



DW24P4N3-S-Q ESD Protection Diode

Feature

- Uni-directional ESD protection of one line
- 5250Watts peak pulse power ($t_p = 8/20\mu s$)
- Working voltage: 24V
- Junction Capacitance: 550pF(Typ)
- Low clamping voltage
- Low leakage current
- AEC-Q101 qualified
- IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
- IEC 61000-4-5 (Lightning) 150A ($8/20\mu s$)

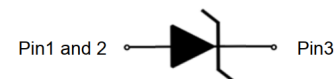
Application

- USB 2.0 and USB 3.0
- 10/100/1000 Ethernet
- Monitors and Flat Panel Displays
- Notebook Computers
- SIM ports
- ATM interface

Mechanical Data

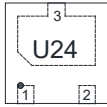
- Package: DFN2020-3L
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Circuit Diagram

Ordering Information

Part Number	Package	Marking	Packing	Reel Size
DW24P4N3-S-Q	DFN2020-3L		3000 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}	5250	W
Peak Pulse Current (8/20 μs)	I_{PP}	150	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	± 30 ± 30	kV
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Operating temperature	T_{OP}	-40 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^{\circ}\text{C}$
Lead temperature	T_L	260	$^{\circ}\text{C}$

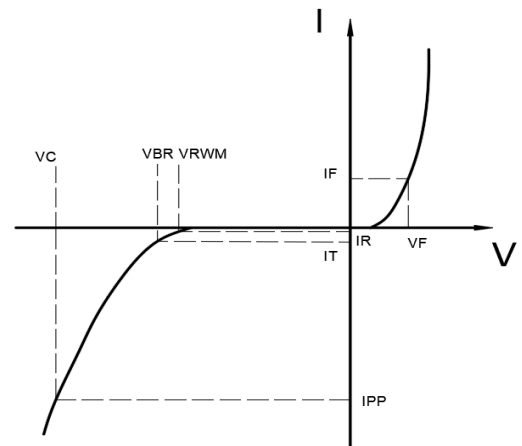
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				24	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	26			V
Reverse Leakage Current	I_R	$V_{RWM} = 24\text{V}$			1	μA
Holding Voltage	V_C	$I_{PP}=1\text{A}$; $t_p=8/20\mu\text{s}$		30	33	V
Clamping Voltage	V_C	$I_{PP} = 150\text{A}$; $t_p=8/20\mu\text{s}$		32	35	V
Junction Capacitance	C_J	I/O to GND; $V_R=0\text{V}$; $f=1\text{MHz}$		550	700	pF

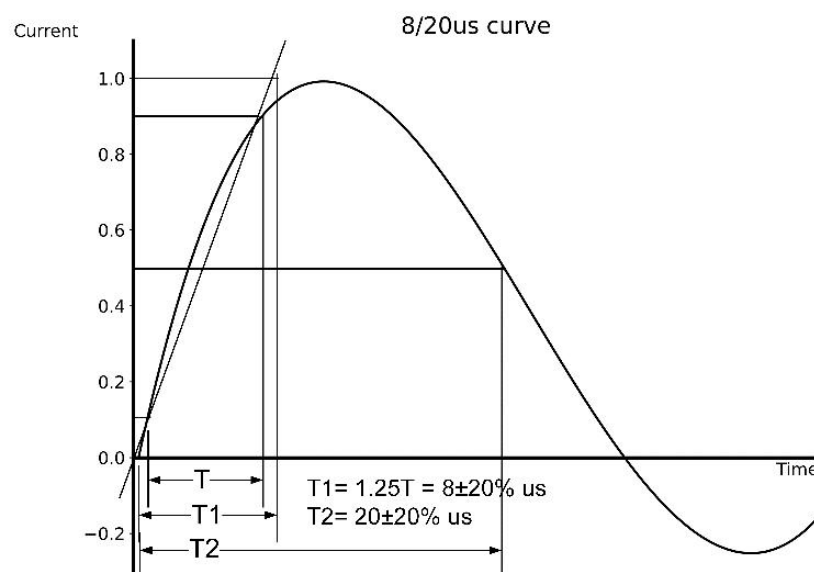


Electrical Parameters

Symbol	Parameters
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}

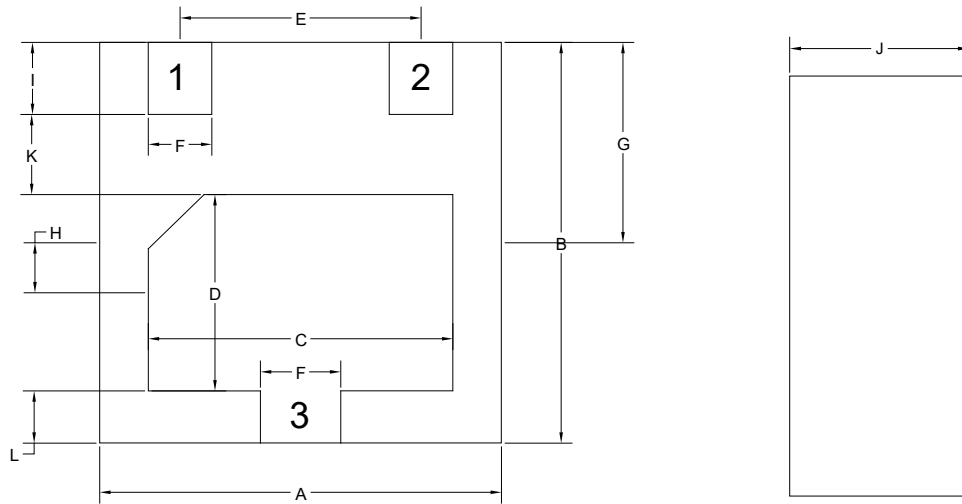


Typical Characteristics





DFN2020-3L Outline Drawing



Units: Millimeters

Dim	A	B	C	D	E	F	G	H	I	J	K	L
Min	1.90	1.90	1.40	0.90	1.30	0.25	0.95	0.20	0.35	0.55	0.30	0.15
Max	2.10	2.10	1.60	1.10	BSC	0.35	1.05	0.30	0.45		0.35	0.20