

CPDZC3V3U-HF

RoHS Device

Halogen Free



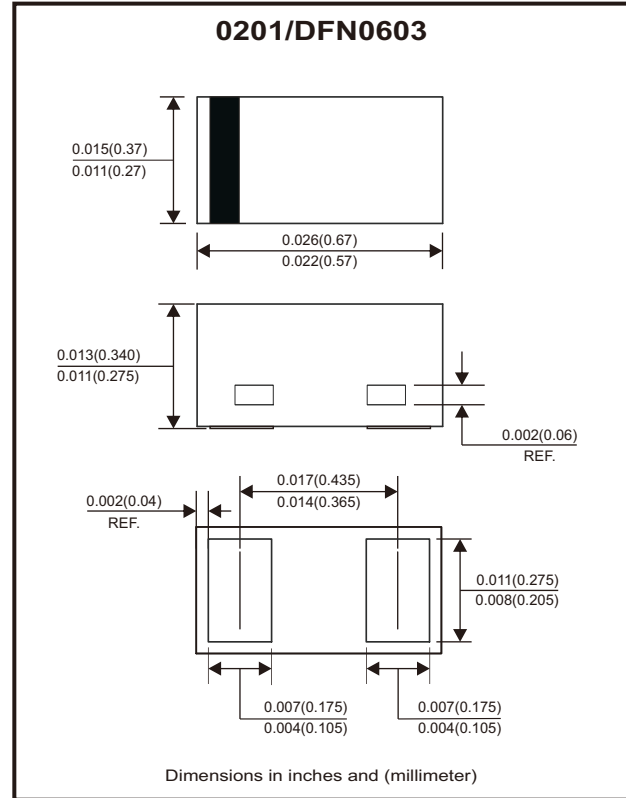
Features

- Uni-directional ESD protection.
- Surface mount package.
- Ultra small SMD package.
- High component density.
- Low clamping voltage.
- Low leakage.

Mechanical data

- Case: 0201/DFN0603 package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.
- Mounting position: Any.

Circuit Diagram



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

Parameter	Conditions	Symbol	Value	Unit
Peak pulse power	$T_P = 8/20\mu s$	P_{PP}	66	W
Peak pulse current	$T_P = 8/20\mu s$	I_{PP}	6	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	± 30	kV
Operating temperature range		T_j	-40~+125	°C
Storage temperature range		T_{STG}	-55~+150	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Working peak reverse voltage		V_{RWM}			3.3	V
Forward voltage	$I_F = 10mA$	V_F			1.2	V
Breakdown voltage	$I_T = 1mA$	V_{BR}	5.7	6.2	6.7	V
Reverse leakage current	$V_{RWM} = 3.3V$	I_R			0.1	μA
Clamping voltage	$I_{PP} = 1A, T_P = 8/20\mu s$ $I_{PP} = 6A, T_P = 8/20\mu s$	V_C			8 11	V
Clamping voltage	$I_{PP} = 8A, T_P = 100ns$ $I_{PP} = 16A, T_P = 100ns$	V_{CL}		10 12.8		V
Dynamic resistance		R_{DYN}		0.35		Ω
Junction capacitance	$V_R = 0V, f = 1MHz$	C_J		35		pF

Rating and Characteristic Curves (CPDZC3V3U-HF)

