

Features

- ESD Protected For 8 High Speed I/O Channels
- Low Clamping Voltage
- Ultra Low Leakage Current
- Moisture Sensitivity Level 1
- Halogen Free. "Green" Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

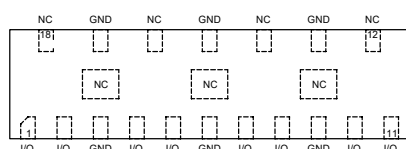
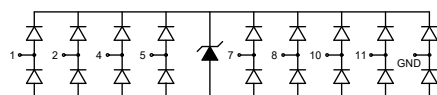
Maximum Ratings

IEC61000-4-2 (ESD)	Air	±20KV
	Contact	±20KV
Peak Pulse Current (8/20µs)	I _{PP}	3A
Peak Pulse Power (8/20µs) ^(Note2)	P _{PK}	45W
Operating Junction Temperature Range	T _J	-55°C to +125°C
Storage Temperature Range	T _{STG}	-55°C to +150°C

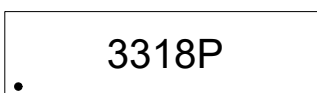
Note :

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. Non-repetitive current pulse 8/20 µs exponential decay waveform according to IEC61000-4-5.

Internal Structure

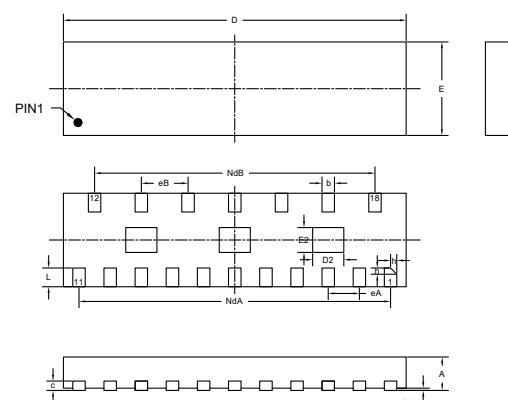


Marking Code



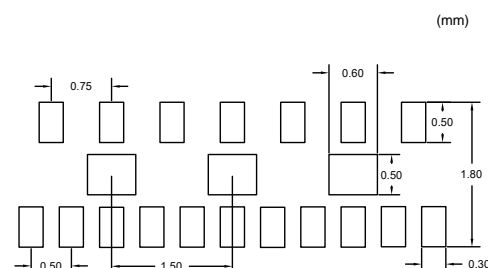
ESD Protection Device

DFN5515-18

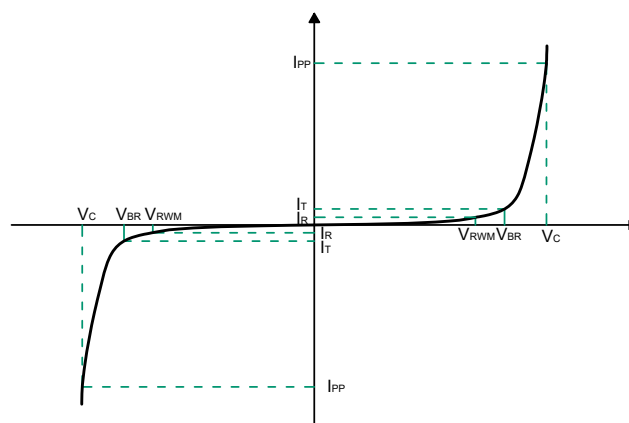


DIMENSIONS					
	INCH		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.018	0.022	0.450	0.550	
A1	0.000	0.002	0.010	0.050	
b	0.006	0.010	0.150	0.250	
c	0.004	0.008	0.100	0.200	
D	0.213	0.220	5.400	5.600	
D2	0.018	0.022	0.450	0.550	
NdA	0.197		5.000		TYP
eA	0.020		0.500		TYP
eB	0.030		0.750		TYP
NdB	0.177		4.500		TYP
E	0.055	0.063	1.400	1.600	
E2	0.014	0.018	0.350	0.450	
L	0.008	0.016	0.200	0.400	
h	0.002	0.006	0.050	0.150	

