

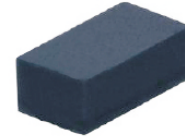


# THE DATASHEET OF CPDUR5V0CSP-HF



## CPDUR5V0CSP-HF

**RoHS Device**  
**Halogen Free**



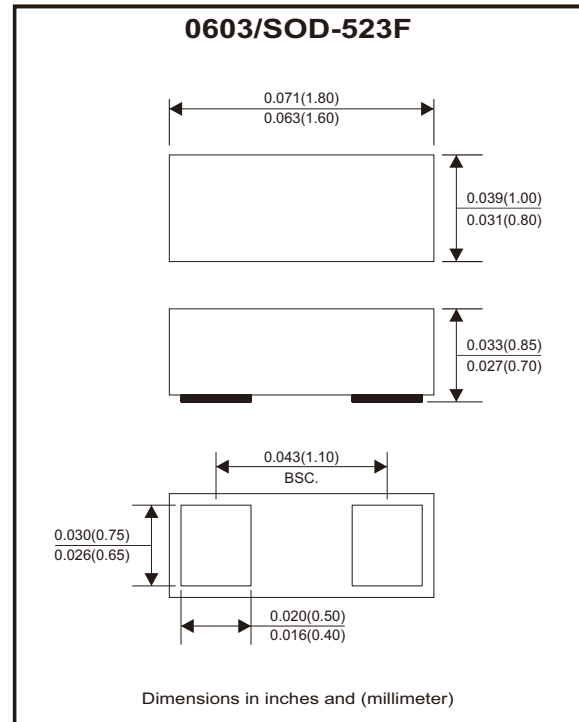
### Features

- Bi-directional ESD protection.
- IEC 61000-4-2 Level 4 ESD protection.
- Working Voltage: 5V
- Low capacitance ESD protection.
- Typical capacitance: 0.4pF

### Mechanical data

- Case: 0603/SOD-523F small outline plastic package. molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Mounting position: Any.
- High temperature soldering guaranteed: 260°C/10 second.
- Weight: 0.003 grams(approx.).

### Circuit Diagram



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

Parameter	Symbol	Value	Unit
Peak pulse power ( tp = 8/20μs waveform)	PPP	60	W
ESD per IEC 61000-4-2(Air)	VESD	±15	kV
ESD per IEC 61000-4-2(Contact)		±8	
Operating temperature range	TJ	-55 to +150	°C
Storage temperature range	TSTG	-55 to +150	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse stand-off voltage		VRWM	-	-	5	V
Reverse leakage current	VR = 5V	IR	-	-	100	nA
Reverse breakdown voltage	IR = 1mA	V(BR)	6	-	10	V
Clamping voltage	I <sub>PP</sub> = 1A	Vc	-	13	15	V
	I <sub>PP</sub> = 3A	Vc	-	18	20	V
Junction capacitance	VR = 0V , F = 1MHz	CJ	-	0.4	0.6	pF

