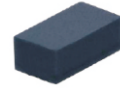


CPDUR Series-HF

RoHS Device

Halogen Free



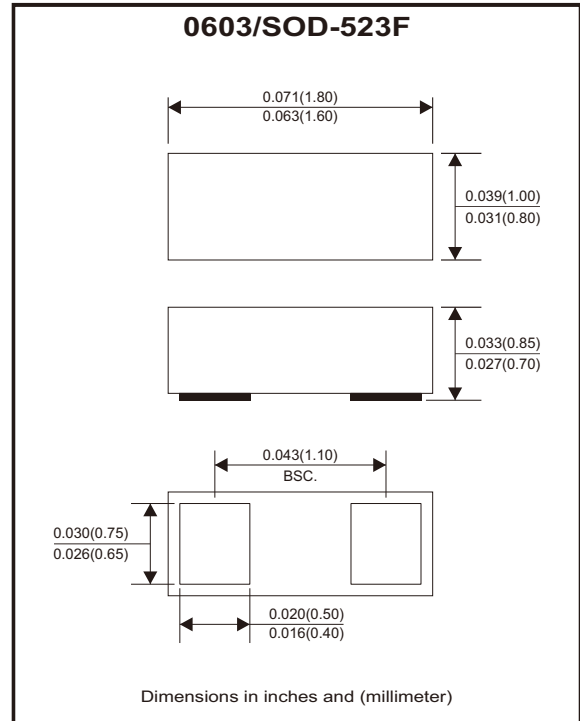
Features

- Bi-directional ESD protection
- Surface mount package.
- High component density.

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 Ratings (at TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Peak pulse power	CPDUR5V0-HF CPDUR12V-HF CPDUR24V-HF TP=8/20µs	PPP			75 25 47	W
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD			16 8	kV
Operating temperature range		Tj	-40		125	°C
Storage temperature range		TSTG	-55		150	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Diode breakdown voltage	CPDUR5V0-HF CPDUR12V-HF CPDUR24V-HF IR = 1mA	VBD	5.1 13 25	7.0 17 28		V
Leakage current	CPDUR5V0-HF CPDUR12V-HF CPDUR24V-HF VR = 5V VR = 12V VR = 24V	IL		0.1	2.0	µA
Clamping voltage	CPDUR5V0-HF CPDUR12V-HF CPDUR24V-HF IPP = 1A, TP = 8/20µs IPP = 5A, TP = 8/20µs IPP = 1A, TP = 8/20µs IPP = 1A, TP = 8/20µs	VC			10 15 25 47	V
Junction capacitance	CPDUR5V0-HF CPDUR12V-HF CPDUR24V-HF VR = 0V, f = 1MHz	CT		15 12 10	20 -	pF

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REV:E

Rating and Characteristic Curves (CPDUR Series-HF)

