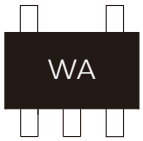
FEATURES

- 100W Peak Pulse Power per Line (tp=8/20μs)
- Protects five I/O lines
- Low clamping voltage
- Small package: SOT-23-5
- Low leakage current
- Working voltage: 3.3 V

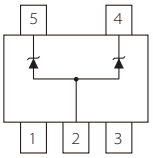
APPLICATIONS

- Cellular Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks,Desktops,and Servers
- Portable Inserumentation
- Networking and Telecom
- Servers and Parallel Ports
- Peripherals

SOT-23-5



Marking



Schematic Symbol

IEC COMPATIBILITY

- IEC61000-4-2 (ESD) ±12kV (air), ±15kV (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)

APPROVALS

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

THERMAL CONSIDERATIONS

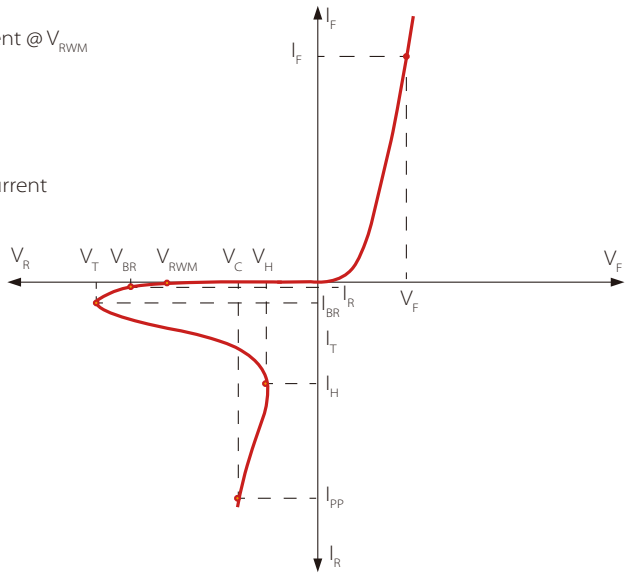
Symbol	Parameter	Value	Unit
P_{PP}	Peak Pulse Power (tp=8/20μs waveform)	100	Watts
T_J	Operating Temperature Range	-55 to +150	℃
T_{STG}	Storage Temperature Range	-55 to +150	℃

ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
V_{RWM}	Reverse Stand-off Voltage			3.3	3.6	V
V_{BR}	Reverse Breakdowm Voltage	I_T=1mA	4.2			V
I_R	Reverse Leakage Current	V_{RWM}=3.3V			0.5	μA
V_{CL}	Clamping Voltage (Tp=8/20us)	I_{PP}=4A,tp=100ns		3.8		V
V_{CL}	Clamping Voltage (Tp=8/20us)	I_{PP}=16A,tp=100ns		8.7		V
I_{PP}	Peark Pulse Current(Tp=8/20us)	tp=8/20us			5	A
C_J	Off State Junction Capacitance	V_R=0V, f=1MHz		0.55		pF

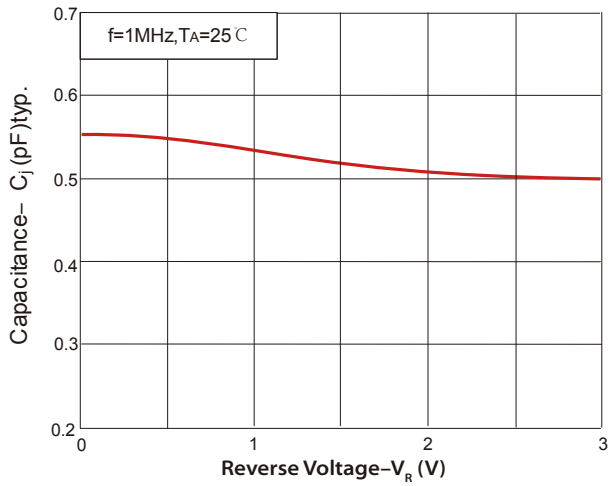
ELECTRICAL PARAMETERS (T_A = 25°C)

V_{RWM} ·····Reverse Working Voltage Max.
I_R ·····Maximum Reverse Leakage Current @ V_{RWM}
V_T ····· Trigger Voltage
V_H ····· Holding Voltage
I_H ····· Holding Current
V_{BR} ····· Reverse Breakdown Voltage
I_{PP} ····· Maximum Reverse Peak Pulse Current
V_C ····· Clamping Voltage @ I_{PP}

