

1. Applications

- Personal Digital Assistance
- Wireless System
- HDMI 2.0
- High Speed Data Line
- Ethernet 10/100/1000
- Tablet
- Set Top Box

2. Feature List

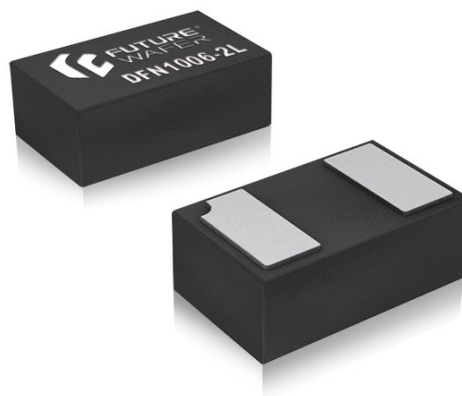
- With TVS Diode
- ESD Protection:Level 4
- Low Clamping Voltage @ $I_{PP} = 4A, V_C < 20V$
- 60 Watts Peak Pulse Power Per Line($t_p = 8/20\mu S$)
- Ultra Low Capacitance:0.5pf typ.

3. IEC Compatibility

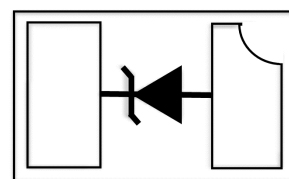
- EN61000-4
- 61000-4-2(ESD):Level 4,Contact:> $\pm 20KV$,Air:> $\pm 30KV$
- 61000-4-4(EFT):40A-5/50ns
- 61000-4-5(Surge):4A,8/20us

4. Mechanical Characteristics

- Molded JEDEC Package
- DFN 1006-2L
- Packing: Tape and Reel
- Flammability rating UL 94V-0
- Halogen Free
- JEDEC MSL Classification :Level 1



DFN1006-2L



5. Device Characteristics

Maximum Ratings@25°C Unless Otherwise Specified

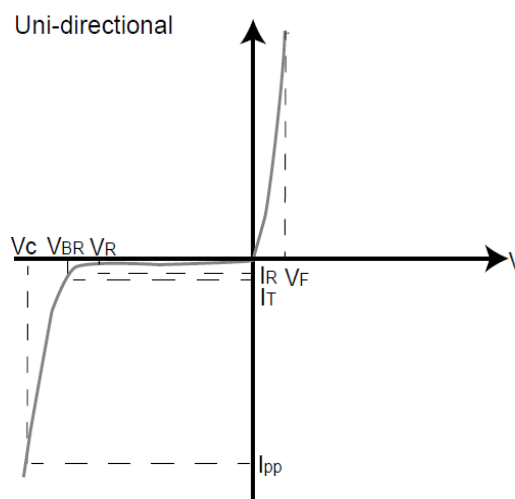
Parameter	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$) see fig 1.	P_{PP}	60	Watts
Operating Temperature	T_J	-55 ~150	°C
Storage Temperature	T_{STG}		

6. Electrical Characteristics

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}	-	-	-	5.0	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	6.0	-	9.0	
Clamping Voltage	V_C	$I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$	-	9	10	
		$I_{PP} = 2\text{A}, t_p = 8/20\mu\text{s}$	-	10	-	
		$I_{PP} = 4\text{A}, t_p = 8/20\mu\text{s}$	-	-	15	
Reverse Leakage Current	I_R	Pin to Pin, @ $V_R = 5\text{V}$	-	-	0.5	μA
Peak Pulse Current	I_{PP}	$T_p = 8/20\mu\text{s}$, Pin to Pin	-	-	4	A
Junction Capacitance	$C_{I/O-I/O}$	$V_{dc} = 0\text{V}, f = 1\text{MHz}$	-	0.5	0.65	pf

7. Electrical Characteristics $T_A = (25^\circ\text{C})$

Symbol	Parameter
V_{RWM}	Nominal Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Reverse Breakdown Voltage @ I_T
I_T	Test Current for Reverse Breakdown
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Maximum Peak Pulse Current
C_{ESD}	Parasitic Capacitance
V_R	Reverse Voltage
f	Small Signal Frequency



