

FEATURES

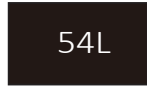
- | 60W Peak Pulse Power per Line (tp=8/20µs)
- | Package optimized for high-speed lines
- | Protects four data lines
- | Low capacitance: 0.2pF (I/O to I/O)
- | Low Clamping Voltage
- | Low leakage current

APPLICATIONS

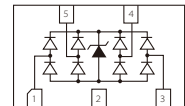
- | Serial ATA
- | PCI Express
- | Desktops, Servers and Notebooks
- | MDDI Ports
- | USB 2.0/3.0 Power and Data Line Protection
- | High Definition Multi-Media Interface (HDMI)
- | Digital Visual Interface (DVI)



DFN2010-5L



Marking



Schematic Symbol

IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±25kV (air), ±20kV (contact)
- | IEC61000-4-4 (EFT) 40A (5/50ns)

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

THERMAL CONSIDERATIONS

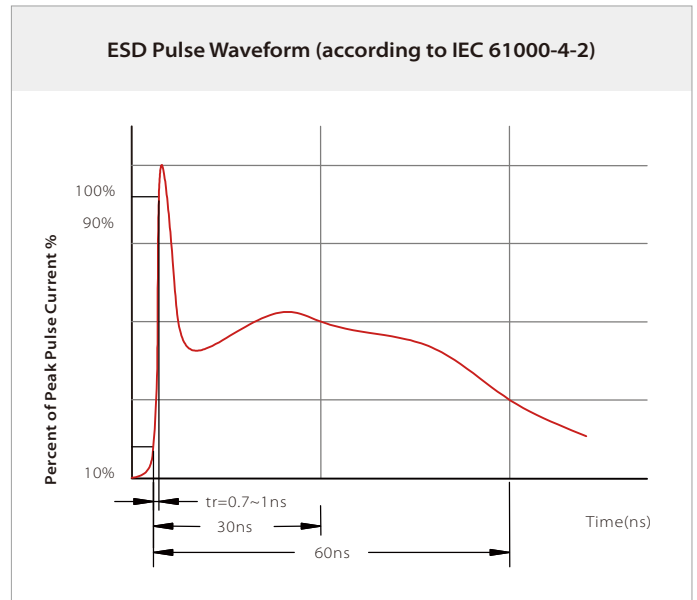
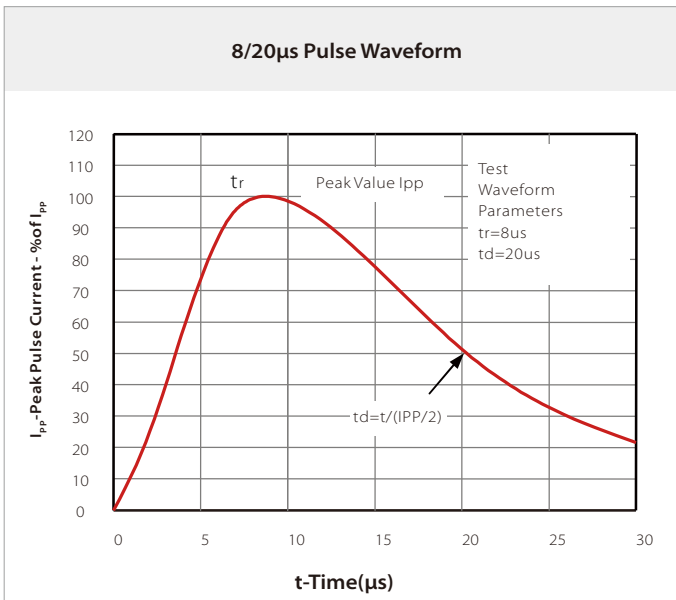
Symbol	Parameter	Value	Unit
P_{PP}	Peak Pulse Power (tp=8/20µs waveform)	60	Watts
T_J	Operating Temperature Range	-55 to +125	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
V_{RWM}	Reverse Stand-off Voltage				5	V
V_{BR}	Reverse Breakdown Voltage	$I_T=1\text{ mA}$	6		9	V
I_R	Reverse Leakage Current	$V_{RWM}=5\text{ V}$			1	μA
V_C	Clamping Voltage ($T_p=8/20\mu\text{s}$)	$I_{pp}=1\text{ A}, t_p=8/20\mu\text{s}$			10	V
V_C	Clamping Voltage ($T_p=8/20\mu\text{s}$)	$I_{pp}=4\text{ A}, t_p=8/20\mu\text{s}$			15	V
V_{CTLP}	TLP Clamping Voltage IEC61000-4-2 Level 2 equivalent ($\pm 4\text{ kV}$ Contact, $\pm 8\text{ kV}$ Air)	$I_{pp}=8\text{ A}$ I/O and GND		16		V
	TLP Clamping Voltage IEC61000-4-2 Level 4 equivalent ($\pm 8\text{ kV}$ Contact, $\pm 16\text{ kV}$ Air)	$I_{pp}=16\text{ A}$ I/O and GND		23		V
I_{pp}	Peak Pulse Current ($T_p=8/20\mu\text{s}$)	$t_p=8/20\mu\text{s}$			4	A
C_J	Off State Junction Capacitance	$V_R=0\text{ V}, f=1\text{ MHz}$ I/O to GND		0.4	0.5	pF
C_J	Off State Junction Capacitance	$V_R=0\text{ V}, f=1\text{ MHz}$ I/O to I/O		0.2	0.3	pF

