

FEATURES

- | 48W Peak Pulse Power per Line (tp=8/20μs)
- | Protects Two Bidirectional I/O Lines
- | Working voltages : 5V
- | Low Clamping Voltage

APPLICATIONS

- | Optical Modules
- | USB 3.0 / 3.1 Port Protection
- | V-By-One
- | eSATA
- | HDMI 1.4, HDMI1.4b and HDMI 2.0
- | LVDS Interfaces



DFN1510

UL12

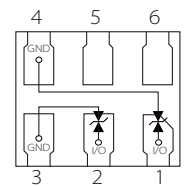
Marking

IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±30kV (air), ±25kV (contact)
- | IEC61000-4-4 (EFT) 40A (5/50ns)

APPROVALS

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



Schematic Symbol

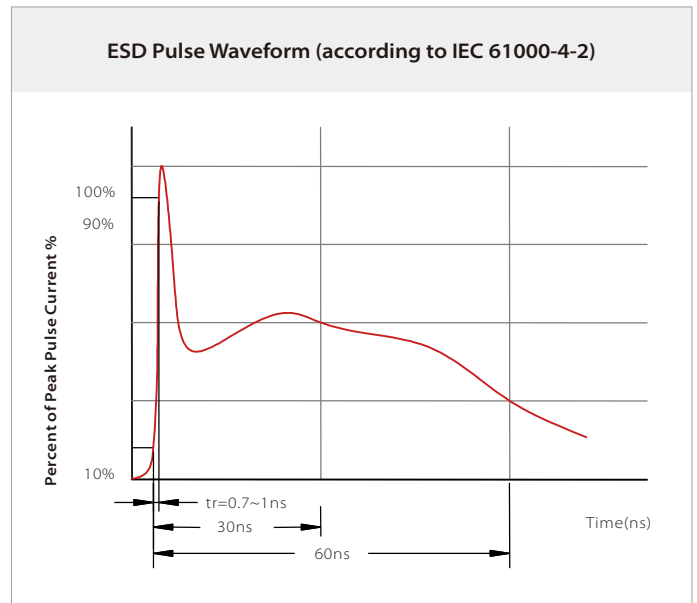
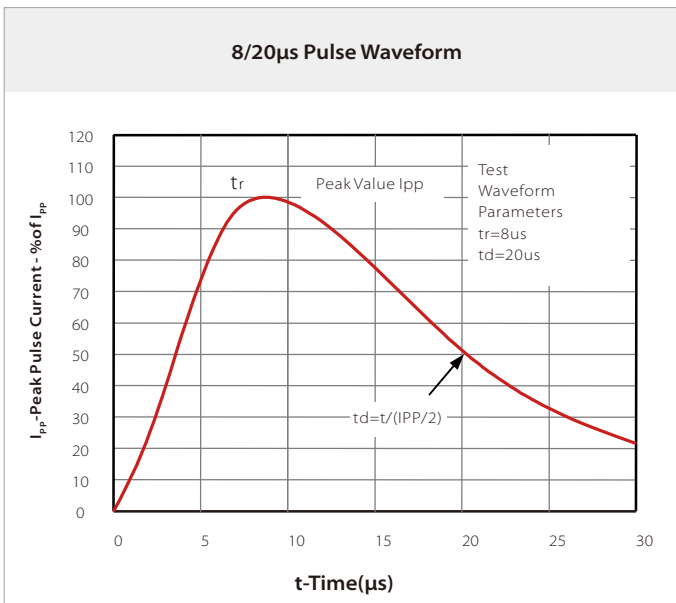
THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
P_{PP}	Peak Pulse Power (tp=8/20μs waveform)	48	Watts
T_J	Operating Temperature Range	-40 to +125	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