Fig.1 - 8/20 μ s Peak Pulse Current Waveform Acc. IEC 61000-4-5

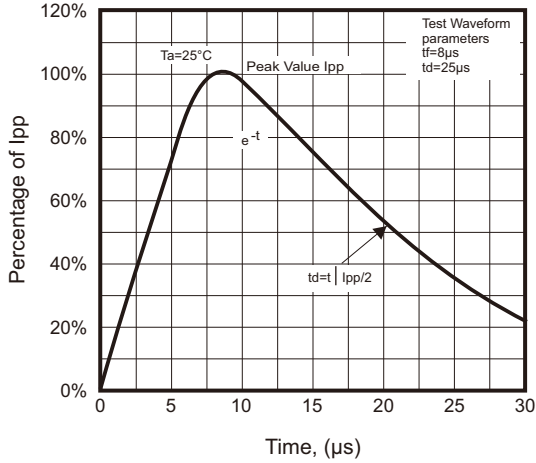


Fig.2 - Power Rating Derating Curve

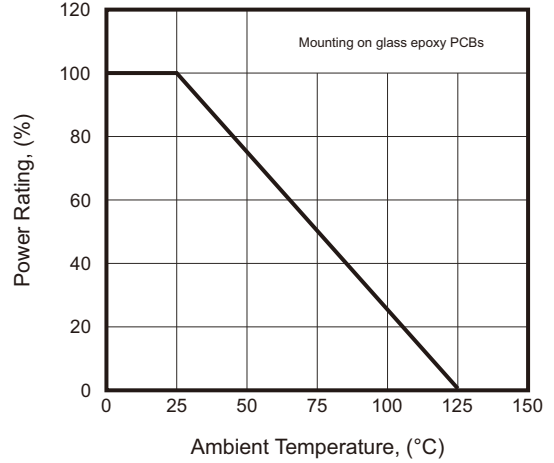


Fig.3 - Clamping Voltage Vs. Peak Pulse Current

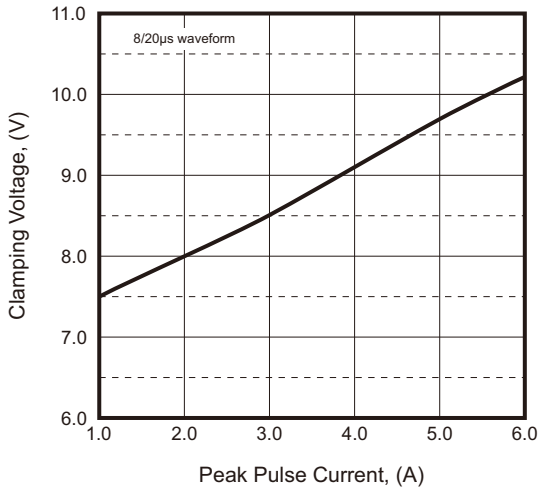


Fig.4 - Capacitance Between Terminals Characteristics

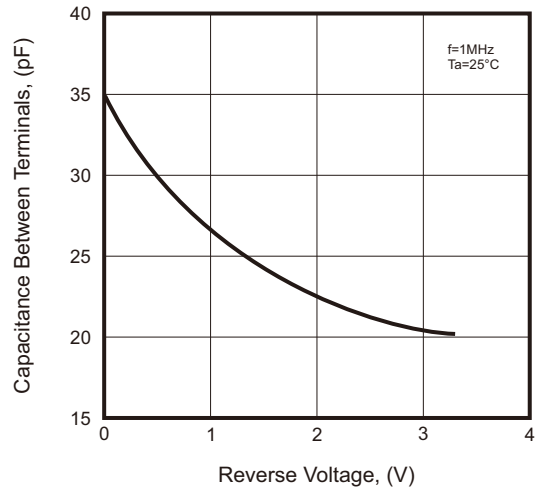
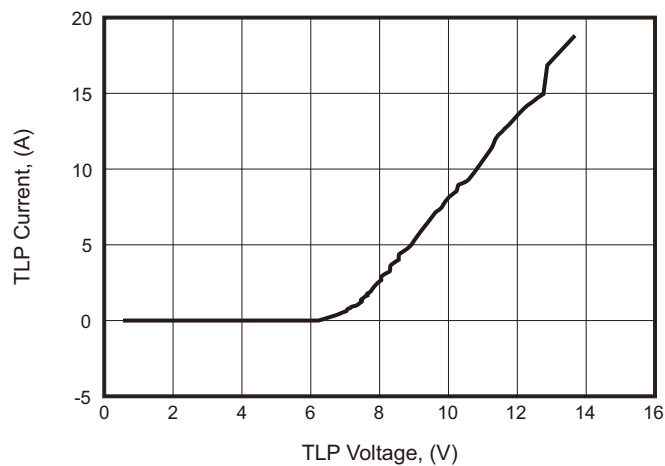
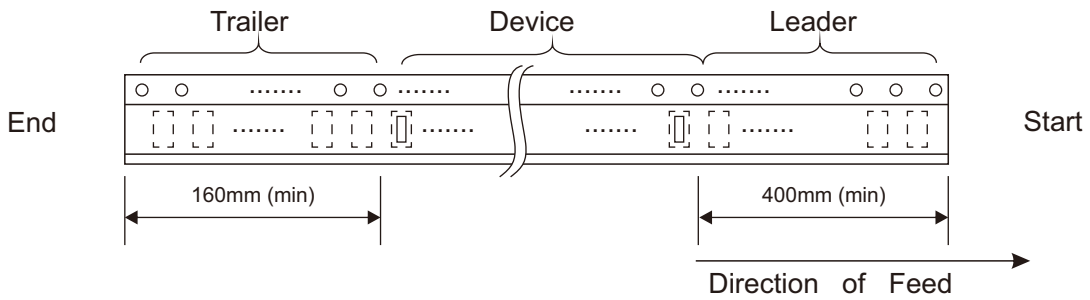
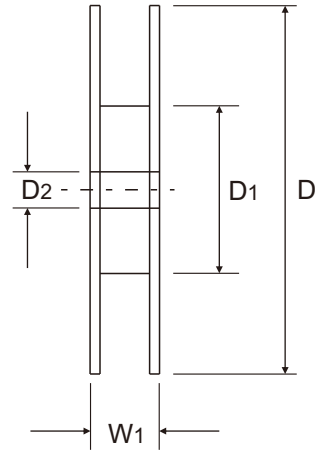
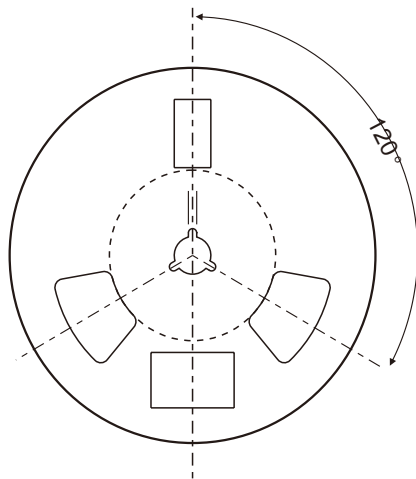
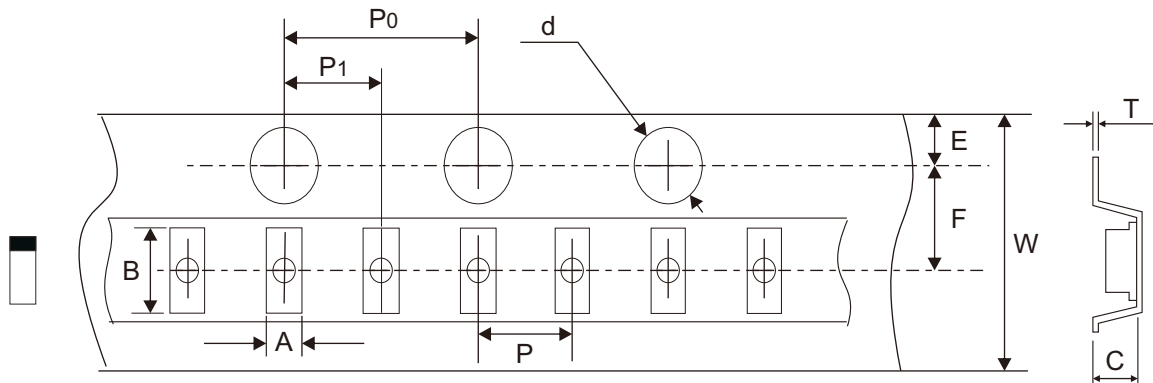


Fig.5 - Positive TLP IV Curve



Reel Taping Specification



0201 (DFN0603)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	0.44 ± 0.03	0.74 ± 0.03	0.40 ± 0.03	1.50 + 0.10 - 0.00	178.00 ± 1.00	60.00 ± 0.50	13.50 ± 0.20
	(inch)	0.017 ± 0.001	0.029 ± 0.001	0.016 ± 0.001	0.059 + 0.004 - 0.000	7.008 ± 0.039	2.362 ± 0.020	0.531 ± 0.008

0201 (DFN0603)	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	2.00 ± 0.05	4.00 ± 0.10	2.00 ± 0.05	0.20 ± 0.03	8.00 + 0.30 - 0.10	12.00 + 0.50 - 0.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.079 ± 0.002	0.157 ± 0.004	0.079 ± 0.002	0.008 ± 0.001	0.315 + 0.012 - 0.004	0.472 + 0.020 - 0.000