8. Electrical Characteristics $T_A = (25^\circ\text{C})$

Fig. 1 Non-Repetitive Peak Pulse Power v_s Pulse Time

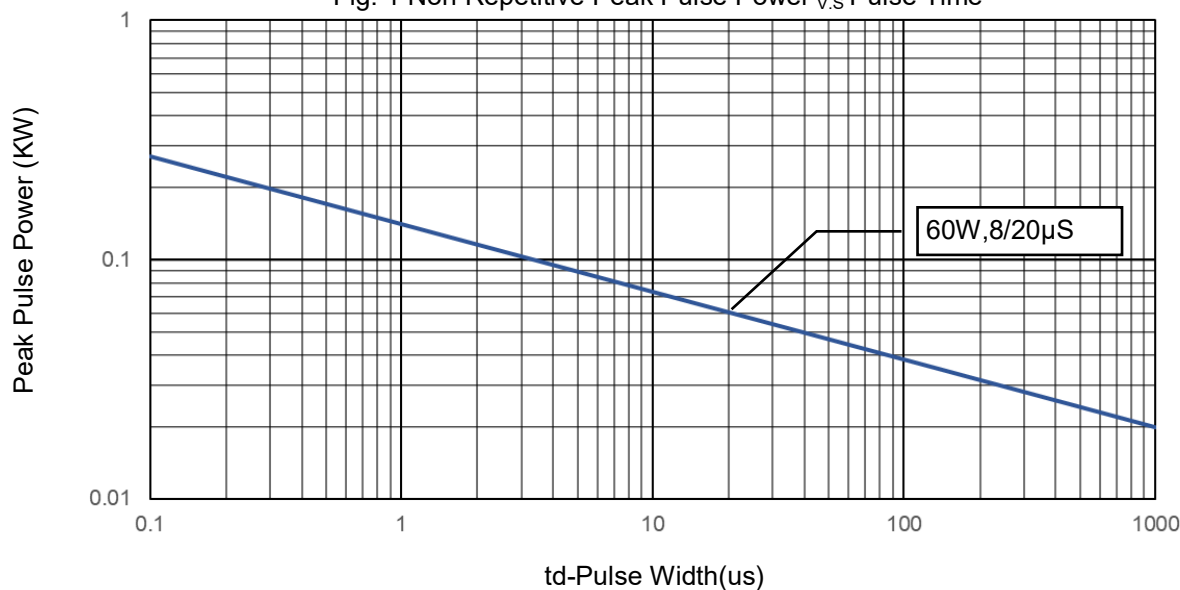


Fig. 2 V_C & I_{PP} Drawing

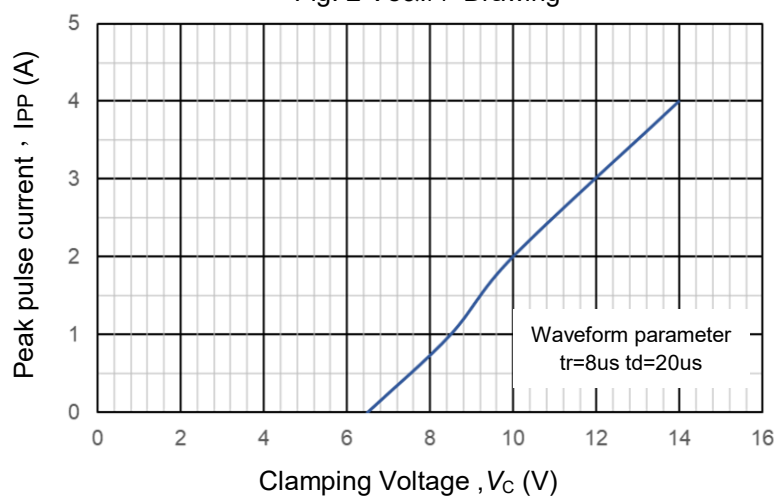


