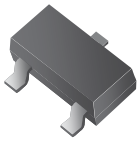
KINGWELL TECHNOLOGY CORP., LTD.

http://www.kingwell-tw.com.tw

CPDT-5V0

SMD ESD Protection Diode



Features

Common anode ESD protection.

IEC61000-4-2 8kV(Contact), 15kV(air).

Surface mount package.

High component density.

Mechanical data

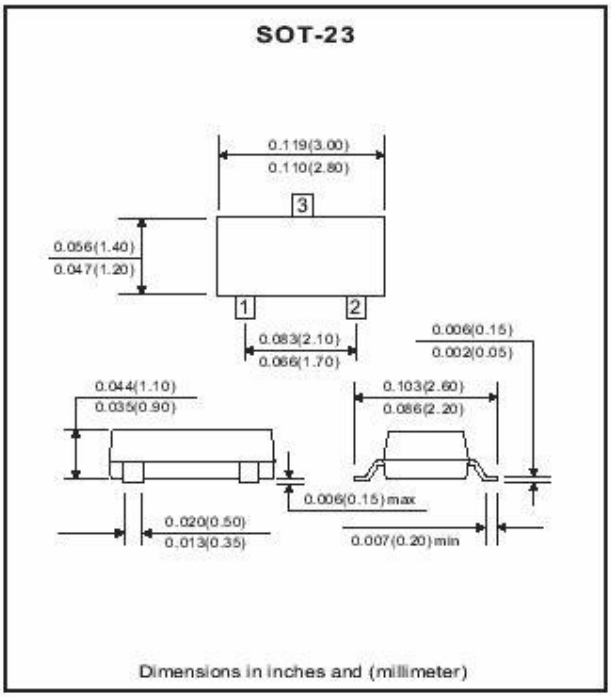
Case: SOT-23 Standard package, molded plastic.

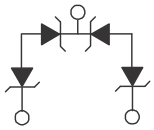
Terminals: Gold plated, solderable per MIL-STD-750D, method 2026.

Marking code:E05

Mounting position: Any.

Weight: 0.003 gram(approx.).





Maximum Rating and Electrical Characteristics
(at T_A=25°C unless otherwise noted)

Characteristics	Symbol	Conditions	Min	Typ	Max	Unit
Diode breakdown voltage	V_{BD}	I_Z=1mA	5.1	7.0		V
Leakage current	I_L	V_R=5V		±0.1	±2.0	μA
Junction capacitance	C_T	V_R=0V,f=1MHz		15	20	pF
Channel clamping voltage	V_{ESD}	8kV event			±7.0	V
Peak ESD voltage capability	V_{PV}	IEC 61000-4-2			16	kV
Peak pulse current	I_{PP}*	8/20μs			5.1	A
Power dissipation	P_D				225	mW
Storage and junction temperature	T_{STG}		-55		+125	°C

RATING AND CHARACTERISTIC CURVES (CPDT-5V0)