Fig.1 - Peak Pulse Current Wave
Form Acc. IEC 61000-4-5

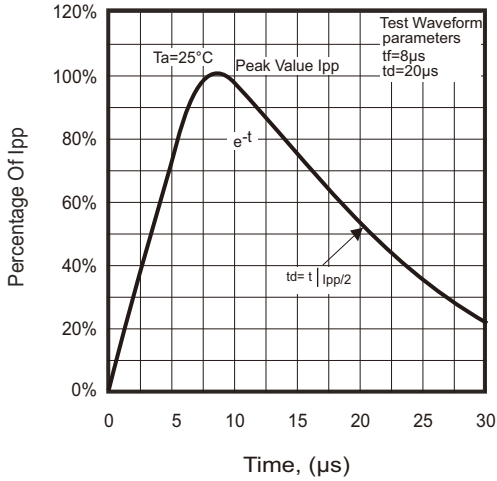


Fig.2-1 - Reverse Characteristics

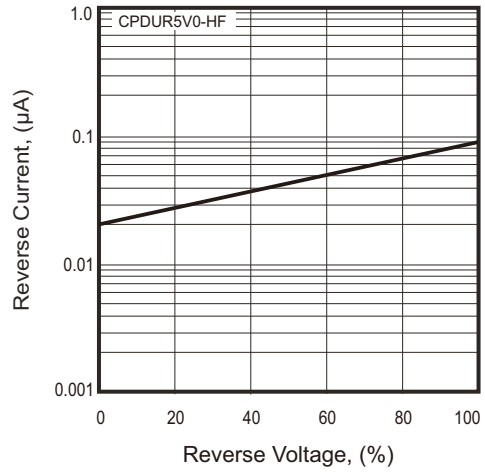


Fig.2-2 - Reverse Characteristics

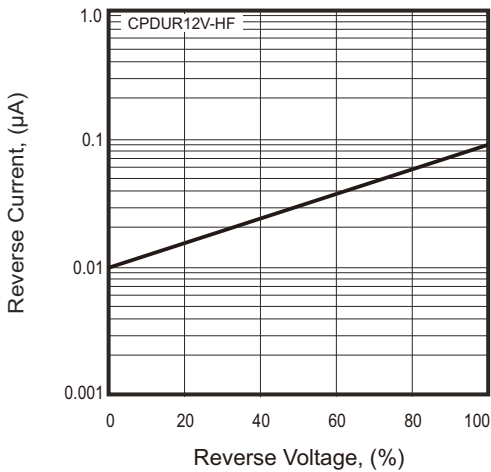


Fig.2-3 - Reverse Characteristics

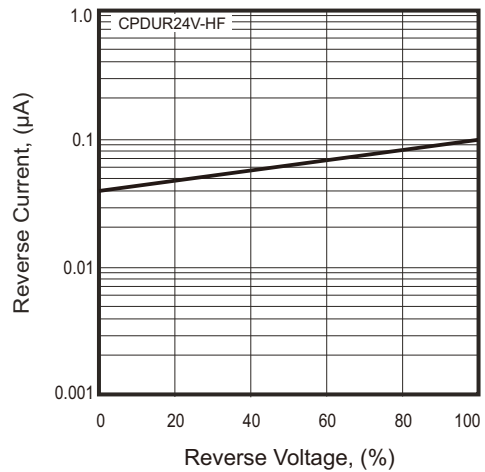


Fig.3 - Capacitance Between Terminals Characteristics

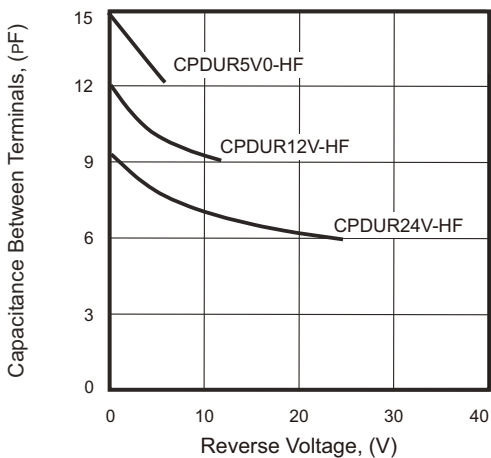
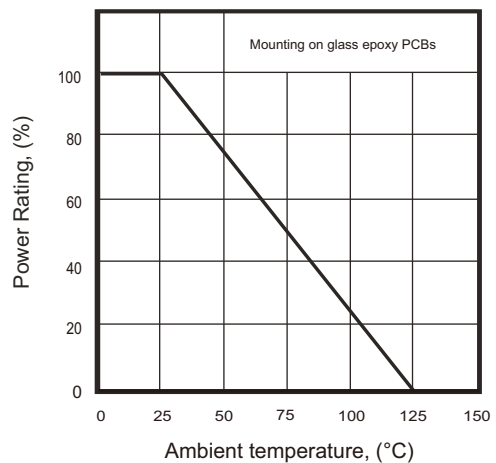


