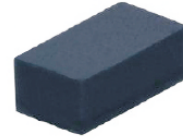


CPDUR5V0HE-HF

RoHS Device

Halogen Free



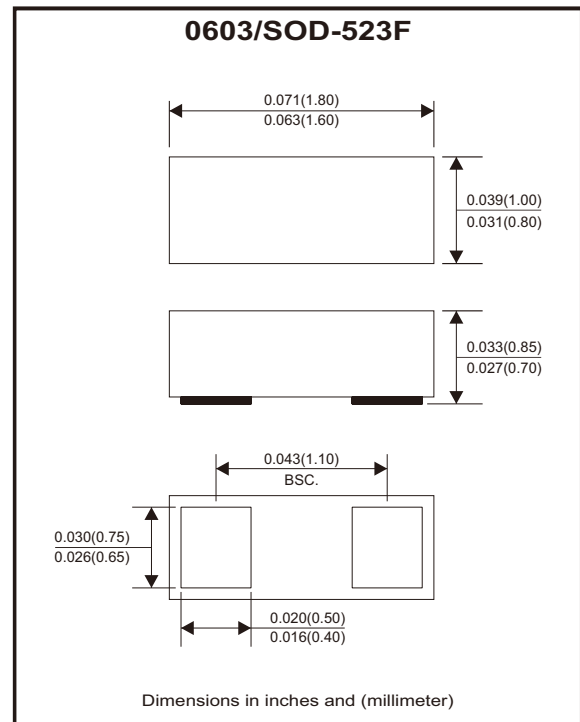
Features

- Bi-directional ESD protection.
- IEC 61000-4-5 (surge) ; $I_{PP}=8A$.
- IEC 61000-4-2 (ESD) ; $\pm 30KV$ (contact).
- Low clamping voltage.
- Low leakage current.
- High surge current.

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 (at $T_A=25^{\circ}C$ unless otherwise noted)

Parameter	Conditions	Symbol	Value	Unit
Peak pulse power	$T_P = 8/20\mu s$	P_{PP}	128	W
Peak pulse current	$T_P = 8/20\mu s$	I_{PP}	8	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	± 30	kV
Operating temperature range		T_j	$-40 \sim +125$	$^{\circ}C$
Storage temperature range		T_{STG}	$-55 \sim +150$	$^{\circ}C$

Electrical Characteristics (at $T_A=25^{\circ}C$ unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Working peak reverse voltage		V_{RWM}			5	V
Breakdown voltage	$I_T = 1mA$	V_{BR}	5.5	7.0		V
Reverse leakage current	$V_{RWM} = 5V$	I_R		0.1	1.0	μA
Clamping voltage	$I_{PP} = 1A, T_P = 8/20\mu s$ $I_{PP} = 8A, T_P = 8/20\mu s$	V_C			11 16	V
Junction capacitance	$V_R = 0V, f = 1MHz$	C_J		15	20	pF

Rating and Characteristic Curves (CPDUR5V0HE-HF)

