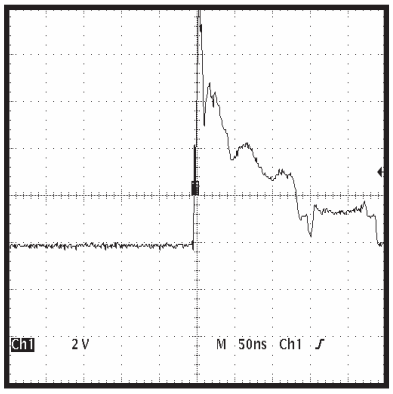
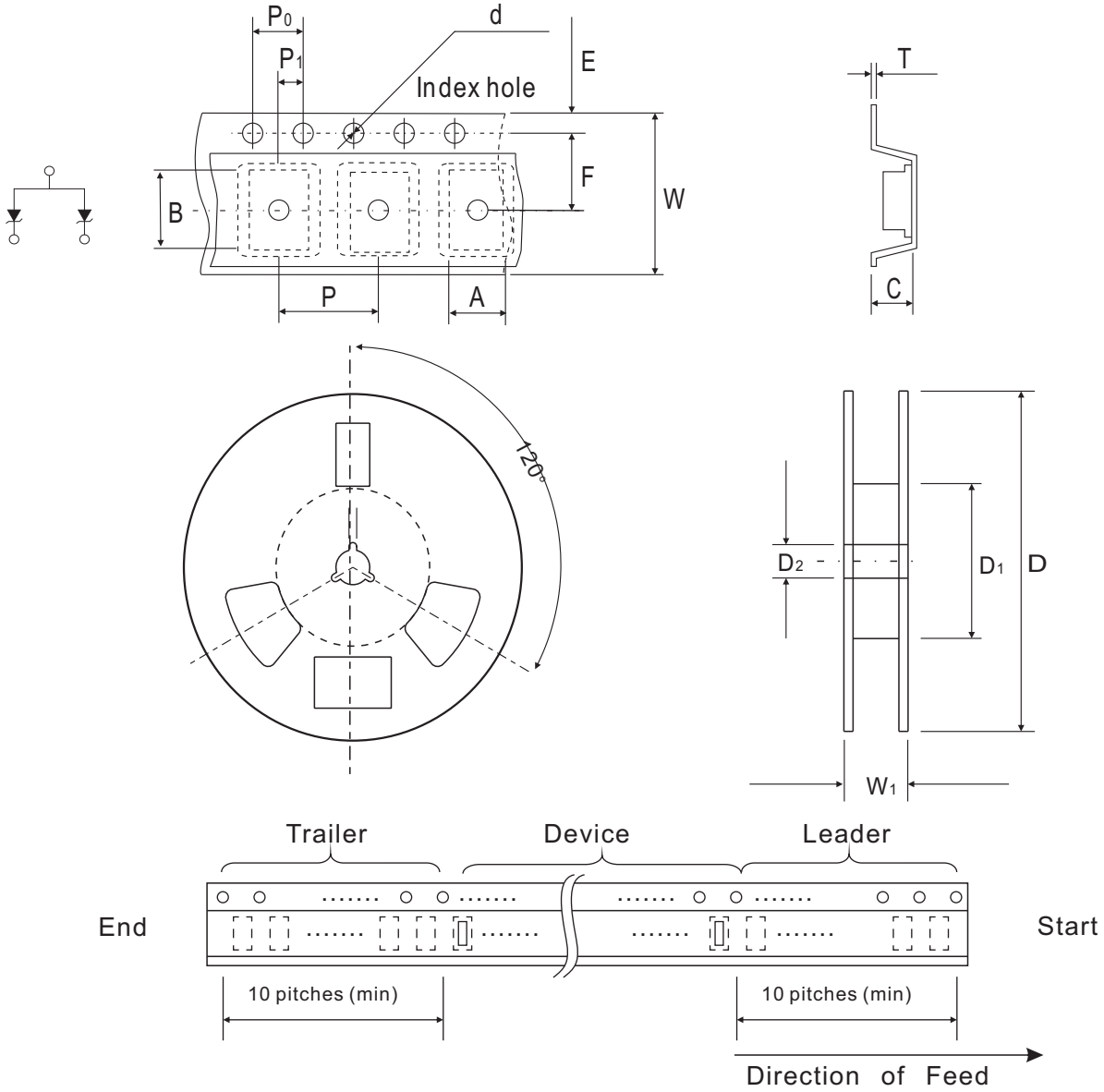


Fig. 5 - ESD Clamping (8kv Contant per IEC 61000-4-2)



Reel Taping Specification

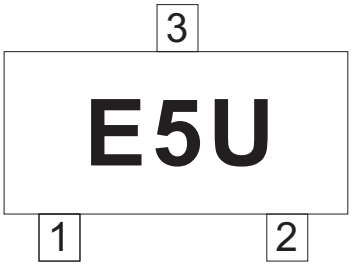


	SYMBOL	A	B	C	d	D	D_1	D_2
SOT-23	(mm)	3.10±0.10	2.85±0.10	1.40±0.10	1.55±0.10	178±1	50.0 MIN.	13.0±0.20
	(inch)	0.122±0.004	0.112±0.004	0.055±0.004	0.061±0.004	7.008±0.04	1.969 MIN.	0.512±0.008

	SYMBOL	E	F	P	P_0	P_1	T	W	W_1
SOT-23	(mm)	1.75±0.10	3.50±0.05	4.00±0.10	4.00±0.10	2.00±0.05	0.20±0.05	8.00±0.30	14.4 MAX.
	(inch)	0.069±0.004	0.138±0.002	0.157±0.004	0.157±0.004	0.079±0.004	0.008±0.002	0.315±0.008	0.567 MAX.

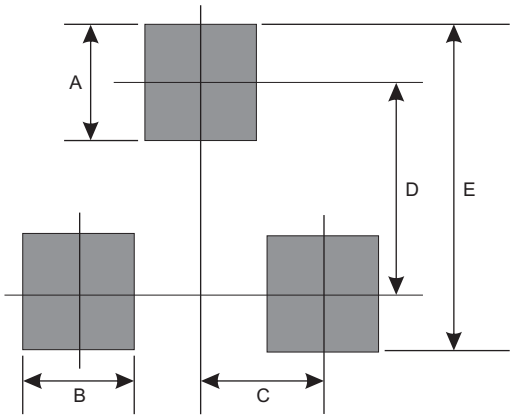
Marking Code

Park Number	Marking Code
CPDT-5V0U	E5U



Suggested PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.90	0.035
B	0.80	0.031
C	0.95	0.037
D	2.00	0.078
E	2.90	0.114



Standard Package

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
SOT-23	3000	7