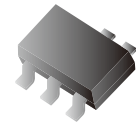




# Uni-directional ESD Protection Product

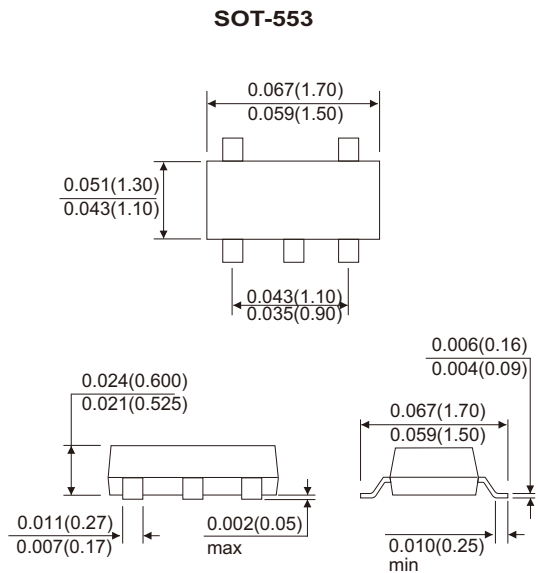


## Features

- IEC61000-4-2 8kV(Contact), 15kV(air).
- Surface mount package.
- High component density.
- RoHS device

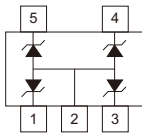
## Mechanical data

- Case : SOT-553 Standard package, molded plastic.
- Terminals : Gold plated, solderable per MIL-STD-750D, method 2026.
- Mounting position : Any.
- Weight : 0.0031 gram (approx.).



Dimensions in inches and (millimeter)

## Configuration



## Marking



## Maximum Rating and Electrical Characteristics

(at T<sub>A</sub> = 25°C unless otherwise noted)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Breakdown voltage	V <sub>BD</sub>	I <sub>R</sub> = 1mA	6.1		7.1	V
Leakage current	I <sub>L</sub>	V <sub>R</sub> = 3V		0.1	1.0	μA
Forward voltage	V <sub>F</sub>	I <sub>F</sub> = 5μA			1.2	V
Junction capacitance	C <sub>T</sub>	V <sub>R</sub> = 0V, f = 1MHz		60	80	pF
Clamping voltage	V <sub>C</sub>	I <sub>PP</sub> = 1A, T <sub>p</sub> =8/20μs I <sub>PP</sub> = 8A, T <sub>p</sub> =8/20μs			8 10	V
ESD capability	ESD	C = 150pF, R = 300ohm, forward and reverse 10 pulses	8			kV
Peak pulse power	P <sub>PP</sub>				80	W
Operation temperature	T <sub>J</sub>				125	°C
Storage temperature	T <sub>STG</sub>		-55		150	°C