## Rating and Characteristic Curves (CPDUR5V0CSP-HF)

Fig.1 - 8/20 $\mu$ s Peak Pulse Current Wave  
Form Acc. IEC 61000-4-5

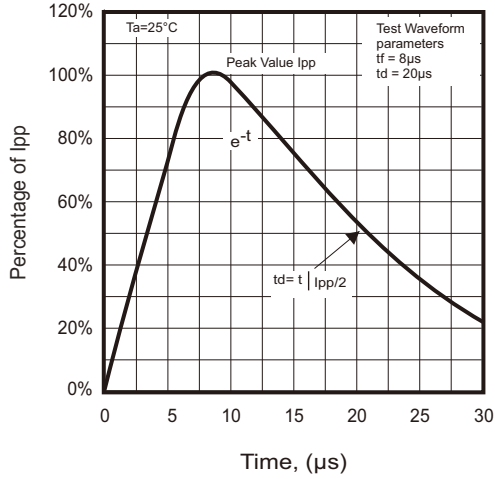


Fig.2 - Typical Capacitance Between  
Terminals Characteristics

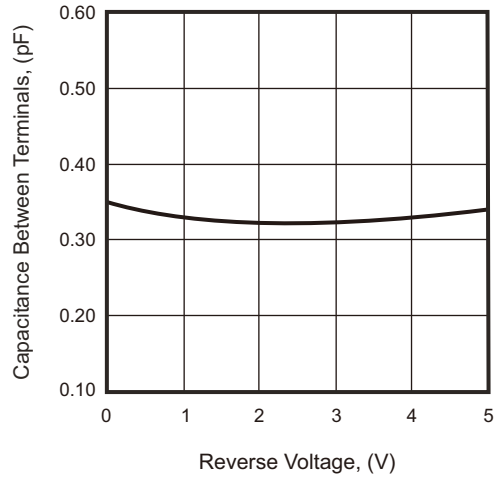


Fig.3 - Clamping Voltage Vs.  
Peak Pulse Current

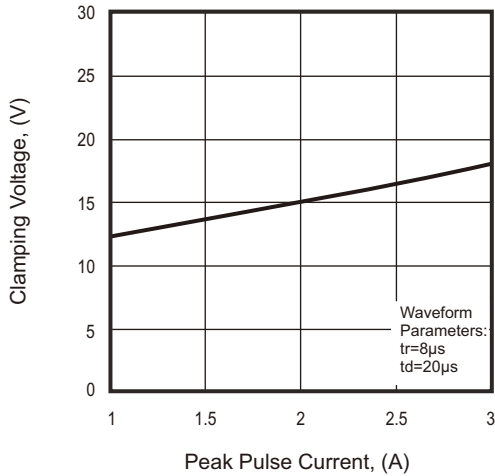
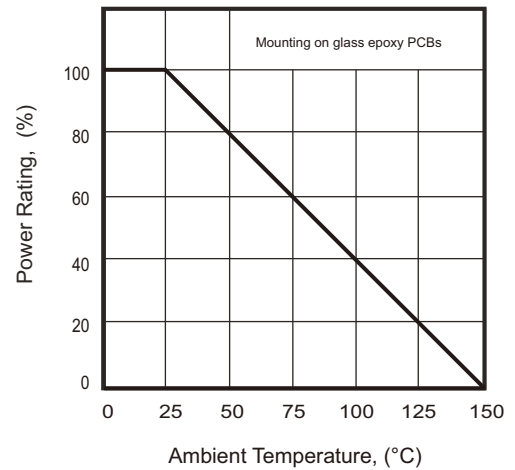
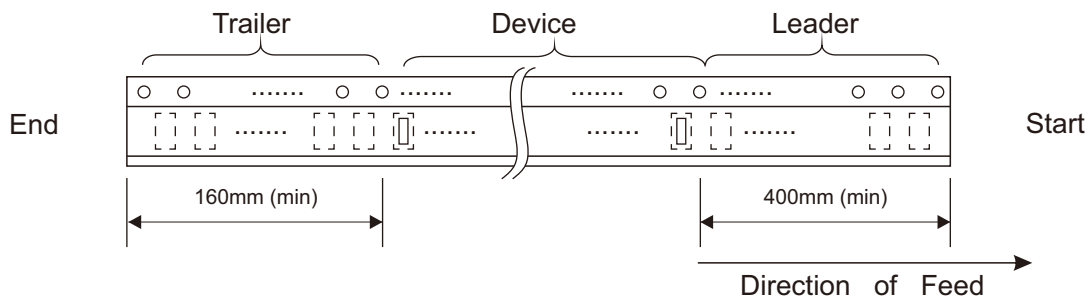
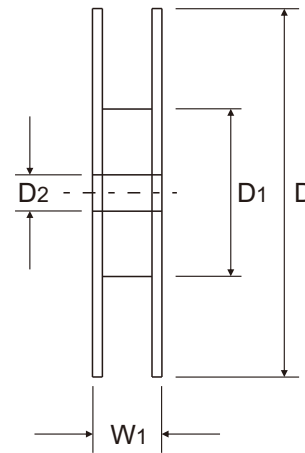
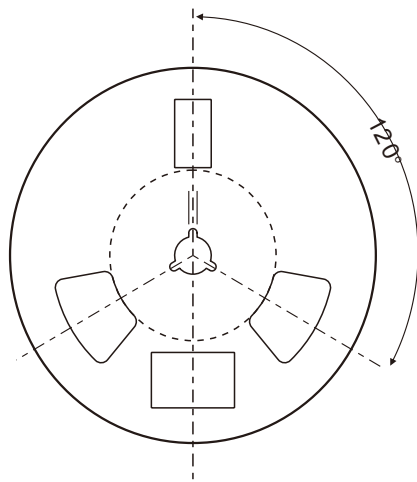
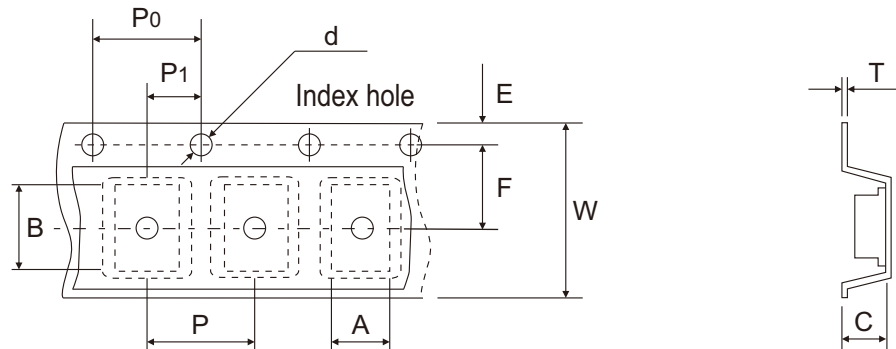


Fig.4 - Power Rating Derating Curve



## Reel Taping Specification



0603 (SOD-523F)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.16 ± 0.10	1.90 ± 0.10	0.95 ± 0.10	1.50 + 0.10 - 0.00	178.00 ± 1.00	60.00 ± 0.50	13.50 ± 0.20
	(inch)	0.046 ± 0.004	0.075 ± 0.004	0.037 ± 0.004	0.059 + 0.004 - 0.000	7.008 ± 0.039	2.362 ± 0.020	0.531 ± 0.008

0603 (SOD-523F)	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.22 ± 0.03	8.00 ± 0.20	12.00 + 0.50 - 0.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.009 ± 0.001	0.315 ± 0.008	0.472 + 0.020 - 0.000

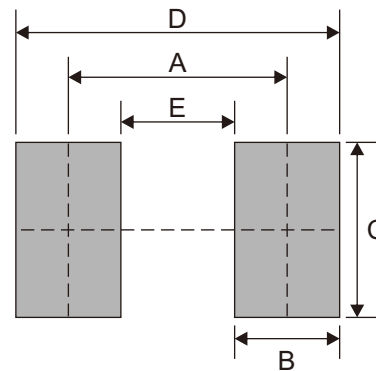
## Marking Code

Part Number	Marking Code
CPDUR5V0CSP-HF	.E5SP



## Suggested P.C.B. 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

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