



DW3.3-8R2P-E ESD Protection Diode

Feature

- Uni-directional ESD protection of eight lines
- 75Watts peak pulse power ($t_p = 8/20\mu s$)
- Working voltage: 3.3V
- Junction Capacitance: 0.25pF(Typ I/O pin to I/O pin)
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 15kV$ contact $\pm 15kV$ air
- IEC 61000-4-5 (Lightning) 6A (8/20 μs)

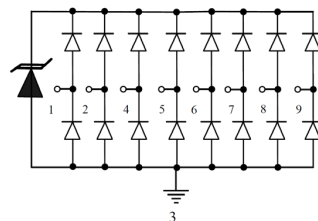
Application

- USB 2.0
- DVI and HDMI interfaces
- Mobile and cordless phones
- Personal Digital Assistants (PDA)
- Digital cameras
- PCs, notebooks, printers and other PC peripherals

Mechanical Data

- Package: DFN3810-9L
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Ordering Information

Part Number	Package	Marking	QTY per Reel	Reel Size
DW3.3-8R2P-E	DFN3810-9L	3V8U LOT	3000 pcs	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}	75	W
Peak Pulse Current (8/20 μs)	I_{PP}	6	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	± 15 ± 15	kV
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Operating temperature	T_{OP}	-40 to +125	$^{\circ}\text{C}$
Storage temperature	T_{STG}	-55 to +150	$^{\circ}\text{C}$
Lead temperature	T_L	260	$^{\circ}\text{C}$

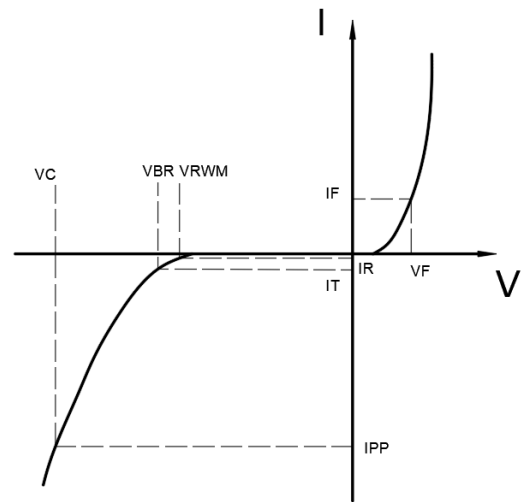
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				3.3	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	4.5		6	V
Reverse Leakage Current	I_R	$V_{RWM} = 3.3\text{V}$			1	μA
Clamping Voltage	V_C	$I_{PP}=1\text{A}$; $t_p=8/20\mu\text{s}$		6	8	V
Clamping Voltage	V_C	$I_{PP} = 6\text{A}$; $t_p=8/20\mu\text{s}$		9	12	V
Junction Capacitance	C_J	$V_R=0\text{V}$; $f=1\text{MHz}$ I/O pin to GND pin		0.5	0.7	pF
Junction Capacitance	C_J	$V_R=0\text{V}$; $f=1\text{MHz}$ I/O pin to I/O pin		0.25	0.35	pF

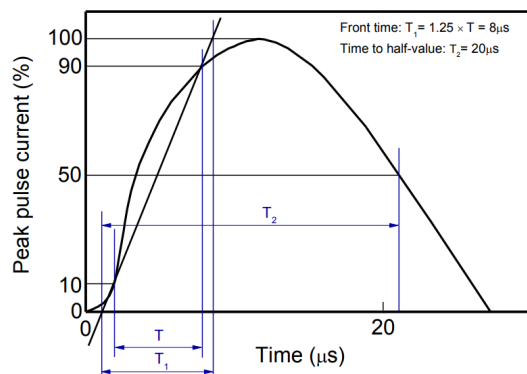


Electrical Parameters

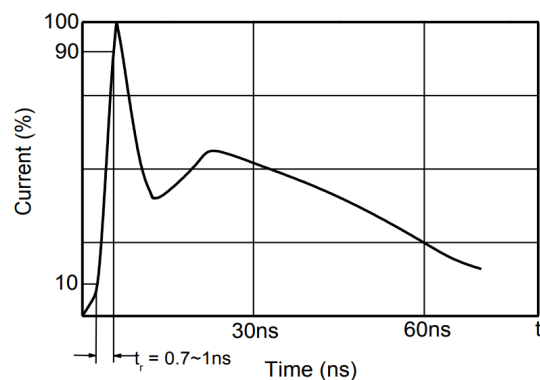
Symbol	Parameters
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
I_F	Forward Current
V_F	Forward Voltage @ I_F



