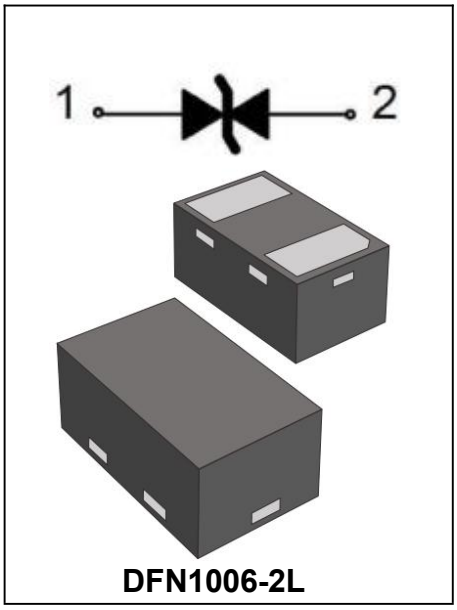
JSUN2C031V

TVS Diode Array

Features

- Ultra-low Capacitance 1 8 pF
- Low Clamping Voltage
- Small Body Outline Dimensions: 0.039″ x 0.024″ (1.0 mm x0.60 mm)
- Low Body Height: 0.019″ (0.5 mm)
- Stand−off Voltage: 3.3V
- Low Leakage
- Response Time is Typically < 1 ns
- IEC61000−4−2 Level 4 ESD Protection for data lines
- These are Pb−Free Devices



DFN1006-2L

Applications

- 10/100/1000 Mbits/s Ethernet
- FireWire
- Display ports
- MDDI ports
- Digital Visual Interface (DVI)
- Cellular handsets & accessories
- Computer and peripherals

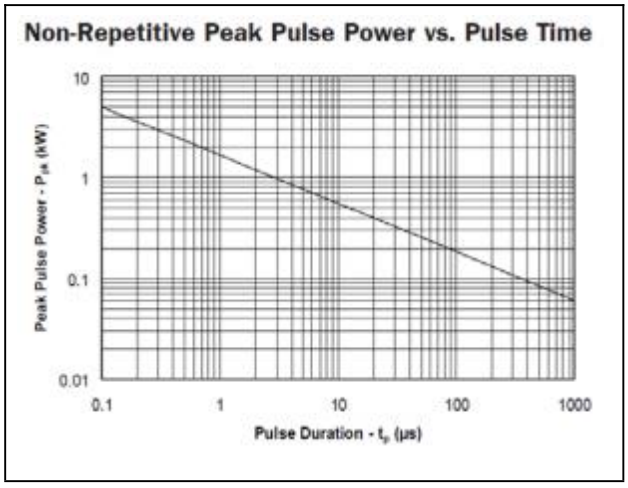
Maximum Rating @ Ta=25℃ unless otherwise specified

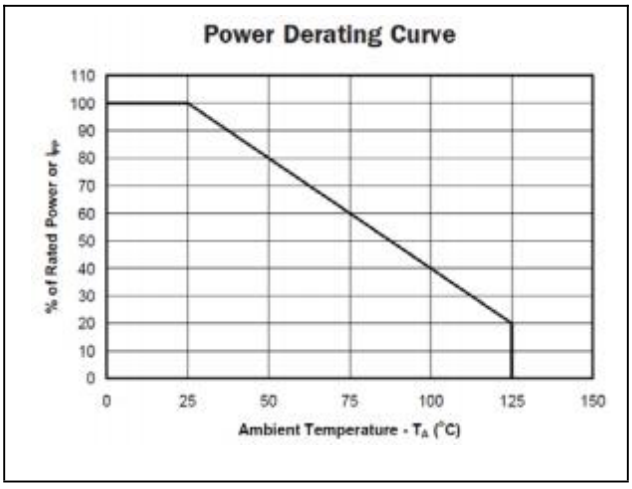
Symbol	Parameter		Ratings	Units
ESD	IEC 61000-4-2 (HBM-ESD)	Contact	±30	KV
		Air	±30	
T_L	Lead Soldering Temperature		260(10sec.)	℃
T_J	Operating Temperature		-55 to +125	℃
T_{STG}	Storage Temperature		-55 to +150	℃