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

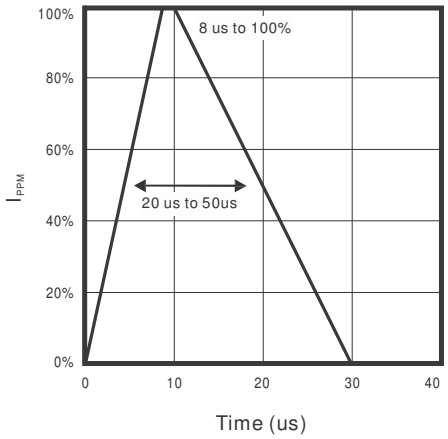


Fig. 2 - Reverse characteristics

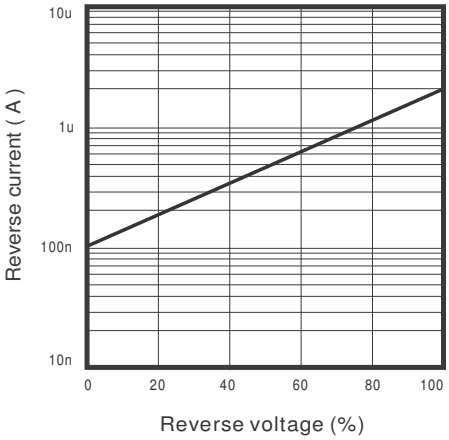


Fig. 3 - Capacitance between terminals characteristics

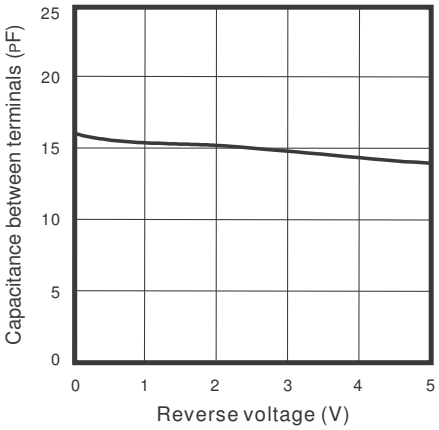


Fig. 4 - Power rating derating curve

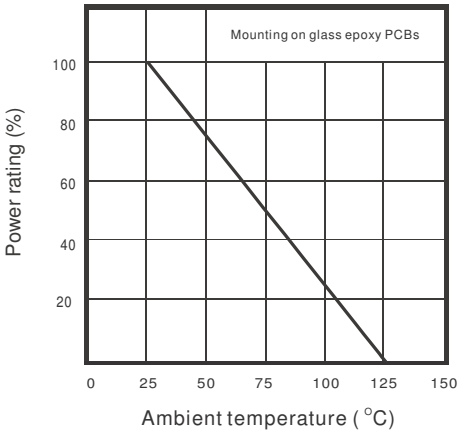
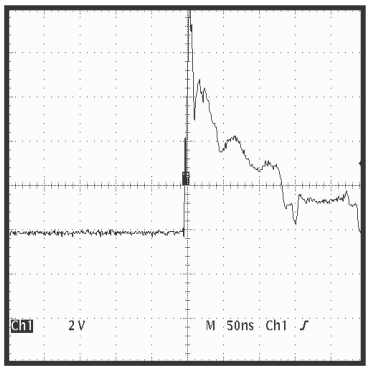
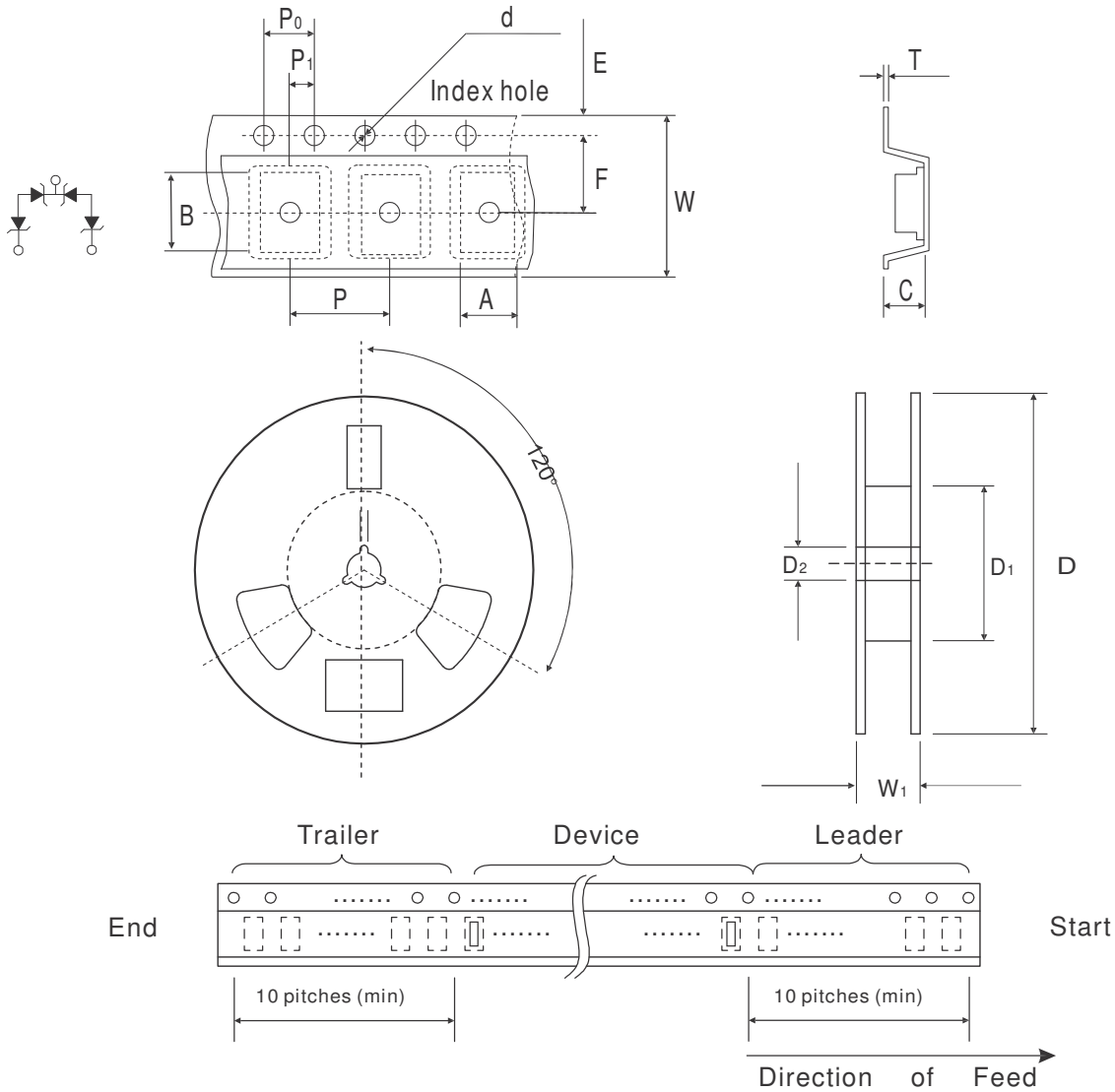