Fig. 3 Power Derating Curve

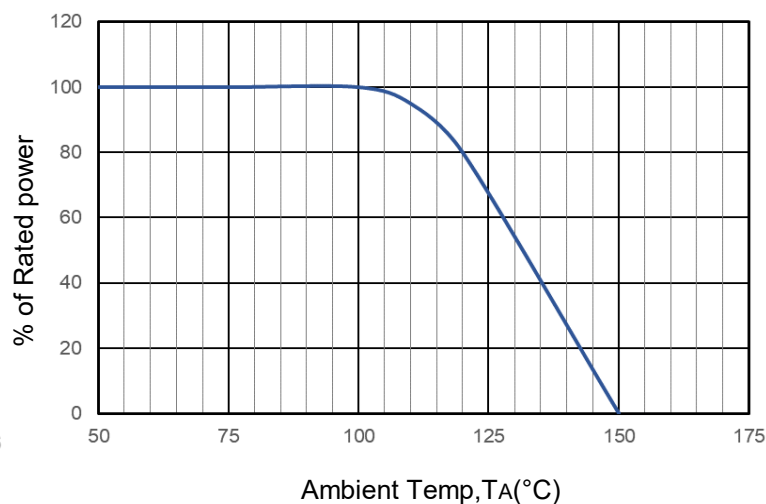


Fig. 4 Pulse Waveform

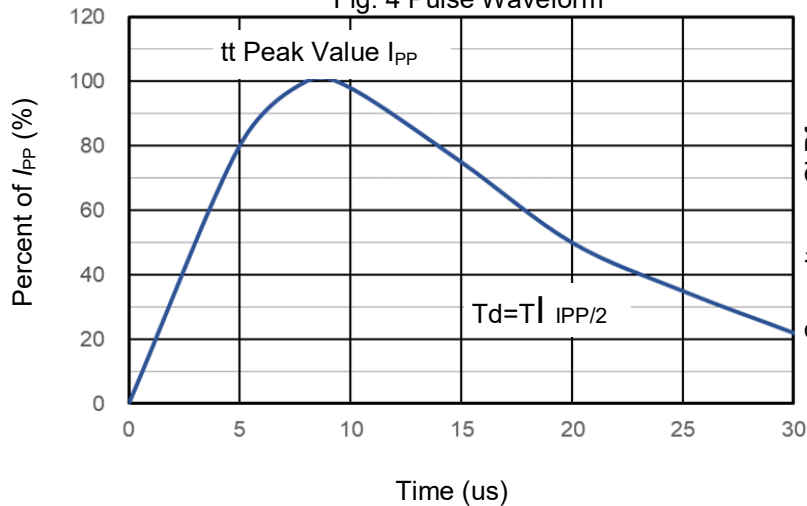
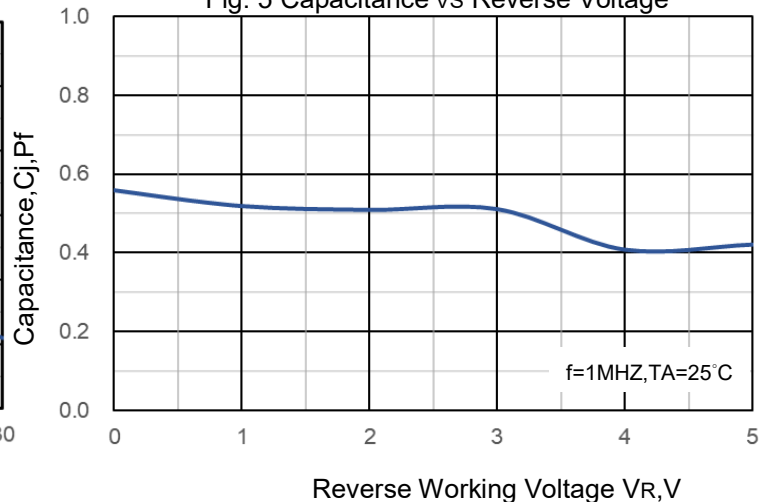
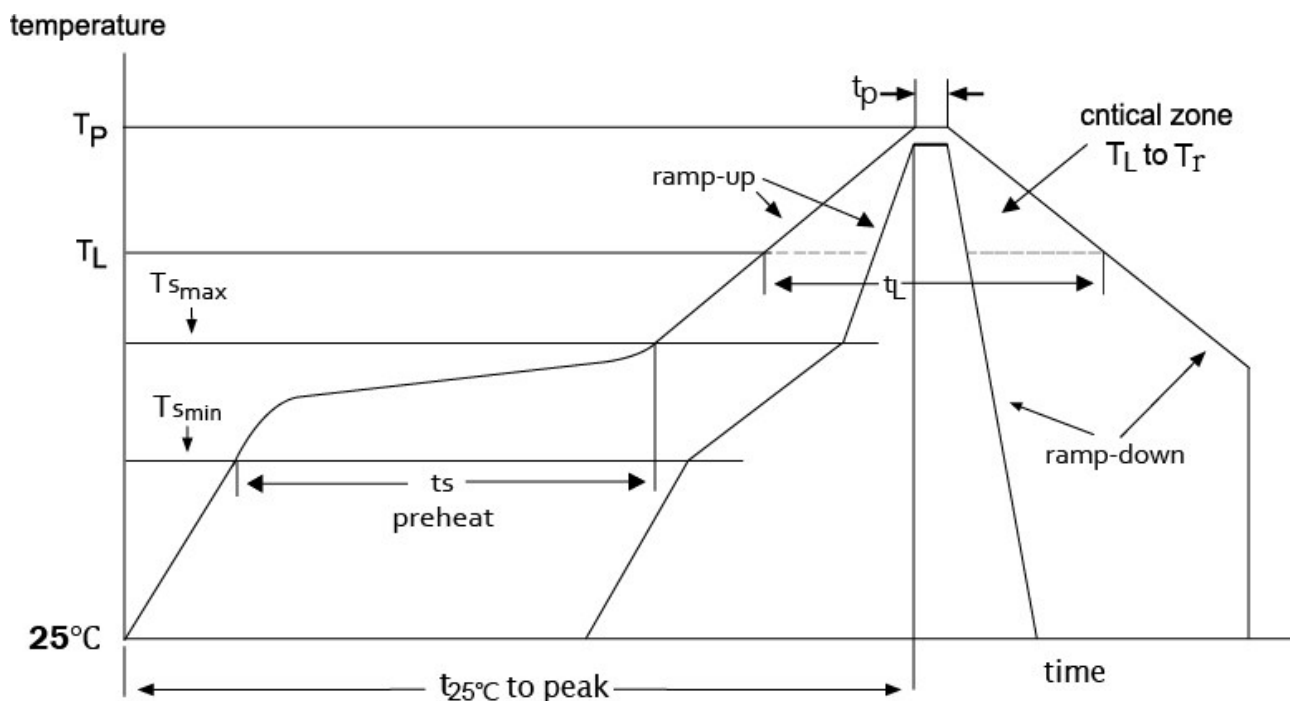


