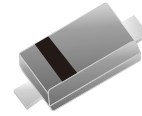


CPDH3V3MUA-HF

RoHS Device

Halogen Free



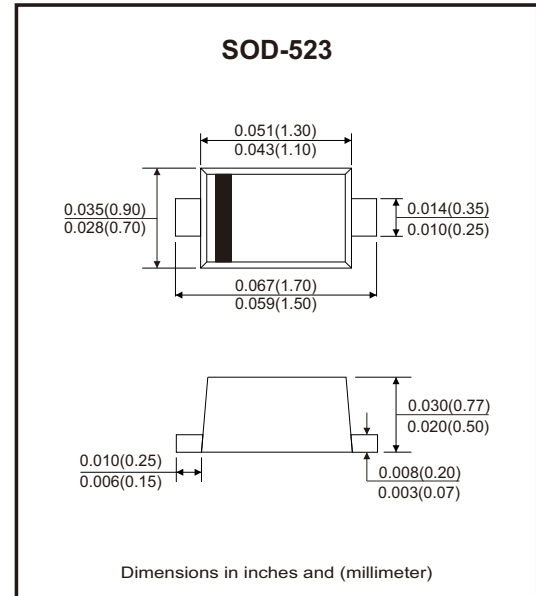
Features

- Protects one I/O or power line.
- Low clamping voltage.
- Low leakage current.
- IEC 61000-4-2 (ESD) $\pm 30\text{kV}$ (air/contact)
- IEC 61000-4-4 (EFT) 80A (5/50ns)
- IEC 61000-4-5 (Lightning) 22A (8/20 μs)

Mechanical data

- Case: SOD-523 package, molded plastic.
- Polarity: Indicated by cathode band.
- Mounting position: Any.

Circuit Diagram



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

Parameter	Conditions	Symbol	Value	Unit
Peak pulse power	$T_P = 8/20\mu\text{s}$	P_{PP}	308	W
Peak pulse current	$T_P = 8/20\mu\text{s}$	I_{PP}	22	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	± 30	kV
Operating temperature range		T_J	-55 to +125	°C
Storage temperature range		T_{STG}	-55 to +150	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse stand-off voltage		V_{RWM}			3.3	V
Breakdown voltage	$I_T = 1\text{mA}$	V_{BR}	4			V
Reverse leakage current	$V_{RWM} = 3.3\text{V}$	I_R			1	μA
Forward voltage	$I_F = 10\text{mA}$	V_F	0.5		1	V
Clamping voltage	$I_{PP} = 22\text{A}$, $T_P = 8/20\mu\text{s}$	V_C		10.2	14	V
Clamping voltage	$TLP = 16\text{A}$, $T_P = 100\text{ns}$	V_C		8.8		V
Junction capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$	C_J		200	240	pF

Typical Rating and Characteristic Curves (CPDH3V3MUA-HF)

