

Features

Miniaturized packaging size suitable for high-density applications:

nom 0.024" x 0.012" (0.6x0.3 mm)

Standard Capacitance 0.40 pF

Low Clamping Voltage: $V_C=20V@I_{PP}=4.0A$

Reverse Working (Stand-off) Voltage: 5.0V

Low Leakage current

Response Time is Typically < 1 ns

Application

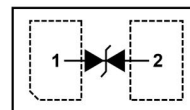
Smartphones, tablet computers

Blu-ray and DVD recorders and players

Video equipment and accessories



DFN0603-2L



Schematic Diagram

Absolute Maximum Rating

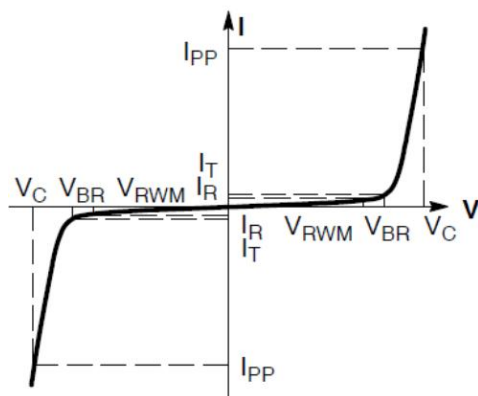
Rating	Symbol	Value	Unit
Peak pulse power ($t_p = 8/20\mu s$)	P_{PK}	60	W
ESD according to IEC61000-4-2 air discharge	V_{ESD}	± 20	kV
ESD according to IEC61000-4-2 contact discharge		± 20	
Operating Temperature Range	T_J	-40~85	$^{\circ}C$
Storage temperature	T_{STG}	-55~150	$^{\circ}C$

Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	6.0		9.0	V
Reverse Leakage Current	I_R	$V_{RWM}=\pm 5.0V$			100	nA
Clamping Voltage	V_C	$I_{PP}=1.0A$, $t_p=8/20\mu s$			13	V
Clamping Voltage	V_C	$I_{PP}=4.0A$, $t_p=8/20\mu s$			22	V
Junction Capacitance	C_J	$V_R=0V$, $f=1MHz$		0.35	0.40	pF

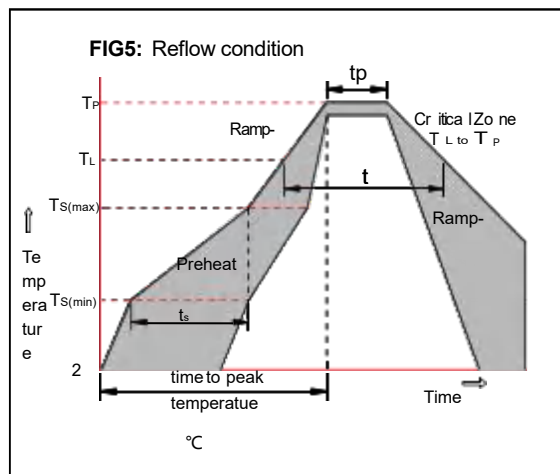
Electrical Parameters (TA = 25°C unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T
P_{PK}	Peak Power Dissipation
C	Max. Capacitance @ $V_R = 0$ and freq.=1 MHz

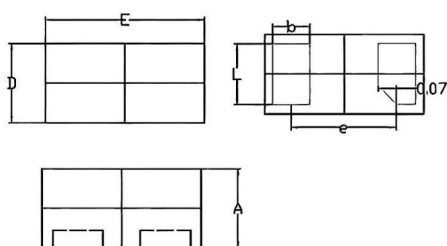


Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150 °C
	-Temperature Max($T_{s(max)}$)	+200 °C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3 °C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3 °C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217 °C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5) °C
Time within 5 °C of actual Peak Temp (t_P)		30 secs. Max
Ramp-down Rate		6 °C/sec. Max
Time 25 °C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260 °C

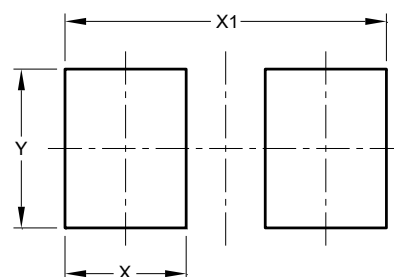


Package Dimensions & Suggested Pad Layout



DFN0603-2L

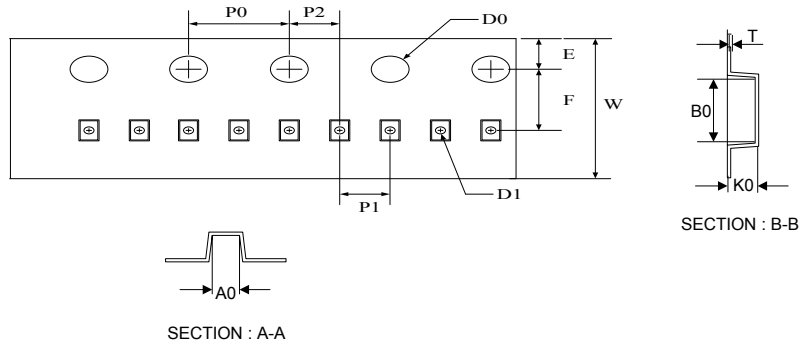
	Millimeters			Inches		
	Min. (mm)	Typ. (mm)	Max. (mm)	Min. (mm)	Typ. (mm)	Max. (mm)
A	0.28	0.30	0.32	0.0110	0.0118	0.0126
b	0.165	0.19	0.215	0.0065	0.0075	0.0085
D	0.25	0.30	0.35	0.0098	0.0118	0.0138
E	0.55	0.60	0.65	0.0216	0.0236	0.0256
e	0.34BSC			0.0134BSC		
L	0.205	0.23	0.255	0.0081	0.0091	0.0100



Dimensions	Value (in mm)
X	0.230
X1	0.650
Y	0.340

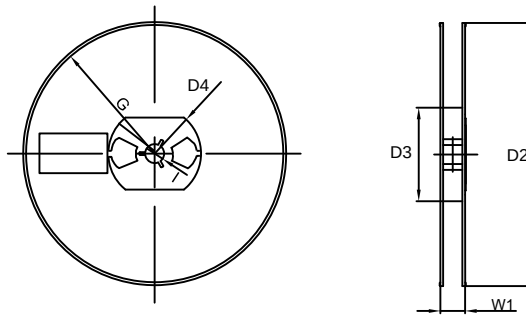
Tape & reel specification

Tape



Symbol	Dimension (mm)
P0	4.00±0.20
P1	2.00±0.20
P2	2.00±0.20
D0	1.55±0.20
D1	0.20±0.20
E	1.55±0.25
F	5.50±0.20
W	8.00±0.20
A0	0.67±0.20
B0	0.96±0.20
K0	0.60±0.20
T	0.20±0.20

7" Reel



D2	177.0±5.0
D3	55Min.
D4	R24.6±2.0
G	R82.0±2.0
I	13.0±2.0
W1	10.20±3.0

Quantity: 10000PCS