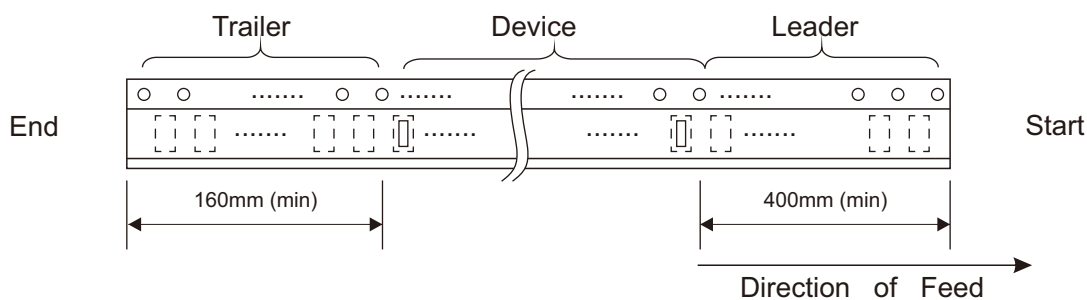
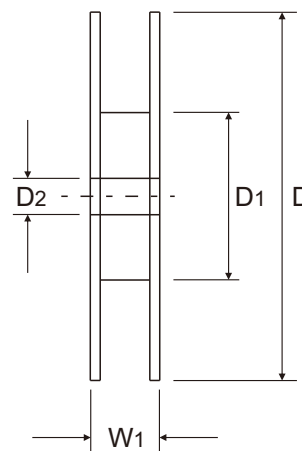
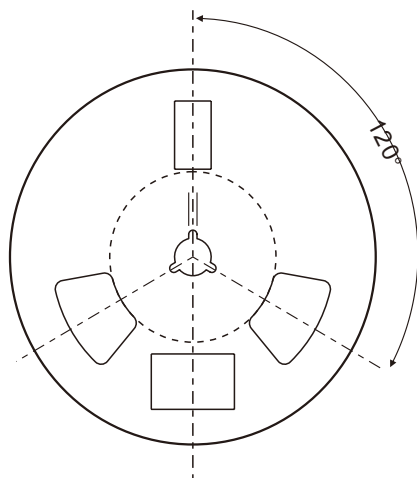
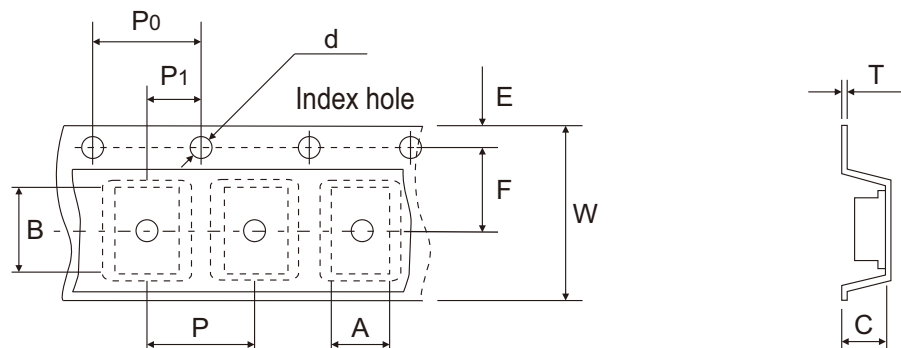
Fig. 4 - Power rating derating curve



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REV:E

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

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

Marking Code

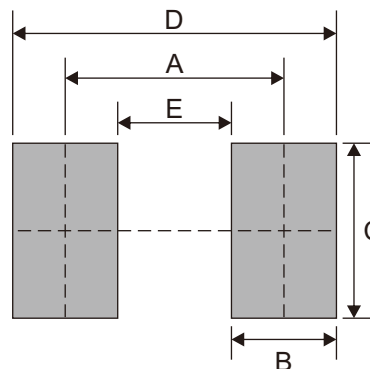
Part Number	Marking Code
CPDUR5V0-HF	E05
CPDUR12V-HF	E12
CPDUR24V-HF	E24



xxx = Product type marking code

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