



DWOS3013PLA ESD Protection Diode

Feature

- Uni-directional ESD protection of one line
- 5700Watts peak pulse power ($t_p = 8/20\mu s$)
- Working voltage: 30V
- Junction Capacitance: 520pF(Typ)
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 160A (8/20 μs)

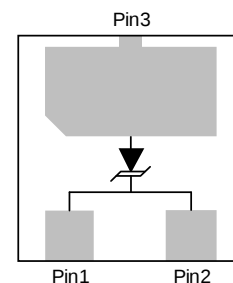
Application

- Power supply protection
- Handsets and Accessories
- Portable Instrumentation
- Industrial equipment
- Noetebooks,Desktops,and Servers

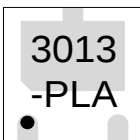
Mechanical Data

- Package: DFN2020-3L
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Ordering Information

Part Number	Package	Marking	Packing	Reel Size
DWOS3013PLA	DFN2020-3L		10000 Tape & Reel	7 inches



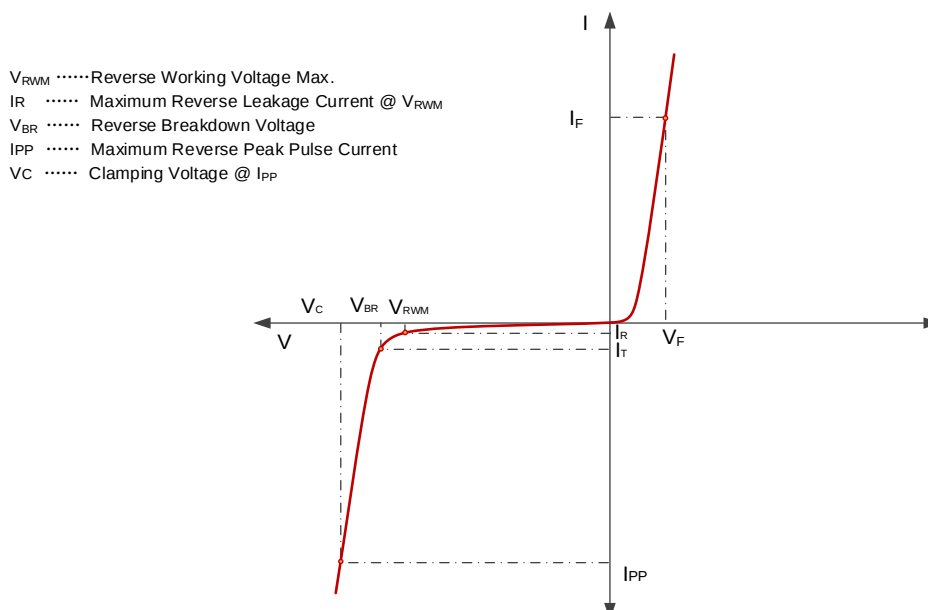
Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P_{PK}	5700	W
Peak Pulse Current (8/20 μs)	I_{PP}	160	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	± 30 ± 30	kV
Operating Temperature Range	T_J	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +125	$^{\circ}\text{C}$

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				30	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	32	36		V
Reverse Leakage Current	I_R	$V_{RWM} = 30\text{V}$			1	μA
Clamping Voltage	V_C	$I_{PP} = 160\text{A}$ (8 x 20 μs pulse)			36	V
Junction Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$		520	600	pF

Electrical Parameters





Typical Characteristics

Figure1: Pulse Waveform- 8/20 μ s(IEC61000-4-5)