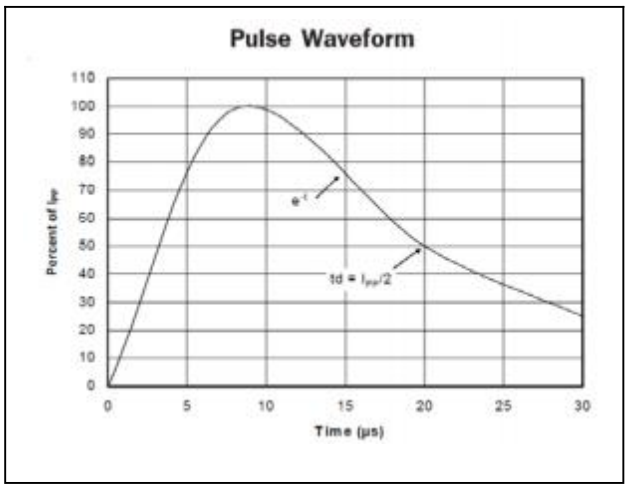
Electrical Characteristics@ Ta=25℃ unless otherwise

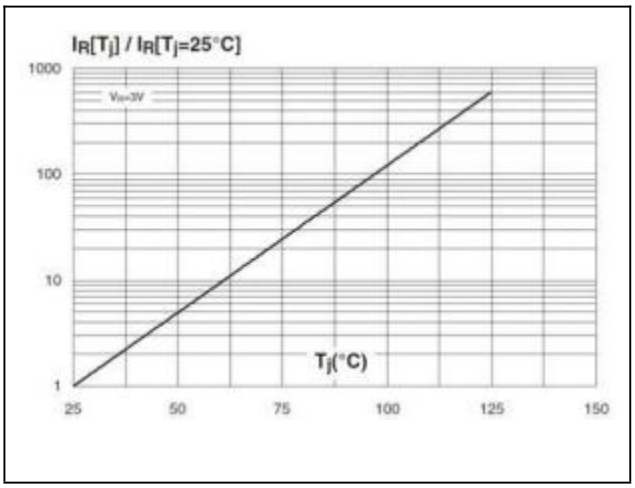
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
V_{RWM}	Reverse Working Voltage				3.3	V
V_{BR}	Reverse Breakdown Voltage	I_T = 1mA,	3.5	4.1	5	V
I_R	Reverse Leakage Current	V_{RWM} = 5V			0.5	μA
V_C	Clamping Voltage	I_{PP} = 1 A, tp =8/20μs			6.5	V
		I_{PP} = 1 0 A , tp =8/20μs			13	V
C_J	Junction Capacitance	V_R = 0V, f = 1MHz		18		pF

Typical Characteristics@ Ta=25℃ unless otherwise specified



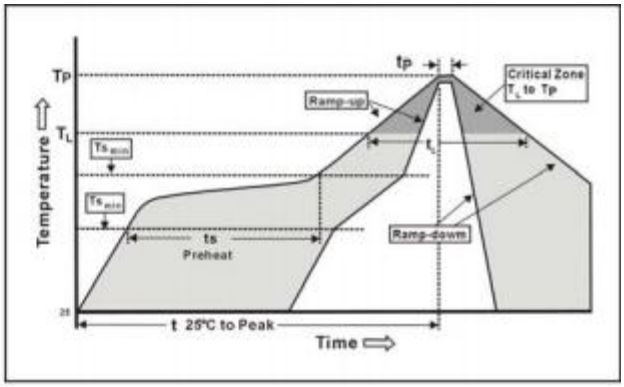



Pulse Waveform
Percent of Ipp
110
100
90
80
70
60
50
40
30
20
10
0
0
5
10
15
20
25
30
Time (μs)
e-1
td = Ipp/2


IR[Tj] / IR[Tj=25°C]
1000
100
10
1
25
50
75
100
125
150
Tj(°C)

