# Features

- Protects One Data or Power Line
- Ultra Low Clamping Voltage
- Ultra Low Leakage: nA Level
- Halogen Free. "Green" Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C
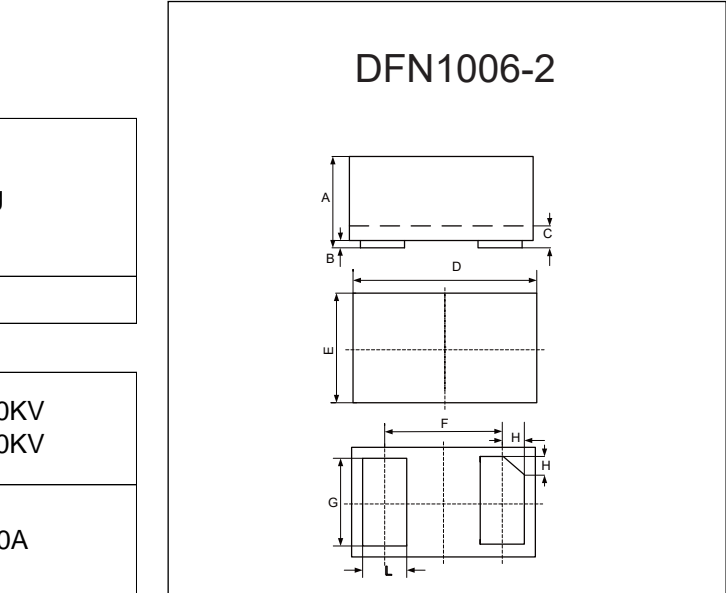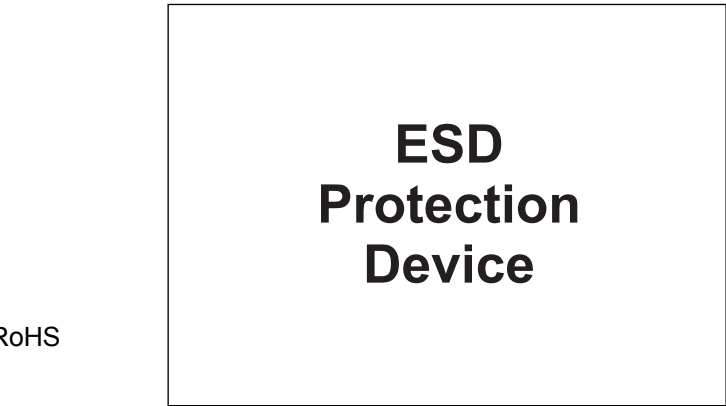
MCC Part Number	Device Marking
ESDLC3V3L	3P

IEC61000-4-2(ESD)	Air Contact	±30KV ±30KV
IEC61000−4−4 (EFT) @5/50ns		40A
IEC61000-4-5(Surge) @8/20us	I_{PP}	10A
Peak pulse power(tp=8/20us)	P_{PP}	150W

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Circuit and Pin Schematic

ESD Protection Device

DFN1006-2

DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.018	0.022	0.45	0.55	
B	0.000	0.002	0.00	0.05	
C	0.005	0.007	0.12	0.18	
D	0.037	0.041	0.95	1.05	
E	0.022	0.026	0.55	0.65	
F	0.026		0.650		TYP.
G	0.018	0.022	0.45	0.55	
H	0.003	0.007	0.07	0.17	
L	0.008	0.012	0.20	0.30	

SUGGESTED SOLDER PAD LAYOUT
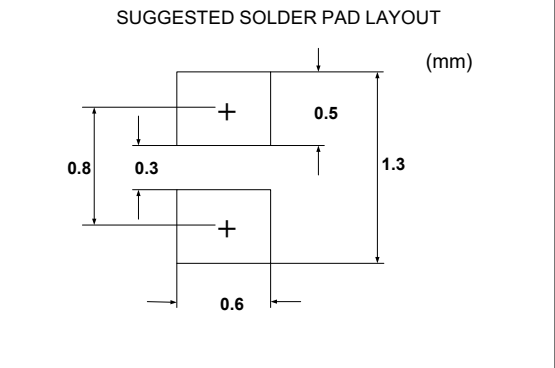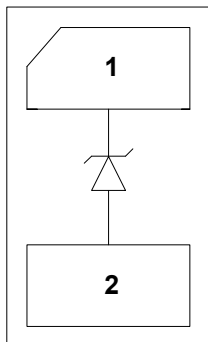
Electrical Characteristics per line @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}				3.3	V
Punch-Through Voltage	V_{PT}	$I_T=2\mu A$	3.5			V
Snap-Back Voltage	V_{SB}	$I_T=50mA$	2.8			V
Reverse Leakage Current	I_R	$V_{RWM}=3.3V$			0.5	μA
Clamping Voltage	V_C	$I_{PP}=1A, t_P=8/20\mu s$		7		V
Clamping Voltage	V_C	$I_{PP}=10A, t_P=8/20\mu s$			15	V
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz$		22	30	pF
Junction Capacitance	C_J	$V_R = 3.3V, f = 1MHz$		14	20	pF