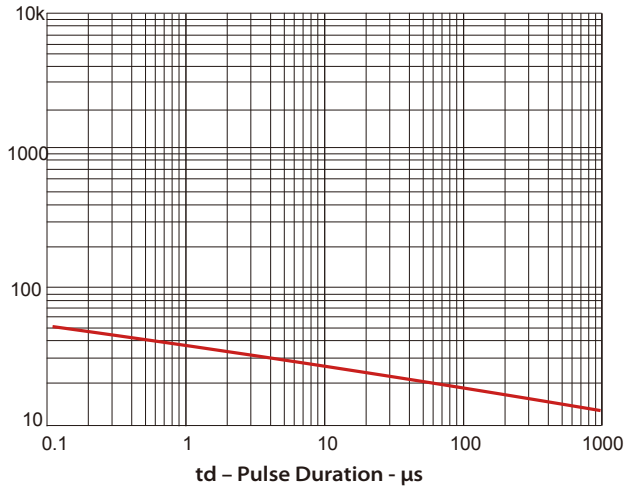


CHARACTERISTIC CURVES

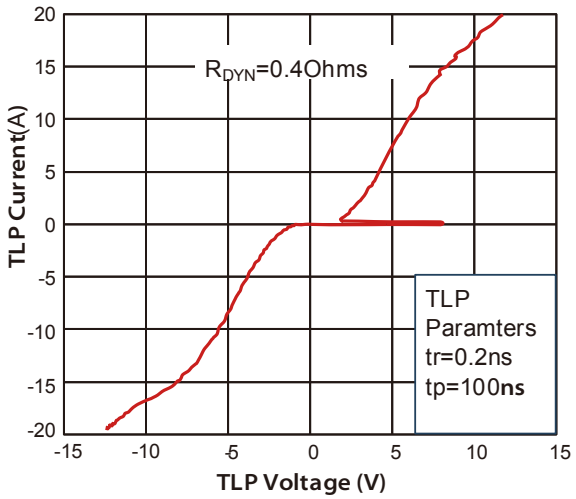
Capacitance vs. Reverse Voltage



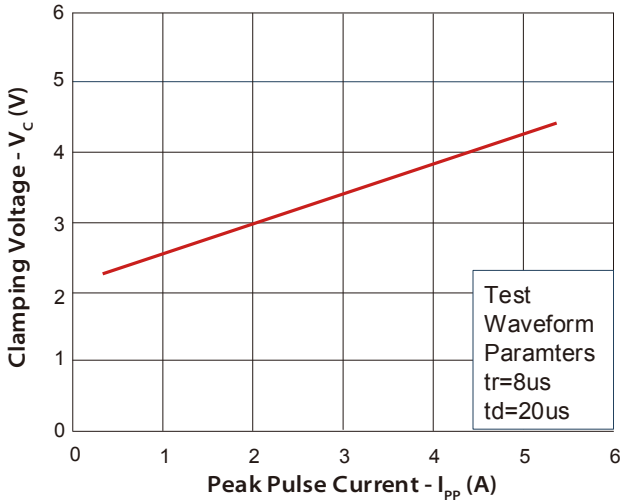
Peak Pluse Power vs. Pluse Time



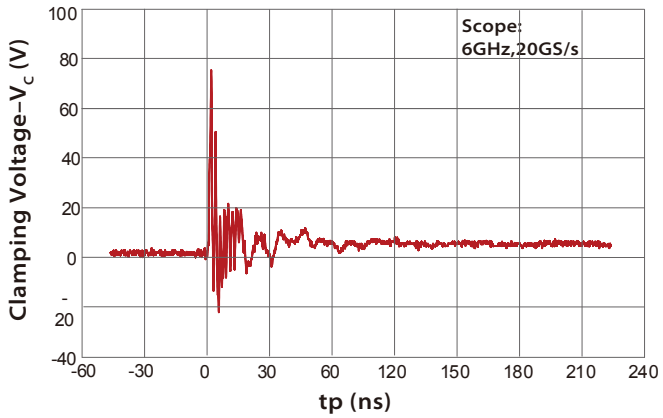
TLP I-V Currve



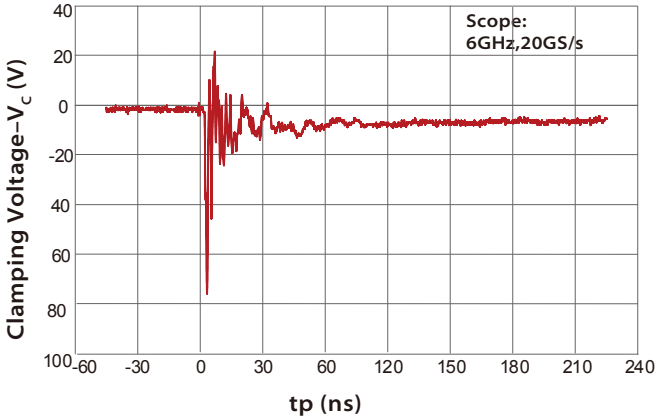
Reverse Clamping Voltage vs. Peak Pulse Current



IEC61000-4-2 : 8 kV positive pulse(I/O to GND)

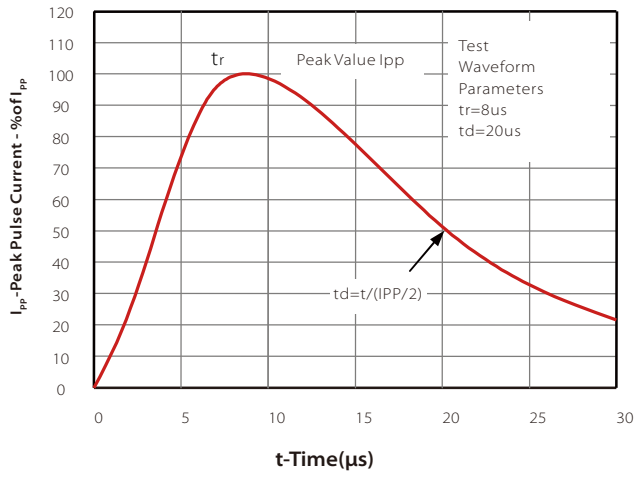


IEC61000-4-2 : 8 kV positive pulse(GND to I/O)