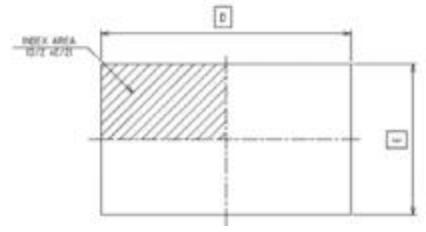
Soldering Parameters

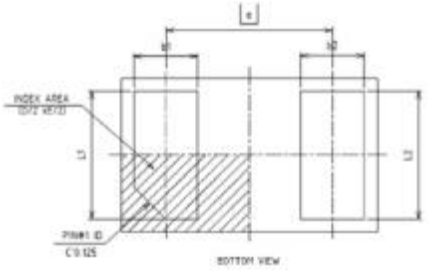
Reflow Condition		Fb – Free assembly
Pre Heat	-Temperature Min ($T_{s(Min)}$)	150°C
	-Temperature Max ($T_{s(Max)}$)	200°C
	-Time (Min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus) Temp (T_L) to peak		3°C/second Max
$T_{S(Max)}$ to T_L - Ramp-up Rate		3°C/second Max
Reflow	-Temperature (T_L) (Liquidus)	217°C
	-Temperature (t_L)	60 – 150 seconds
Peak Temperature (T_p)		250$^{+0/-5}$ °C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-dowm Rate		6°C/second Max
Time 25°C to peak Temperature (T_p)		8 minutes Max.
Do not exceed		260°C



Package Outline

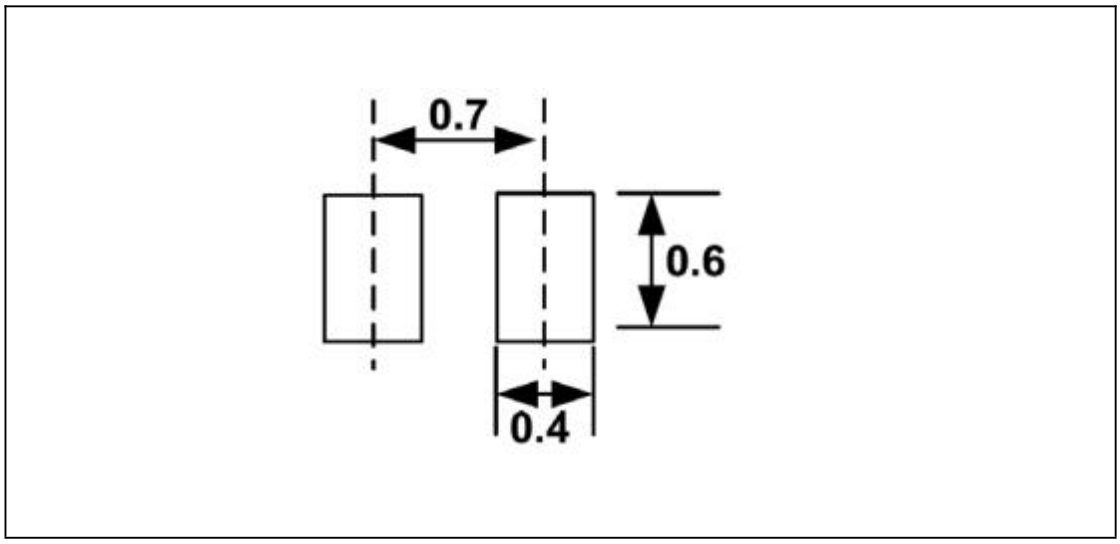
Plastic surface mounted package DFN 1006-2L





Symbol	Dimensions in mm		
	Min	Nom	Max
A	0.450	0.500	0.550
A1	0.000	0.002	0.050
D	0.950	1.000	1.050
E	0.550	0.600	0.650
e		0.650	
b1	0.200	0.250	0.300
b2	0.200	0.250	0.300
L1	0.450	0.500	0.550
L2	0.450	0.500	0.550

Soldering Footprint



Package And Marking Information

Device	Package	Shipping	Reel Size
JSUN2C031V	DFN1006-2L	10K/Reel	7 inch