Curve Characteristics

Fig. 1 - 8 X 20µs Pulse Waveform

Peak value I_{RSM} @ 8µs

Pulse width(t_p) is defined
as that point where the peak
current decay=8µs

Half value I_{RSM} @ 20µs

t_r

t_P

Percent of Peak Pulse Current (%)

Time (µs)
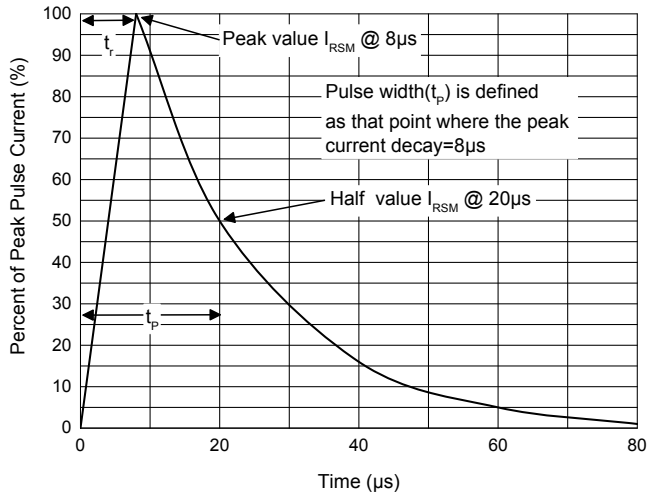
Fig. 2 - Pulse Derating Curve

Percent of Rated Power (%)

Ambient Temperature (°C)
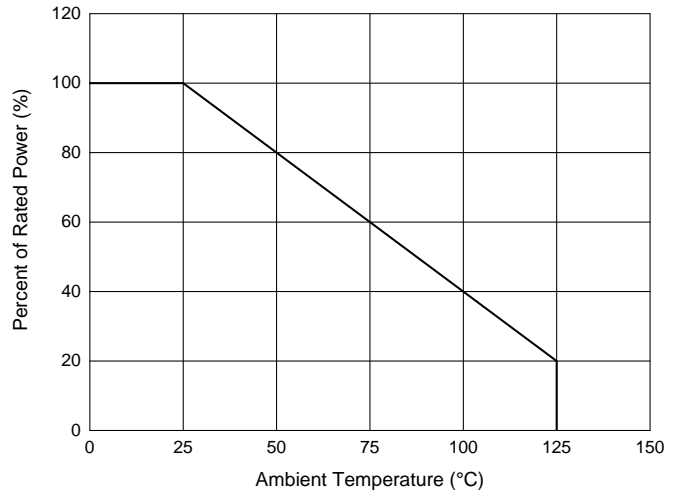
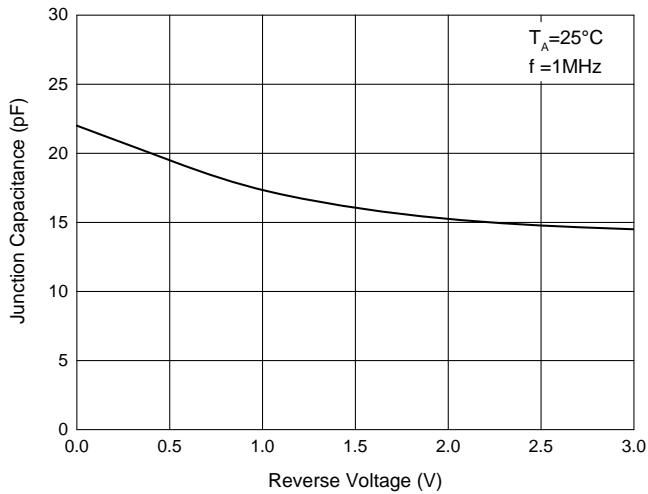Fig. 3 - Capacitance Characteristics

T_A=25°C
f =1MHz

Junction Capacitance (pF)

Reverse Voltage (V)

Fig. 4 - Clamping Voltage Characteristics

T_A=25°C
t_p=8/20us

Clamping Voltage (V)

Reverse Peak Pulse Current (A)