ELECTRICAL CHARACTERISTICS

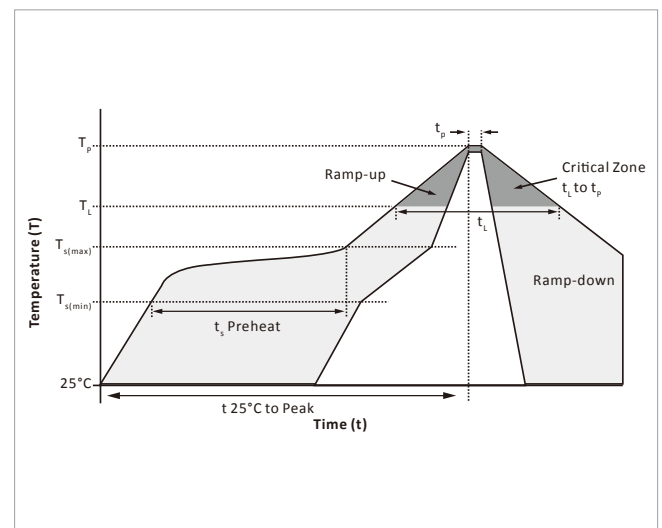
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
V_{RWM}	Reverse Stand-off Voltage				5	V
V_{BR}	Reverse Breakdown Voltage	$I_T=1mA$	6			V
I_R	Reverse Leakage Current	$V_{RWM}=5V$			1	μA
V_C	Clamping Voltage	$I_{pp}=1A, tp=8/20us$			8.7	V
V_C	Clamping Voltage	$I_{pp}=2A, tp=8/20us$			10	V
V_C	Clamping Voltage	$I_{pp}=4A, tp=8/20us$			12	V
I_{PP}	Peak Pulse Current	tp=8/20us			4	A
C_J	Off State Junction Capacitance	$V_R=0V, f=1MHz$		0.2		pF

CHARACTERISTIC CURVES

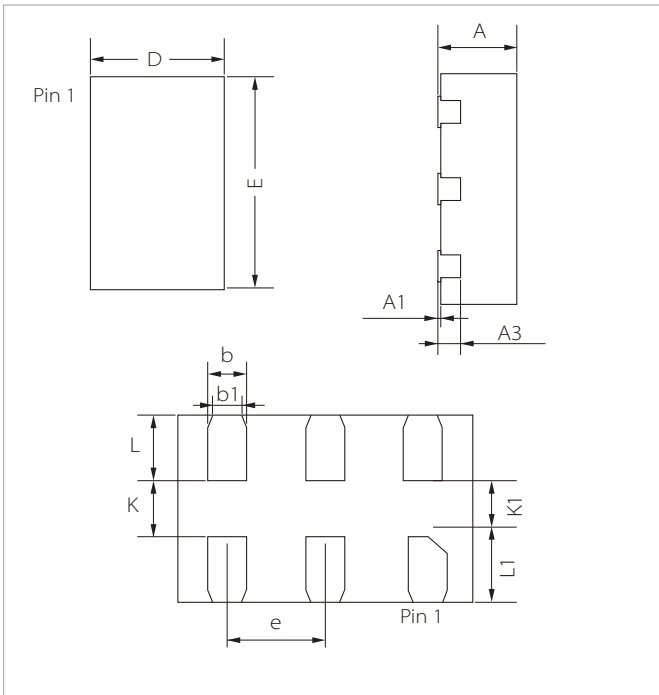


SOLDERING PARAMETERS

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
$T_{s(\max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	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



DFN1510 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.500	0.600	0.020	0.024
A1	0	0.050	0	0.002
A3	0.152REF		0.006REF	
b	0.150	0.250	0.006	0.010
b1	0.150REF		0.006REF	
D	0.900	1.100	0.035	0.043
E	1.400	1.600	0.055	0.063
e	0.500BSC		0.020BSC	
K	0.300REF		0.012REF	
K1	0.250REF		0.010REF	
L	0.274	0.426	0.011	0.017
L1	0.324	0.476	0.013	0.019

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SE15F10B5.0MB	DFN1510	3000PCS	7"

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