Fig. 5 Capacitance vs Reverse Voltage

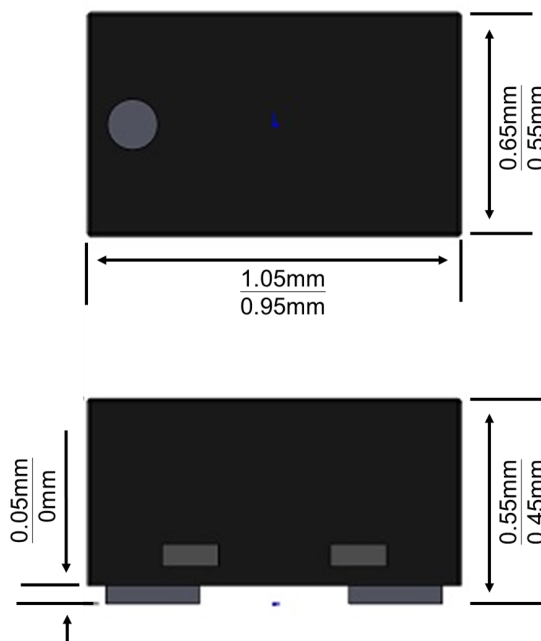
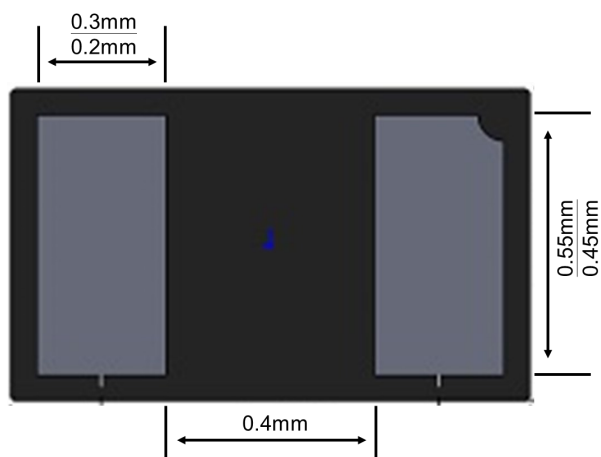


9. Soldering Parameters

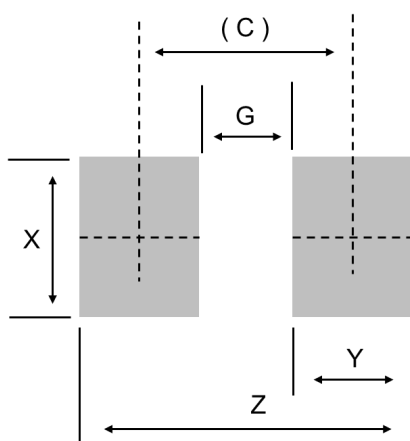
Profile Feature	SnPb eutectic assembly	Pb-free assembly
Average ramp-up rate (T_{smax} to T_p)	3 °C/s maximum	3 °C/s maximum
Preheat		
Temperature minimum (T_{smin})	100 °C	150 °C
Temperature maximum (T_{smax})	150 °C	200 °C
Time (t_{smin} to t_{smax})	60 s to 120 s	60 s to 180 s
Time maintained above		
Temperature (T_L)	183 °C	217 °C
Time (t_L)	60 s to 150 s	60 s to 150 s
Peak/classification temperature (T)	235 °C	260 °C
Number of allowed reflow cycles	3	3
Time within 5 °C of actual peak temperature (t_p)	10 s to 30 s	20 s to 40 s
Ramp-down rate	6 °C/s maximum	6 °C/s maximum
Time 25 °C to peak temperature	6 minutes maximum	8 minutes maximum



