

FEATURES

- | Bi-directional configurations
- | Low Clamping Voltage
- | Low Leakage Current
- | Response time is typically <1ns
- | Solid-state silicon-avalanche technology

APPLICATIONS

- | USB3.0,3.1,3.2
- | Thunderbolt
- | Sensitive interface lines
- | Ultra-high-speed data line
- | Communication systems



DFN0603



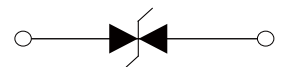
Marking

IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±17kV (air), ±15kV (contact)
- | IEC61000-4-4 (EFT) 40A (5/50ns)

APPROVALS

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



Schematic Symbol

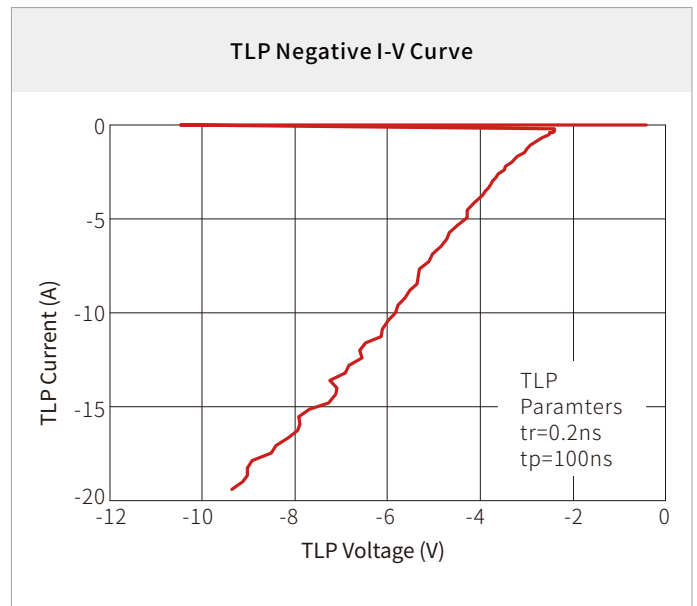
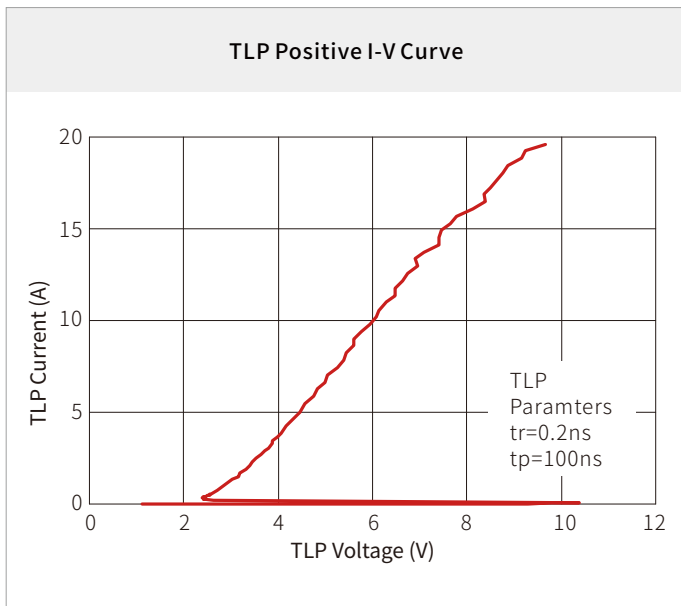
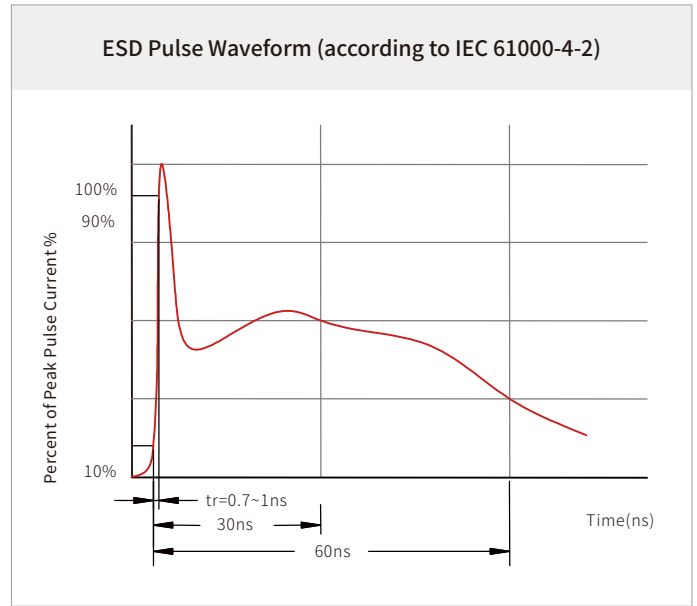
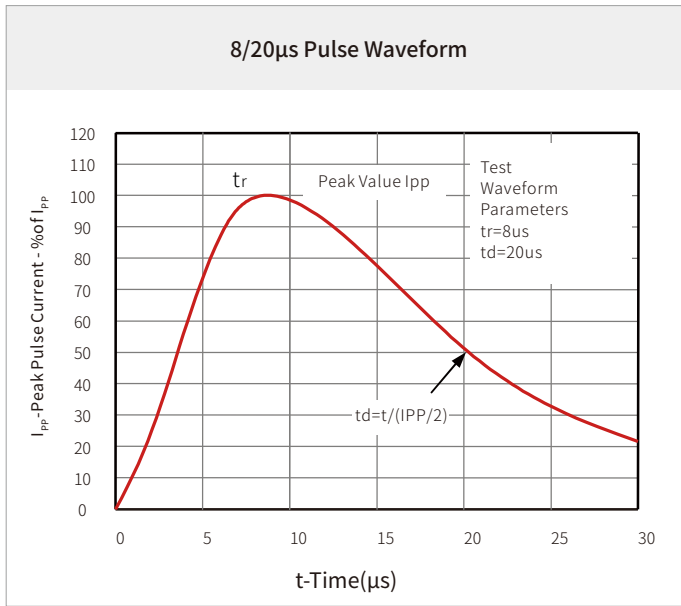
THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
P_{PP}	Peak Pulse Power (tp=8/20μs waveform)	36	Watts
T_J	Operating Temperature Range	-55 to +125	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