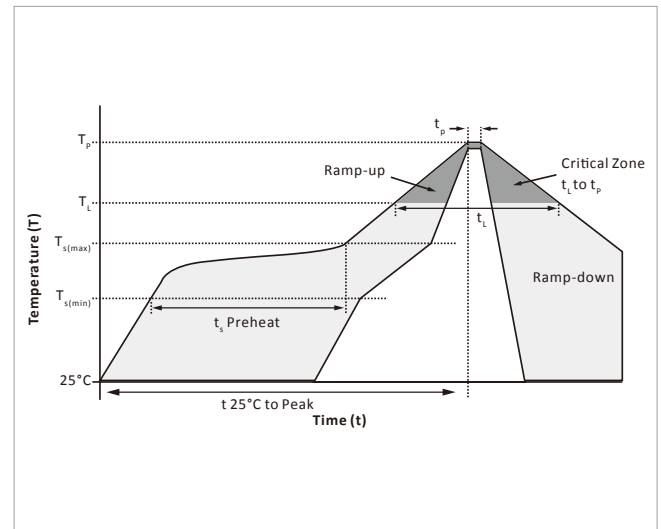
Note: I/O are pin 1,3,4,5, GND is pin2.

CHARACTERISTIC CURVES

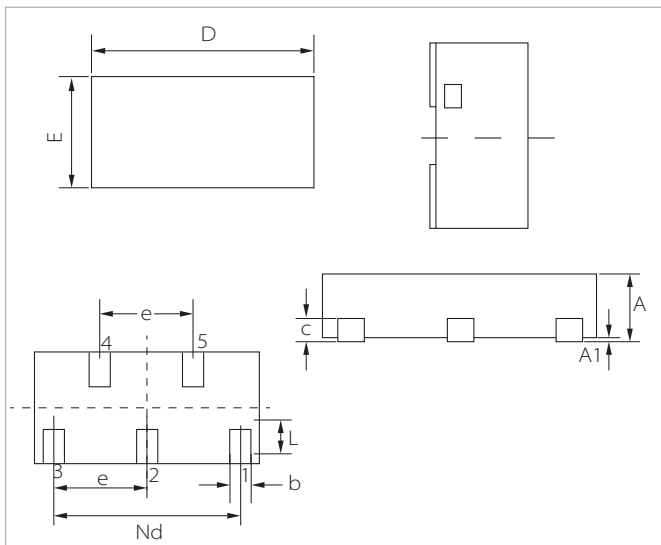


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	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
Reflow	$T_{s(max)}$ to T_L - Ramp-up Rate	3°C/second max
	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_l)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

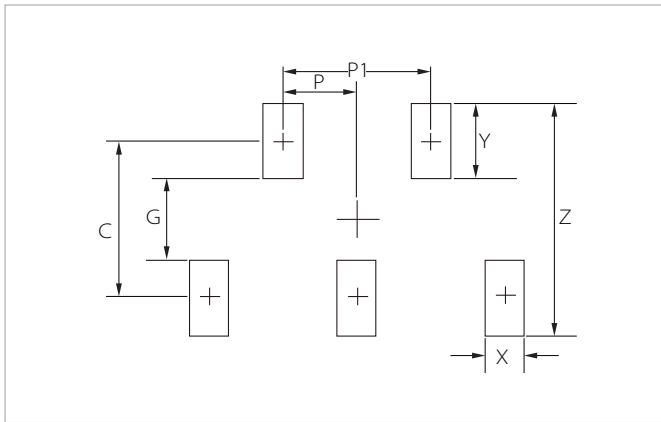


DFN2010-5L PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.45	0.55	0.018	0.022
A1	0.00	0.05	0.000	0.002
b	0.15	0.25	0.006	0.010
c	0.152REF		0.006REF	
D	1.95	2.05	0.077	0.081
Nd	1.60BSC		0.063BSC	
e	0.80BSC		0.031BSC	
E	0.95	1.05	0.037	0.041
L	0.30	0.40	0.012	0.016

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
C	0.85	0.033
G	0.25	0.010
P	0.40	0.016
P1	0.80	0.031
X	0.20	0.008
Y	0.60	0.024
Z	1.45	0.057

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SE21F5P06B5.0UA	DFN2010-5L	3000PCS	7"

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By QR Code

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