11. Package Information

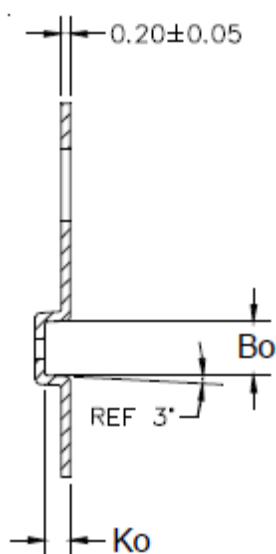
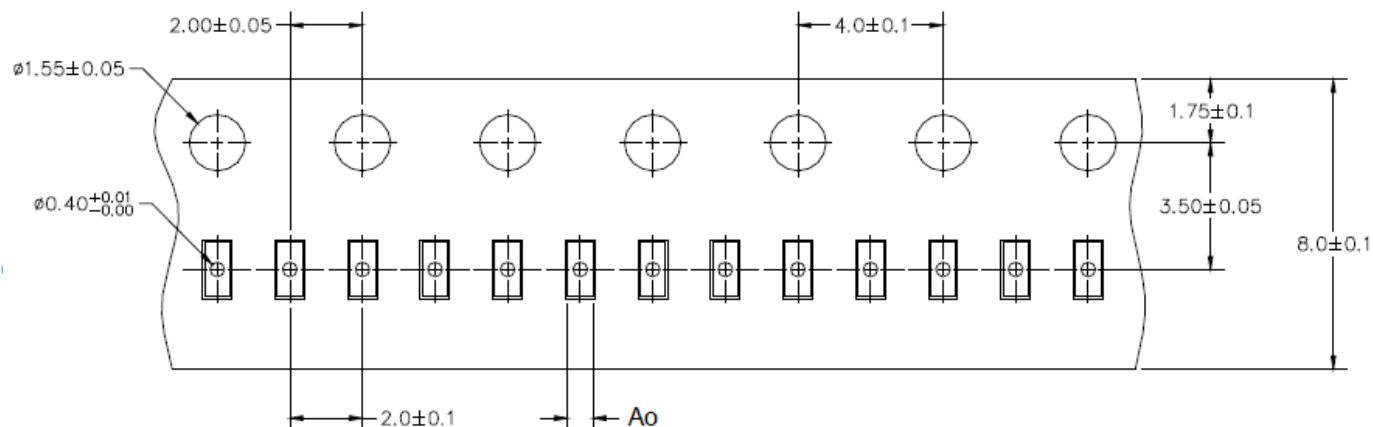


12. Suggest Pad Layout

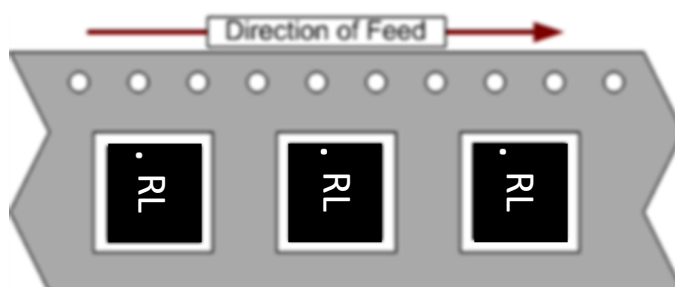


Dimensions		
DIM	Inches	Millimeters
(C)	.033	0.85
G	.012	0.30
X	.024	0.60
Y	.022	0.55
Z	.055	1.40

13. Taping & Reel Information



A0	B0	K0
0.69 +/-0.10 mm	1.19 +/-0.10 mm	0.66 +/-0.10 mm



14. Ordering information

Part Number	Component Package	Marking	Quantity	Packaging Option
FLC0525D	DFN1006	RL	10,000PCS	Tape&reel-8mm tape / 7"reel

15. History

Version	Date	File No.	Recording	Basis
A	03-Aug-2018	F118321	New create	Market
B	14-Oct-2019		Upgrade Version	System
2.0	01-Apr-2021		Update Version	System