SUGGESTED SOLDER PAD LAYOUT



Symbol	Parameter
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}
P_{PK}	Peak Pulse Power
C_J	Junction Capacitance



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	V_{RWM}				3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	3.5			V
Reverse Leakage Current	I_R	$V_{RWM}=3.3V$			0.2	μA
Clamping Voltage ^{Note1}	V_C	$I_{PP}=1A, t_p=8/20\mu s$			10	V
Clamping Voltage ^{Note1}	V_C	$I_{PP}=3A, t_p=8/20\mu s$			15	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$		0.25		pF
Dynamic Resistance ^{Note2}	R_{DYN}	TLP, $t_p=100ns$		0.9		Ω

Note :

1.Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5.

2.TLP parameter: $Z_0=50\Omega$, $t_p=100ns$, $t_r=2ns$, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A.

Curve Characteristics

Fig. 1 - 8 X 20 μ s Pulse Waveform

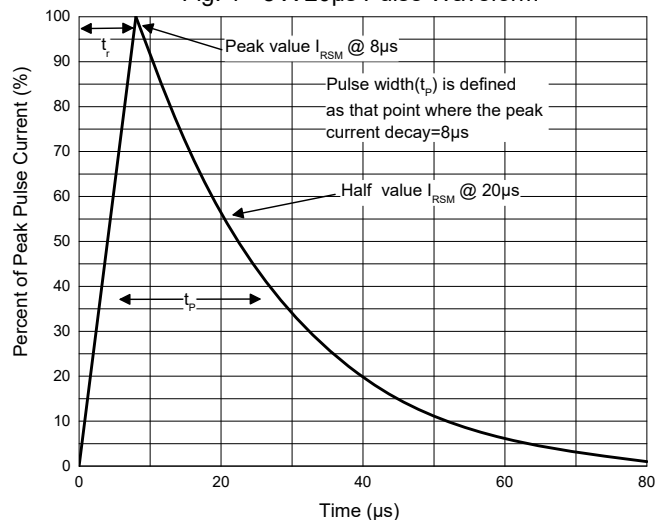


Fig. 2 - Non-Repetitive Peak Pulse Power

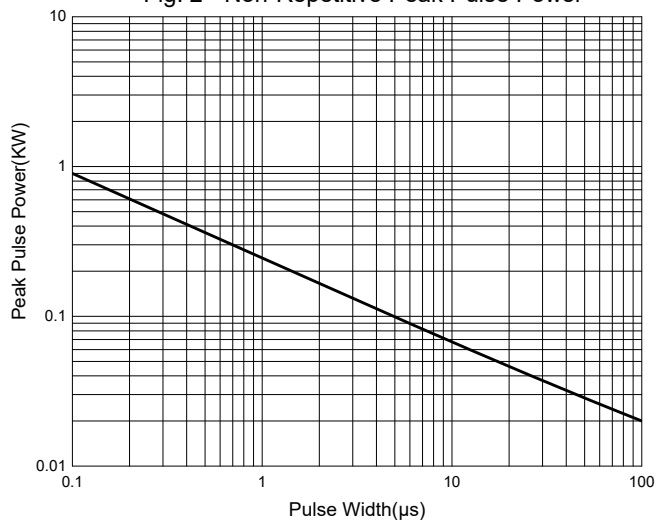


Fig. 3 - Capacitance Characteristics

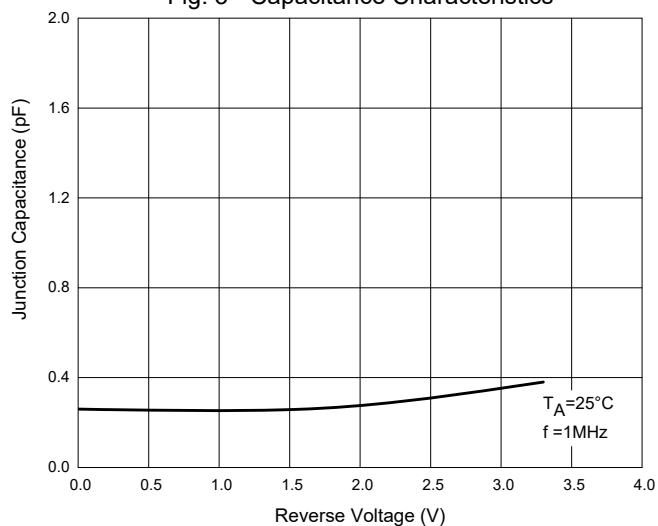


Fig. 4 - Clamping Voltage Characteristics

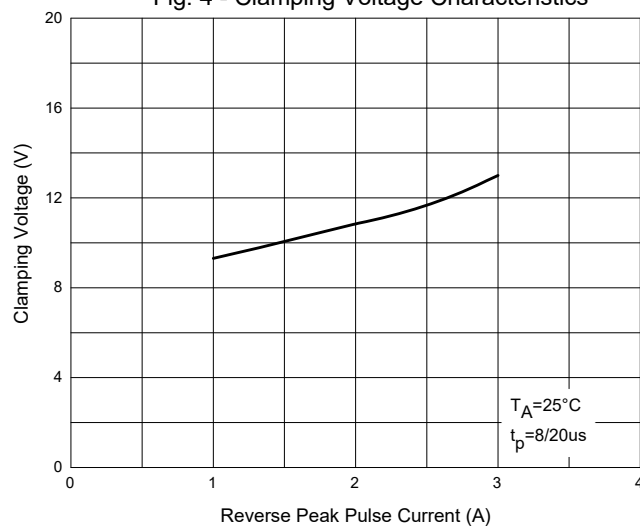


Fig. 5 - TLP Curve

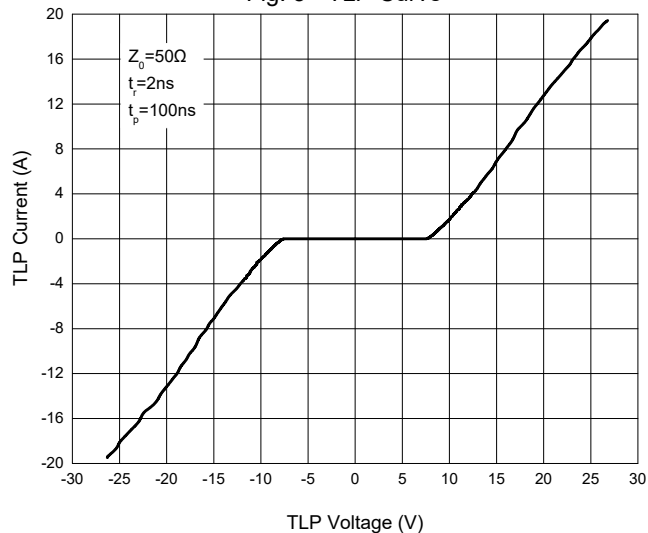
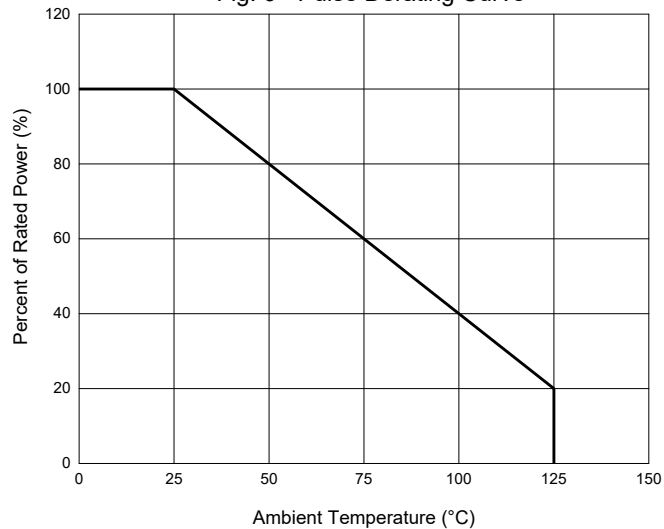


Fig. 6 - Pulse Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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