

## CPDUR5V0R-HF

### RoHS Device

### Halogen Free



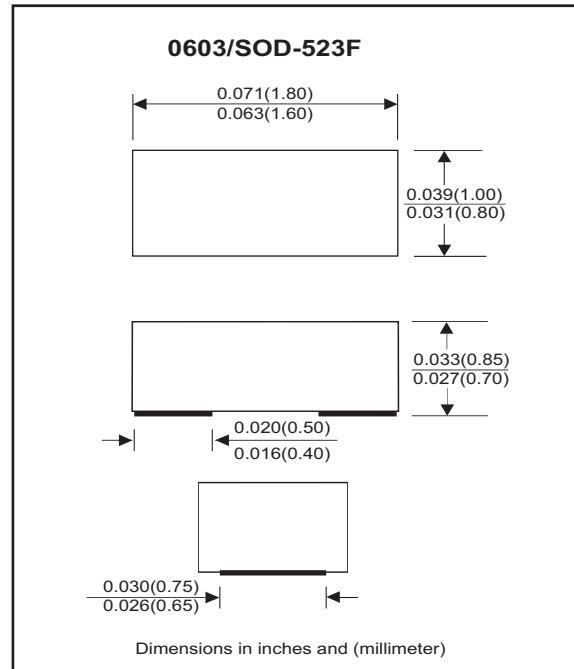
### Features

- Bi-directional ESD protection.
- IEC61000-4-2 Level 4 ESD protection.
- Surface mount package.
- Operating voltage: 5V

### Mechanical data

- Case: 0603/SOD-523F standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026
- Mounting position: Any
- Weight: 0.003 grams(approx.).

### Circuit Diagram



### Maximum Rating And Electrical Characteristics (at TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse stand-Off voltage		V <sub>RWM</sub>	-	-	5	V
Diode breakdown voltage	I <sub>R</sub> = 1mA	V <sub>BD</sub>	5.6	-	9.4	V
Reverse leakage current	V <sub>R</sub> = 5V	I <sub>L</sub>	-	5	90	nA
Junction capacitance	V <sub>R</sub> = 0V, f = 1MHz	C <sub>T</sub>	-	20	30	pF
ESD capability	IEC 61000-4-2(Air)	ESD	-	-	±30	kV
	IEC 61000-4-2(Contact)	ESD	-	-	±30	kV
Clamping Voltage	I <sub>PP</sub> = 1 A, tp=8/20us	V <sub>c</sub>	-	-	8	V
	I <sub>PP</sub> = 11 A, tp=8/20us	V <sub>c</sub>	-	-	12	V
Operation temperature		T <sub>j</sub>	-40	-	+150	°C
Storage temperature		T <sub>STG</sub>	-40	-	+150	°C

## RATING AND CHARACTERISTIC CURVES (CPDUR5V0R-HF)

Fig. 1 - Reverse Characteristics

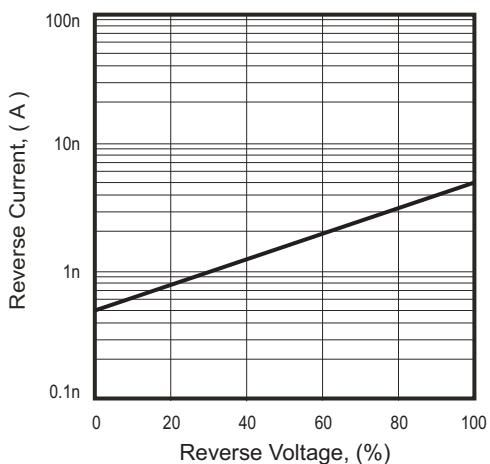


Fig. 2 - Capacitance Between Terminals Characteristics

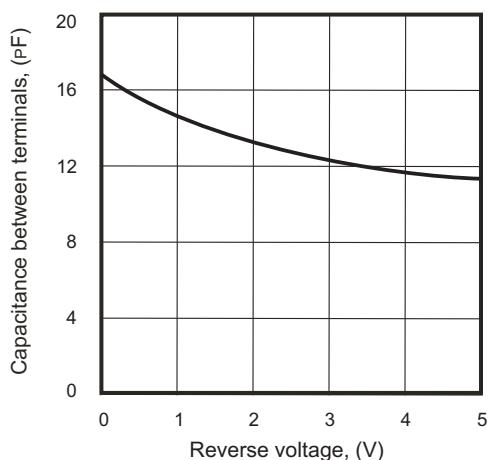


Fig. 3 - Clamping Voltage Vs. Peak Pulse Current

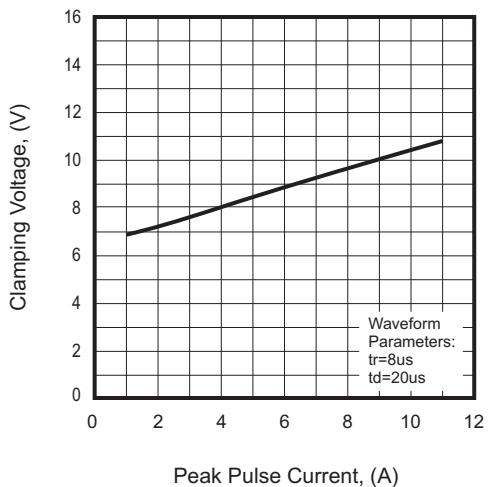
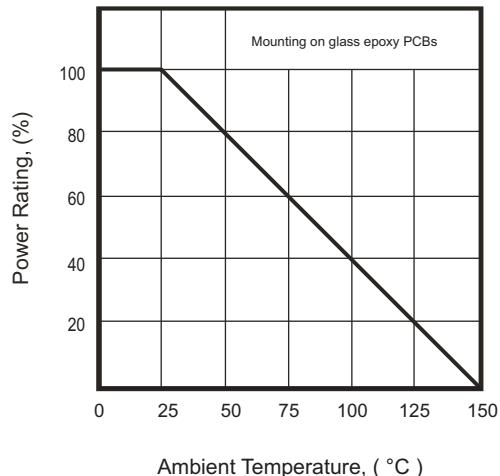