# Uni-directional ESD Protection Product

## Rating and Characteristic Curves

Fig. 1 - 8/20 $\mu$ s Peak pulse current wave form acc. IEC 61000-4-5

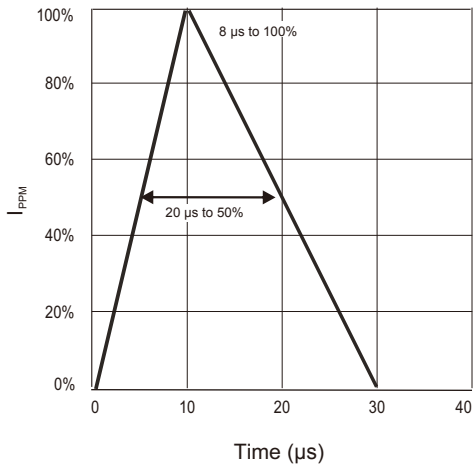


Fig. 2 - Power rating derating curve

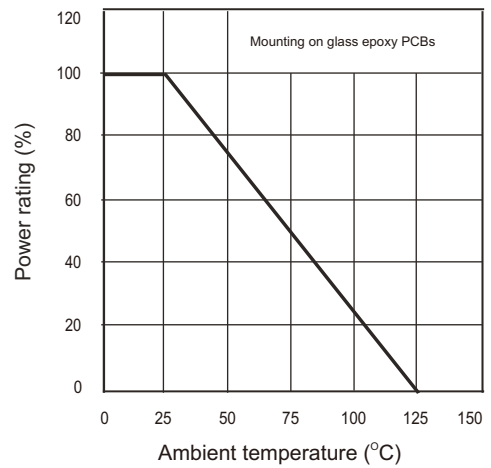


Fig. 3 - Clamping voltage vs. peak pulse current

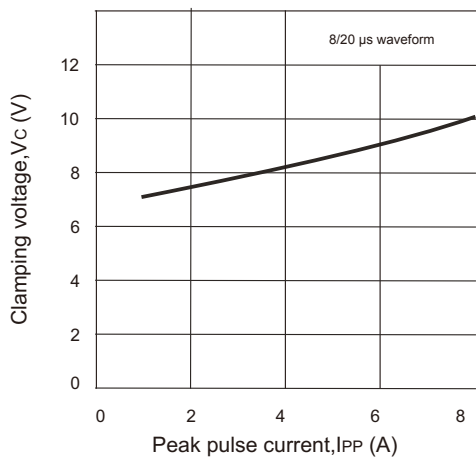
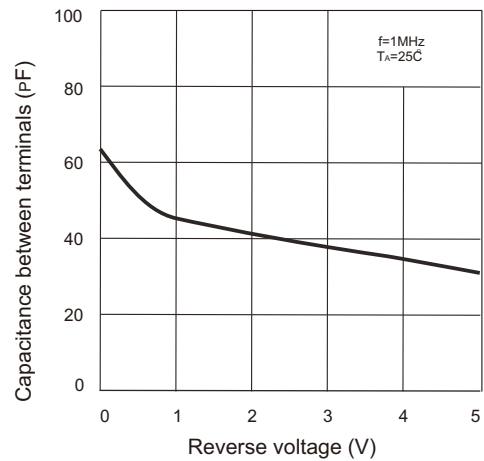


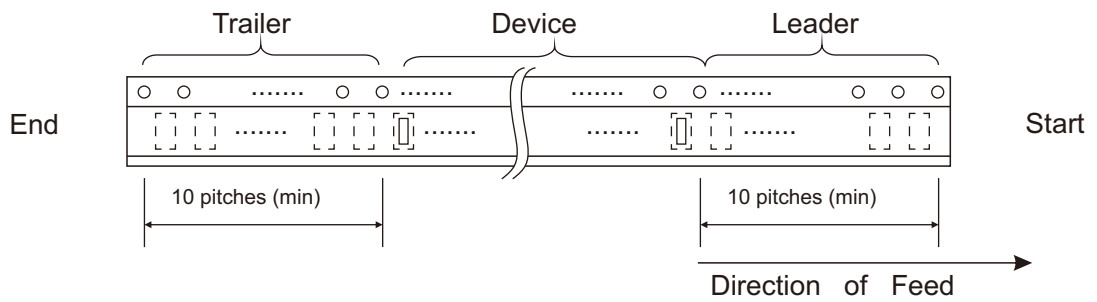
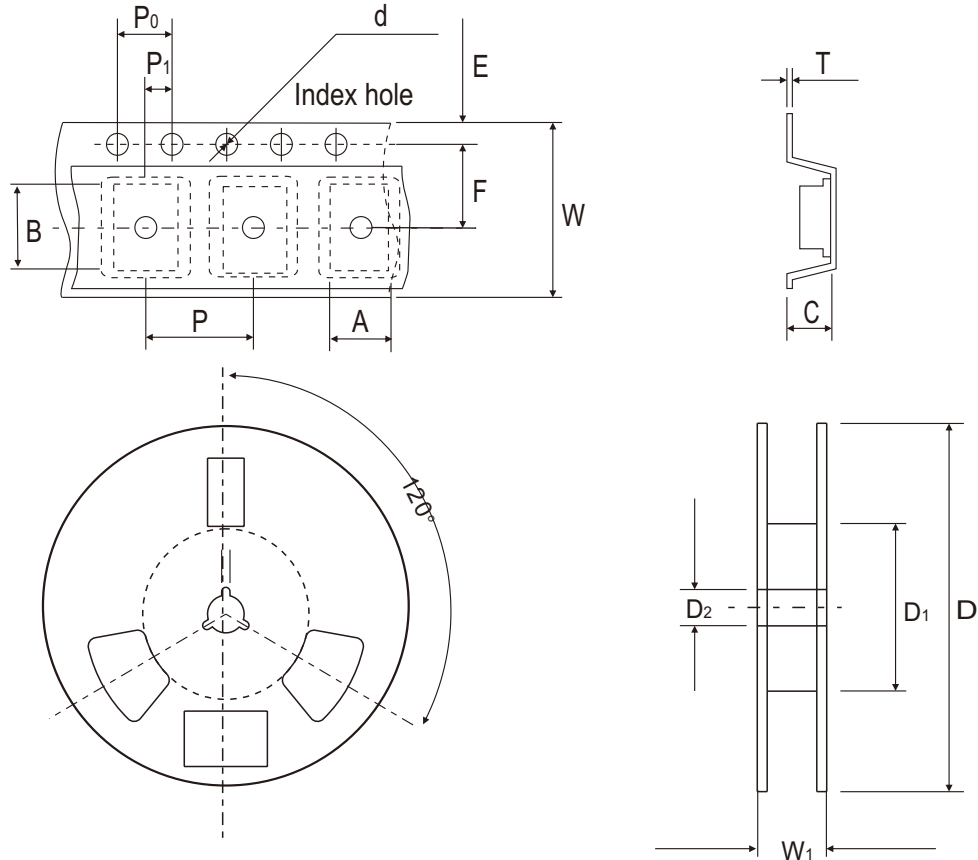
Fig. 4 - Capacitance between terminals characteristics