Fig.1 - Peak Pulse Power vs. Pulse Time

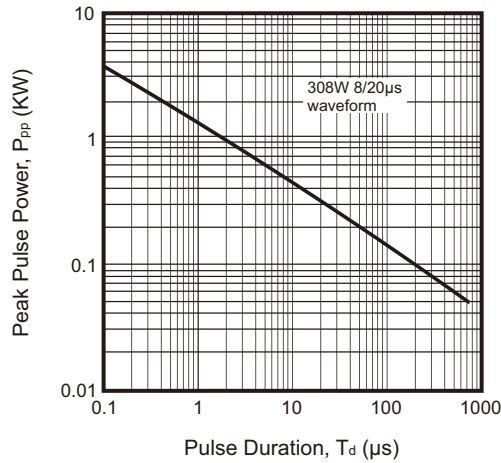


Fig.2 - Power Derating Curve

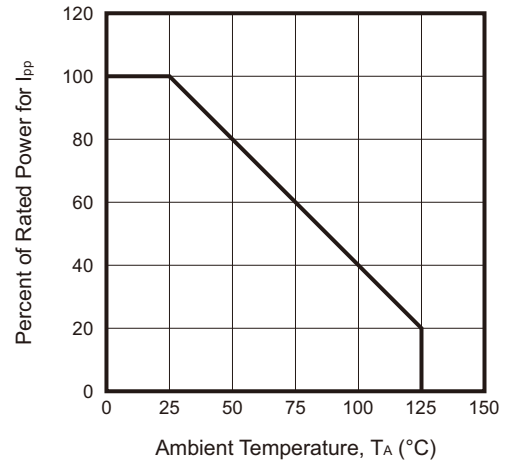


Fig.3 - Clamping Voltage vs. Peak Pulse Current

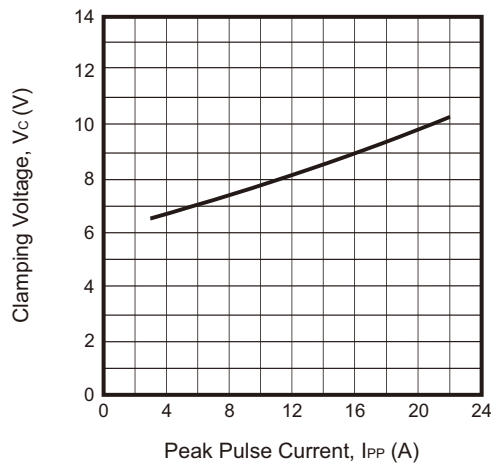


Fig.4 - Typical Capacitance Between Terminals Characteristics

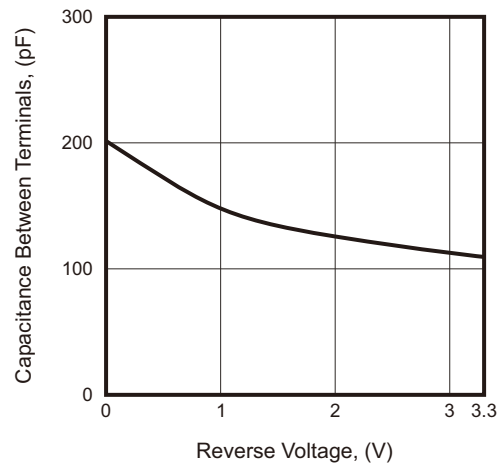


Fig.5 - 8/20 μs Peak Pulse Current Waveform Acc. IEC 61000-4-5

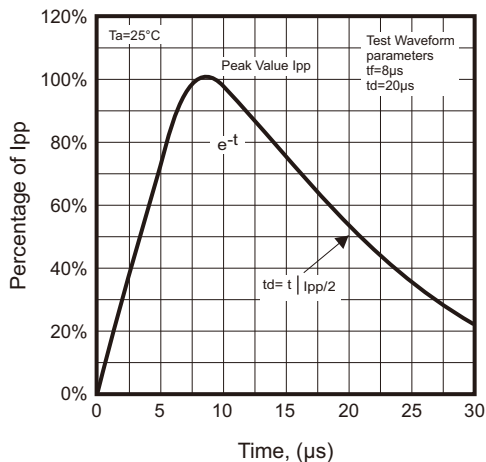
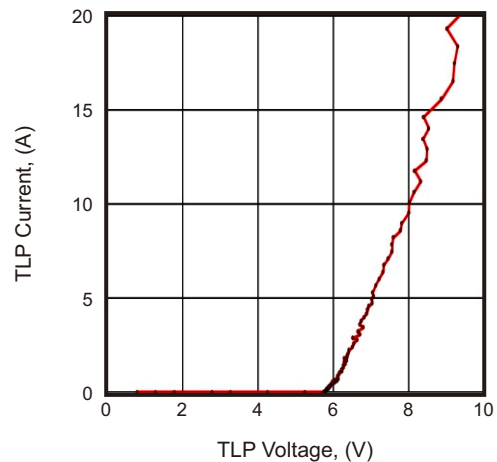
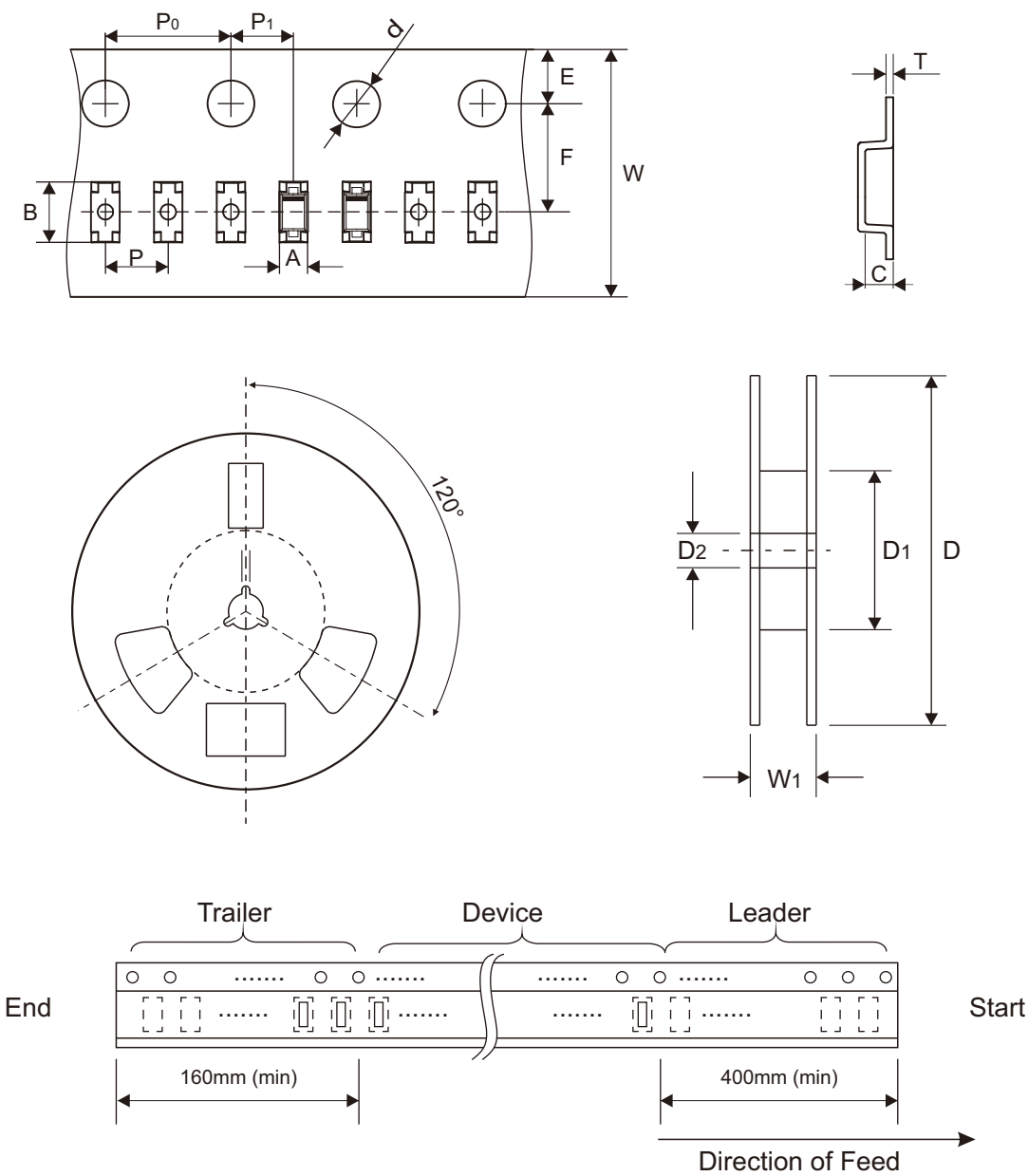


Fig.6 - TLP- Positive Pulse



Reel Taping Specification

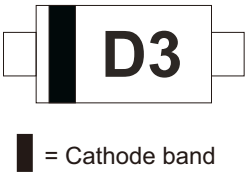


SOD-523	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	0.905 ± 0.105	1.95 ± 0.10	0.73 ± 0.10	1.55 ± 0.10	178.50 ± 2.50	53.00 ± 3.00	$13.00 + 0.50 - 0.20$
	(inch)	0.036 ± 0.004	0.077 ± 0.004	0.029 ± 0.004	0.061 ± 0.004	7.028 ± 0.098	2.087 ± 0.118	$0.512 + 0.020 - 0.008$

SOD-523	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	2.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.195 ± 0.035	$8.00 + 0.30 - 0.10$	13.75 ± 1.75
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.079 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.008 ± 0.001	$0.315 + 0.012 - 0.004$	0.541 ± 0.069

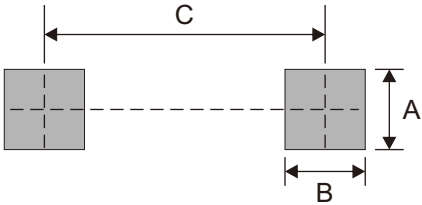
Marking Code

Part Number	Marking Code
CPDH3V3MUA-HF	D3



Suggested P.C.B. PAD Layout

SIZE	SOD-523	
	(mm)	(inch)
A	0.40	0.016
B	0.40	0.016
C	1.40	0.055



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-523	5,000	7