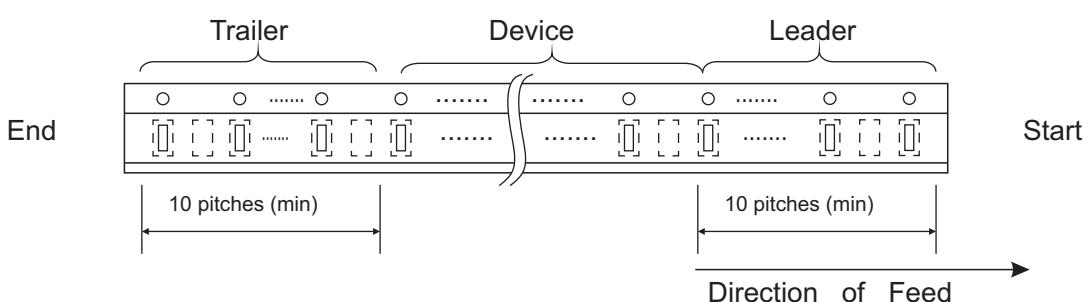
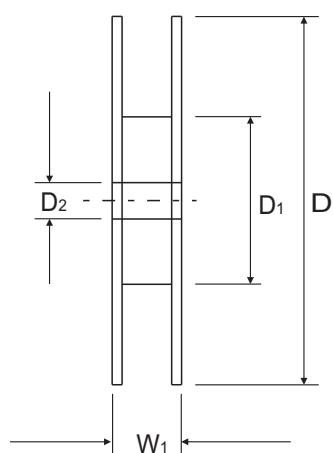
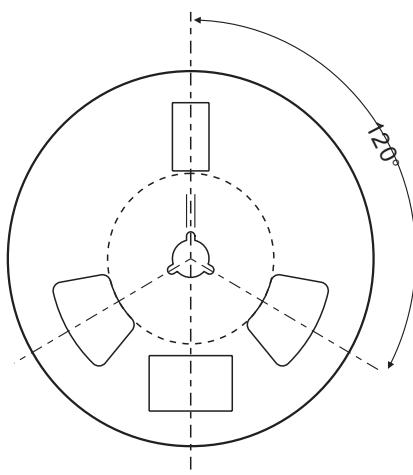
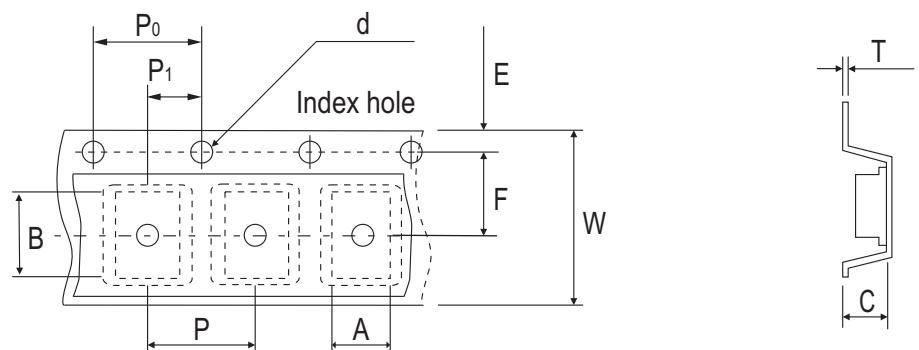
Fig. 4 - Power Rating Derating Curve



# SMD ESD Protection Diode

**Comchip**  
SMD Diode Specialist

## Reel Taping Specification



0603 (SOD-523)	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	1.00 ± 0.10	1.85 ± 0.10	1.00 ± 0.10	1.55 ± 0.05	178 ± 1	60.0 MIN.	13.0 ± 0.20
	(inch)	0.039± 0.004	0.073± 0.004	0.039± 0.004	0.061± 0.002	7.008± 0.04	2.362 MIN.	0.531± 0.008

0603 (SOD-523)	SYMBOL	E	F	P	P <sub>0</sub>	P <sub>1</sub>	T	W	W <sub>1</sub>
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.23 ± 0.05	8.00 ± 0.20	13.5 MAX.
	(inch)	0.069± 0.004	0.138± 0.002	0.157± 0.004	0.157± 0.004	0.079± 0.004	0.009± 0.002	0.315± 0.008	0.531 MAX.

Company reserves the right to improve product design , functions and reliability without notice.

REV:B

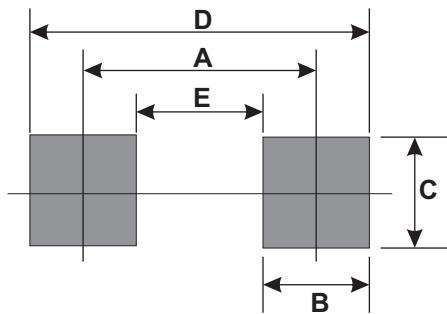
## Marking Code

Part Number	Marking Code
CPDUR5V0R-HF	E5R

**E5R**

## Suggested PAD Layout

SIZE	0603/SOD-523F	
	(mm)	(inch)
A	1.25	0.049
B	0.60	0.024
C	1.00	0.039
D	1.85	0.073
E	0.65	0.026



## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
0603/SOD-523F	4,000	7