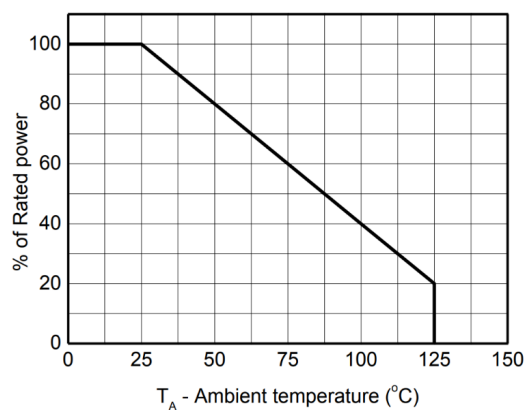
Typical Characteristics



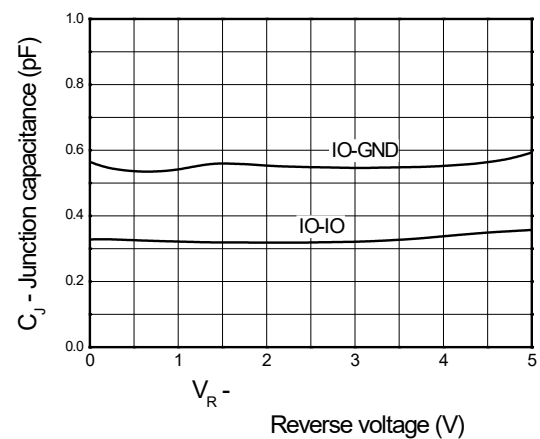
8/20μs waveform per IEC61000-4-5



Contact discharge current waveform per IEC61000-4-2



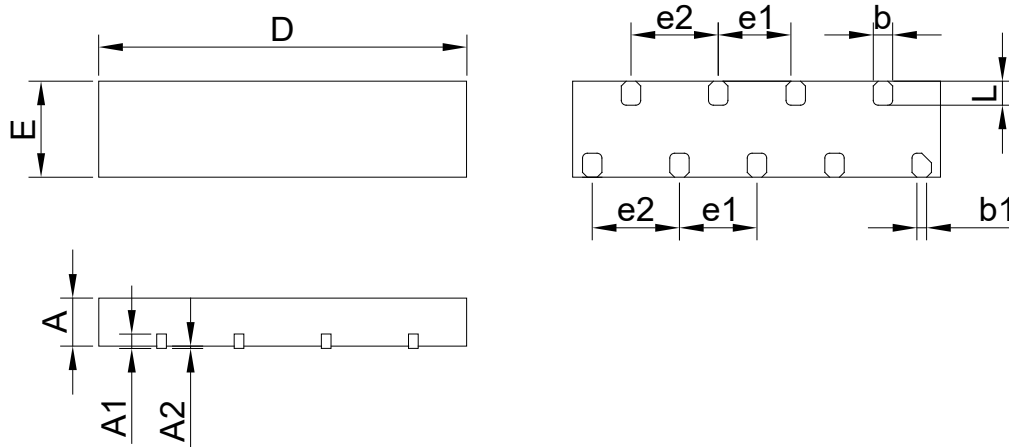
Power derating vs. Ambient temperature



Capacitance vs. Reverse voltage



DFN3810-9L Outline Drawing



Symbol	Dimensions in Millimeters		
	MIN	NOM	MAX
D	3.75	3.80	3.90
E	0.95	1.00	1.05
L	0.20	0.25	0.30
b	0.15	0.20	0.25
b1	0.05	0.10	0.15
e1	0.80BSC		
e2	0.90BSC		
A	0.45	0.50	0.55
A1	0.152REF		
A2	-	0.00	0.05