# Uni-directional ESD Protection Product

## Reel Taping Specification



SOT-553	SYMBOL	A	B	C	d	D	D1	D2
	mm	$1.78 \pm 0.05$	$1.78 \pm 0.05$	$0.69 \pm 0.05$	$1.50 \pm 0.10$	$178 \pm 1$	50.0 MIN.	$13.0 \pm 0.20$
	inch	$0.070 \pm 0.002$	$0.070 \pm 0.002$	$0.027 \pm 0.002$	$0.061 \pm 0.004$	$7.008 \pm 0.040$	1.969 MIN.	$0.512 \pm 0.008$

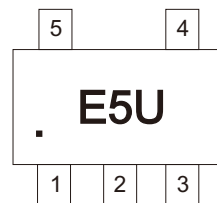
SOT-553	SYMBOL	E	F	P	P0	P1	W	W1
	mm	$1.75 \pm 0.10$	$3.50 \pm 0.05$	$4.00 \pm 0.10$	$4.00 \pm 0.10$	$2.00 \pm 0.05$	$8.00 \pm 0.30$	14.4 MAX.
	inch	$0.069 \pm 0.004$	$0.138 \pm 0.002$	$0.157 \pm 0.004$	$0.157 \pm 0.004$	$0.079 \pm 0.002$	$0.315 \pm 0.012$	0.567 MAX.



# Uni-directional ESD Protection Product

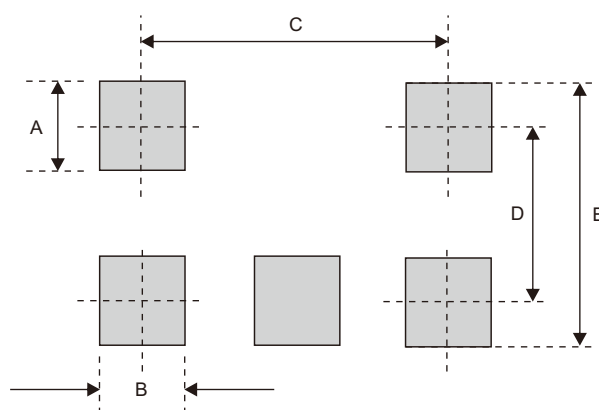
## Marking Code

Part Number	Marking Code
ESDH55V0U	E5U



## Suggested PAD Layout

SIZE	SOT-553	
	mm	inch
A	0.45	0.018
B	0.30	0.012
C	1.00	0.039
D	1.35	0.053
E	1.80	0.071



## Standard Package

Case Type	Qty per Reel	Reel Size
	Pcs	inch
SOT-553	3000	7