Fig.1 - 8/20μs Peak Pulse Current WaveForm Acc. IEC 61000-4-5

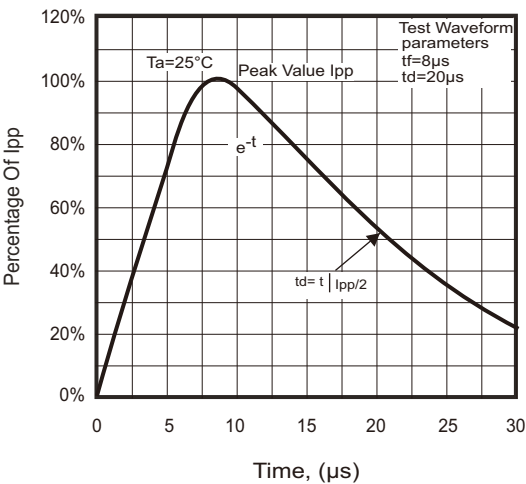


Fig.2 - Typical Capacitance Between Terminals Characteristics

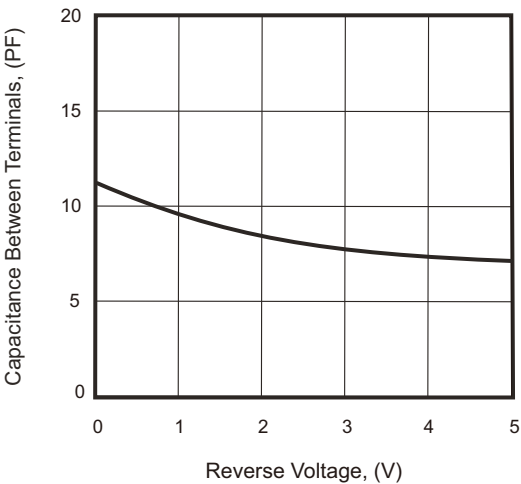


Fig.3 - Clamping Voltage Vs. Peak Pulse Current

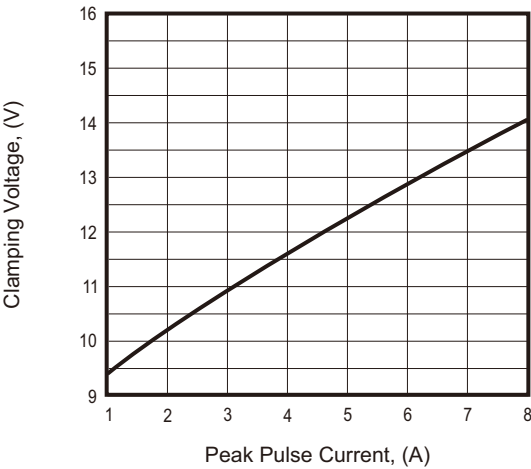
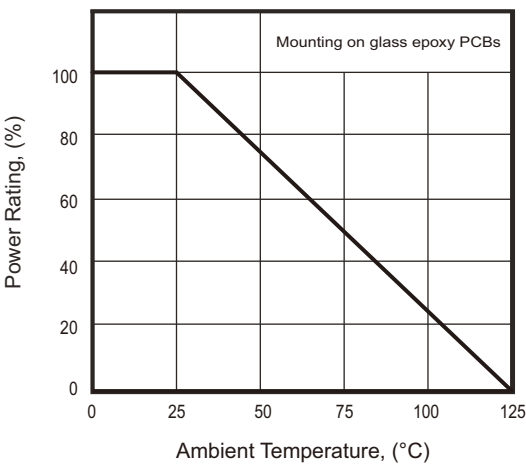
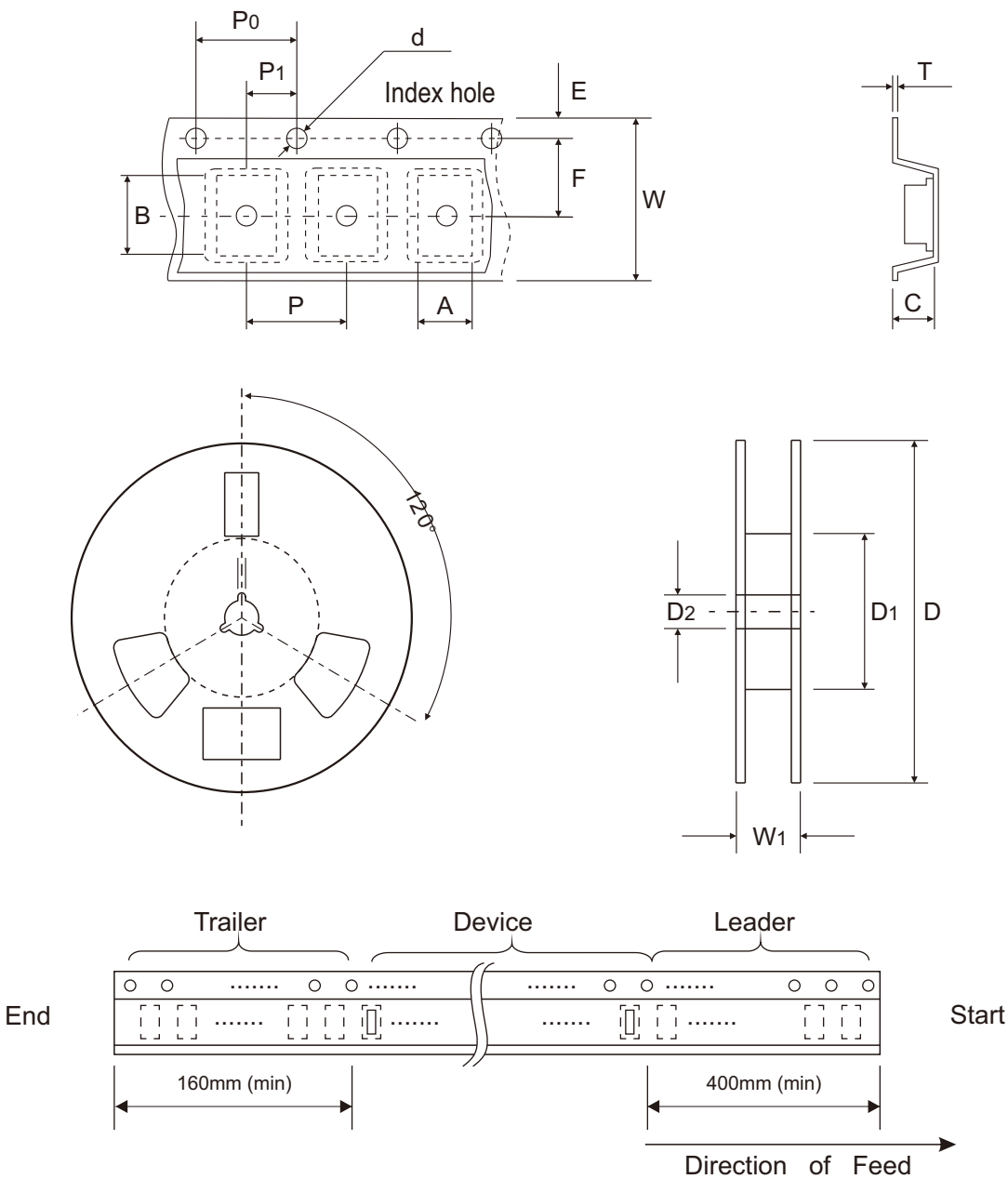


Fig.4 - Power Rating Derating Curve



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

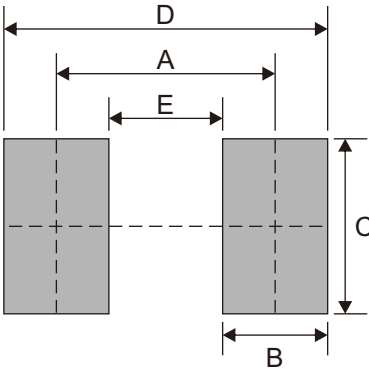
Marking Code

Part Number	Marking Code
CPDUR5V0HE-HF	E05

E05

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