ELECTRICAL CHARACTERISTICS

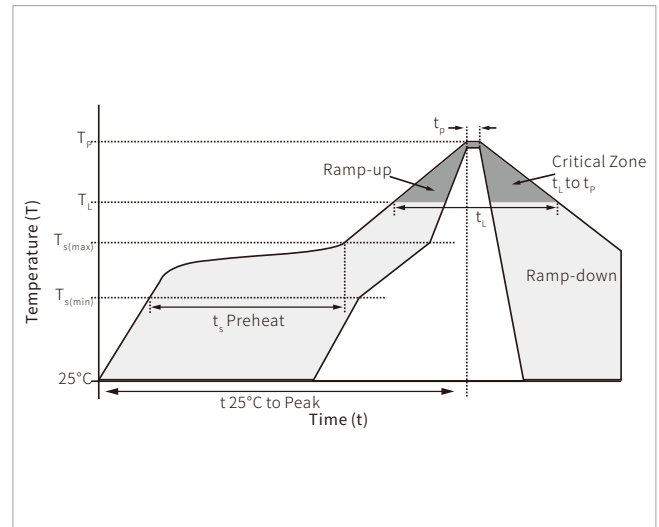
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
V_{RWM}	Reverse Working Voltage				5	V
V_{BR}	Reverse Breakdown Voltage	$I_T=1mA$	6			V
I_R	Reverse Leakage Current	$V_{RWM}=5V$			0.5	μA
V_C	ESD Clamping Voltage	$I_{TLB}=4A$, tp=0.2/100ns		4.1		V
V_C	ESD Clamping Voltage	$I_{TLP}=16A$, tp=0.2/100ns		8.1		V
R_{DYN}	ESD Dynamic Resistance	TLP=0.2/100ns		0.33		Ω
V_C	Clamping Voltage	$I_{PP}=6A$, tp=8/20μs			6	V
I_{PP}	Peak Pulse Current	tp=8/20μs			6	A
C_J	Junction Capacitance	$V_R=2.5V$, f=1MHz		0.17	0.23	pF

CHARACTERISTIC CURVES

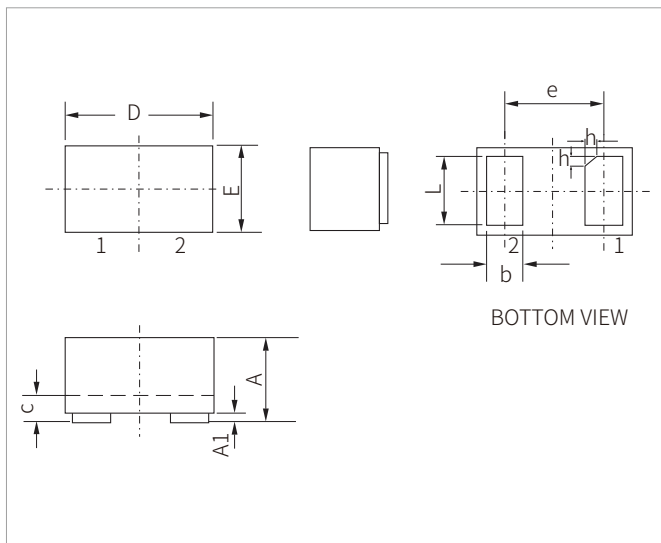


SOLDERING PARAMETERS

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
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

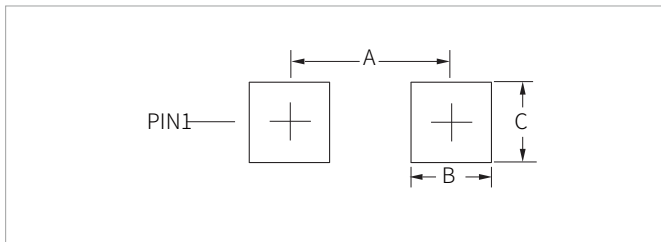


DFN0603 PACKAGE INFORMATION



Ref.	Millimeters			Inches		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	0.28	0.30	0.36	0.011	0.012	0.014
A1	0	0	0.05	0	0	0.002
b	0.13	0.18	0.24	0.005	0.007	0.009
c	0.05	-	0.15	0.002	-	0.006
D	0.55	0.60	0.70	0.022	0.024	0.028
e	0.35BSC			0.014BSC		
E	0.25	0.30	0.35	0.010	0.012	0.014
L	0.20	0.25	0.30	0.008	0.010	0.012
h	0	-	0.10	0	-	0.004

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
A	0.38	0.015
B	0.23	0.009
C	0.30	0.012

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SE06F05B5.0UA-SP	DFN0603	10000PCS	7"

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