Fig. 5 - ESD Clamping (8kv Contant per IEC 61000-4-2)



Reel Taping Specification

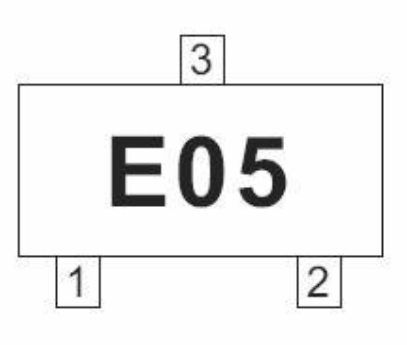


	SYMBOL	A	B	C	d	D	D_1	D_2
SOT-23	(mm)	3.10 ± 0.10	2.85 ± 0.10	1.40 ± 0.10	1.55 ± 0.10	178 ± 1	50.0 MIN.	13.0 ± 0.20
	(inch)	0.122 ± 0.004	0.112 ± 0.004	0.055 ± 0.004	0.061 ± 0.004	7.008 ± 0.04	1.969 MIN.	0.512 ± 0.008

	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.

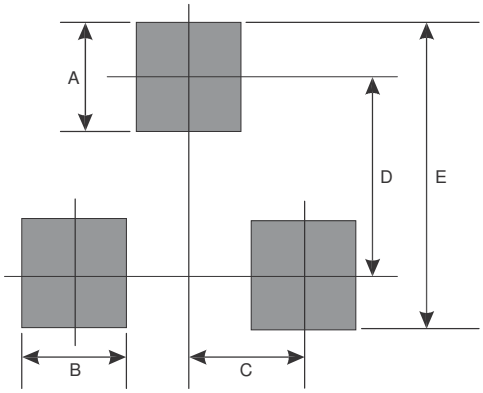
Marking Code

Park Number	Marking Code
CPDT-5V0	E05



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