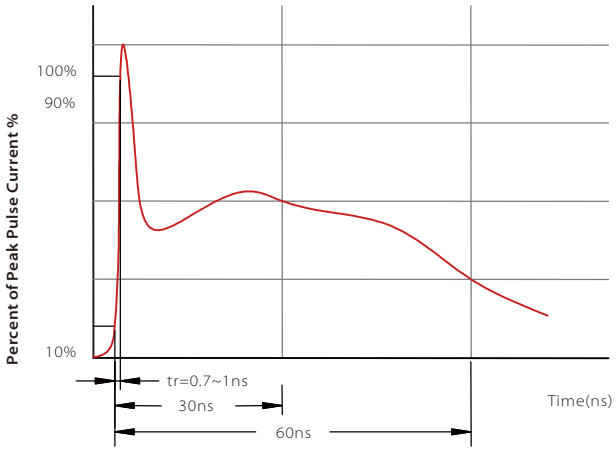


CHARACTERISTIC CURVES

8/20μs Pulse Waveform

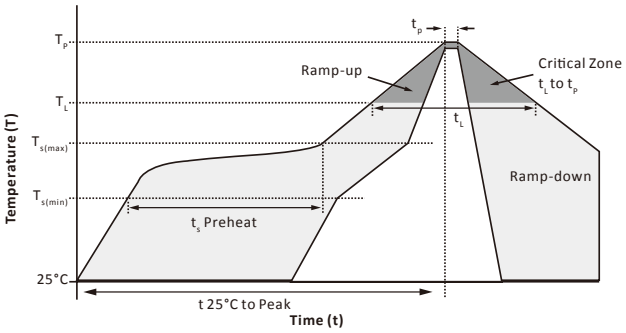


ESD Pulse Waveform (according to IEC 61000-4-2)

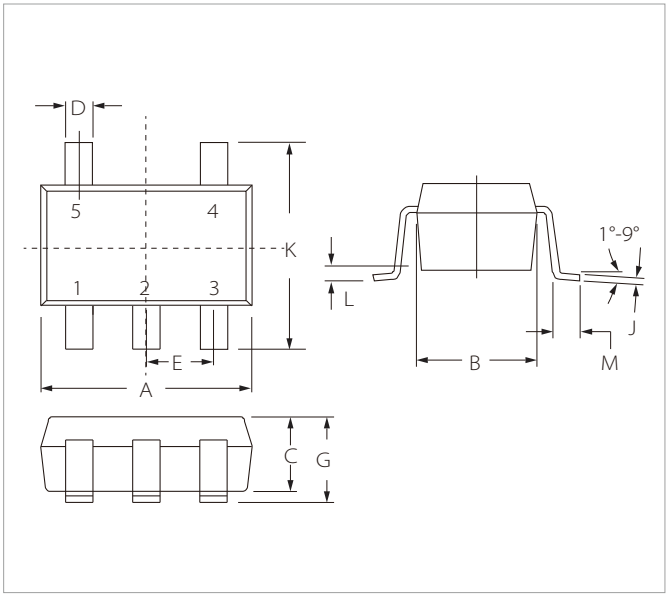


SOLDERING PARAMETERS

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

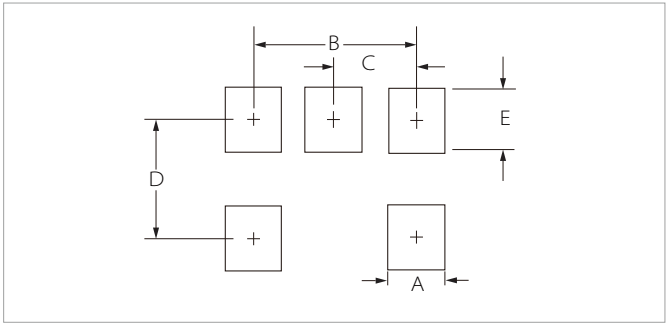


SOT-23-5 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.10	0.110	0.122
B	1.50	1.80	0.059	0.071
C	0.90	1.30	0.036	0.051
D	0.25	0.50	0.010	0.020
E	0.95(Typ)		0.037(Typ)	
G	0.90	1.40	0.036	0.055
J	0.08	0.25	0.003	0.010
K	2.60	3.00	0.102	0.118
L	0.00	0.10	0.00	0.004
M	0.37	2.64	0.014	-

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
	Nominal	Nominal
A	0.70	0.028
B	1.90	0.074
C	0.95	0.037
D	2.40	0.094
E	1.00	0.039

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SE25T10U3.3MA	SOT-23-5	3000PCS	7″

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