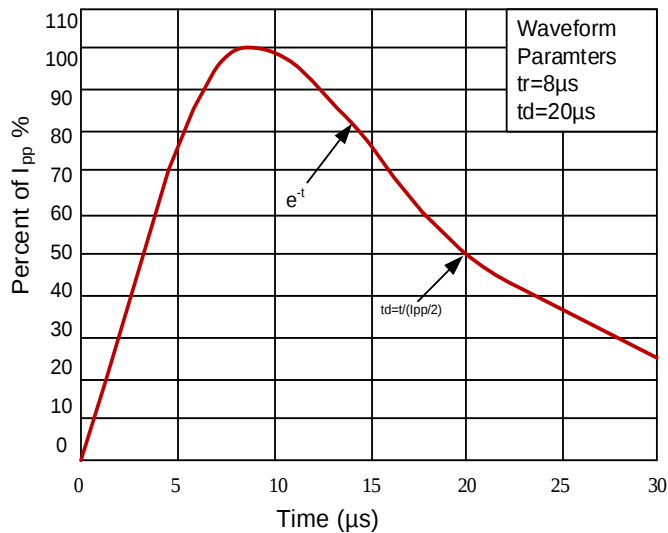


Figure 2: Power Derating Curve

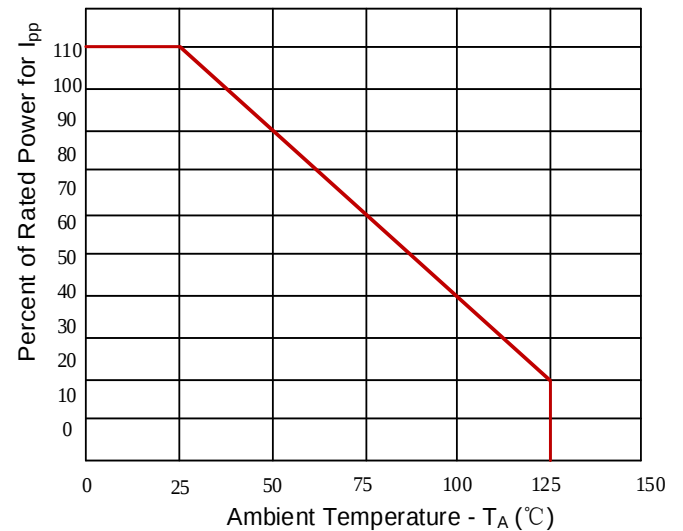


Figure3: Peak Pluse Power vs. Pluse Time

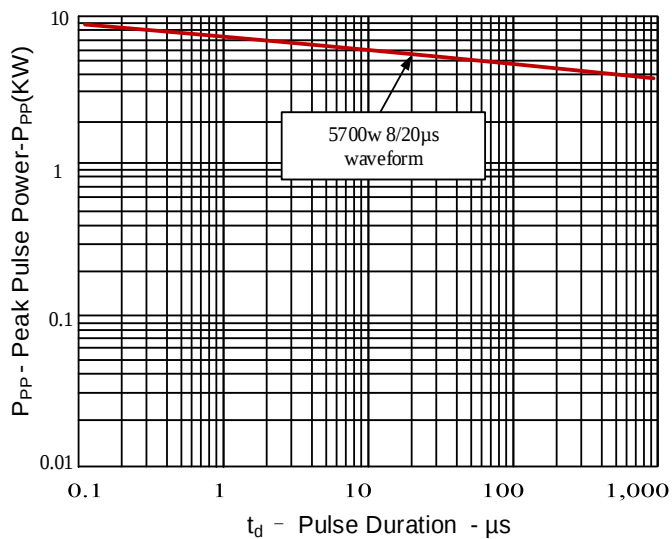
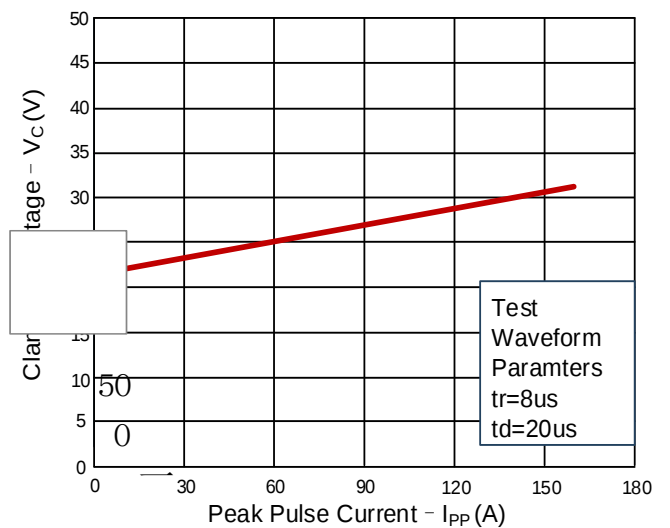
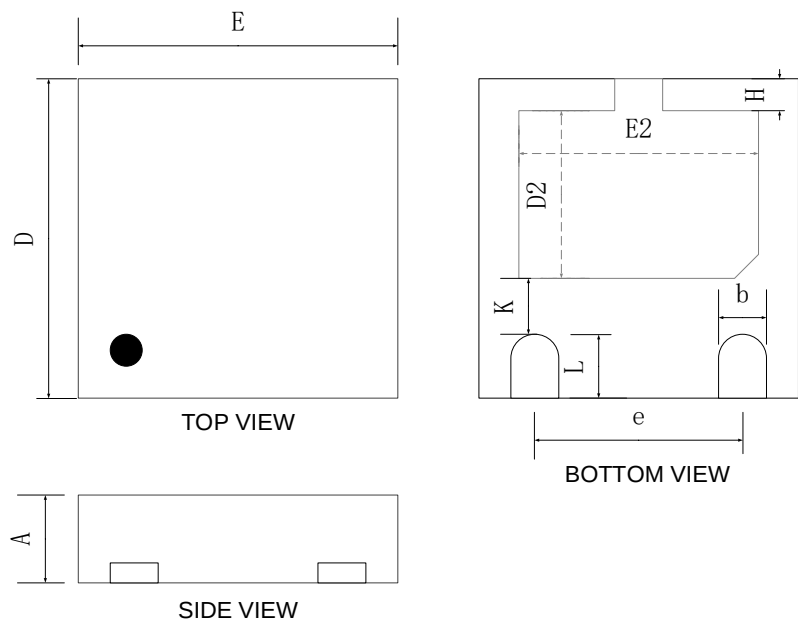


Figure4: Reverse Clamping Voltage vs. Peak Pulse Current





DFN2020-3L Outline Drawing



COMMON DIMENSION (MM)			
PKG	DFN2020-3		
REF.	MIN.	NOM.	MAX.
A	0.527	0.552	0.577
b	0.25	0.30	0.35
D	1.90	2.00	2.10
D2	0.95	1.05	1.15
E	1.90	2.00	2.10
E2	1.40	1.50	1.60
e	1.20	1.30	1.40
H	0.20	0.25	0.30
K	0.20	0.30	0.40
L	0.35	0.40	0.45