

## FEATURES

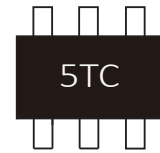
- | 70W Peak Pulse Power (tp=8/20μs)
- | Up to four data lines and one power line protects
- | Uni-directional configurations
- | Solid-state silicon-avalanche technology
- | Low leakage current
- | Low clamping voltage

## APPLICATIONS

- | USB2.0 power and Data lines protection
- | Digital visual interface
- | Notebooks, Desktops, and Servers
- | Monitors and flat panel displays



SOT-23-6



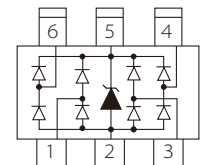
Marking

## IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±22kV (air), ±20kV (contact)
- | IEC61000-4-4 (EFT) 40A (5/50ns)

## APPROVALS

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



Schematic Symbol

## THERMAL CONSIDERATIONS

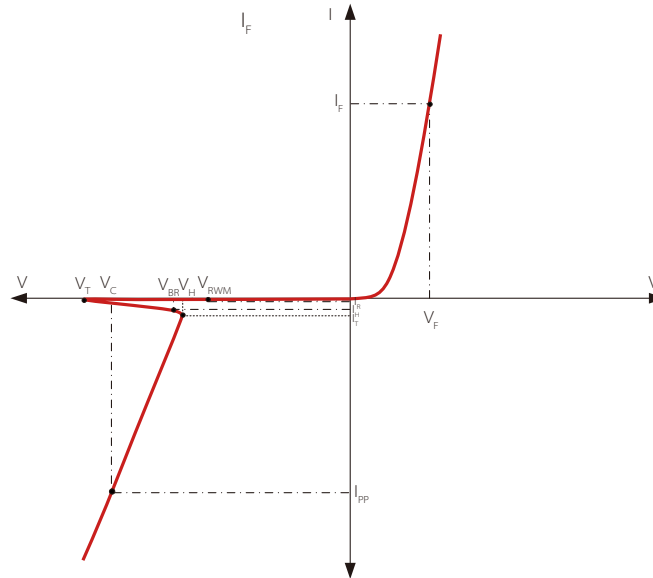
Symbol	Parameter	Value	Unit
$P_{PP}$	Peak Pulse Power (tp=8/20μs waveform)	70	Watts
$T_J$	Operating Temperature Range	-55 to +125	°C
$T_{STG}$	Storage Temperature Range	-55 to +125	°C

## ELECTRICAL CHARACTERISTICS

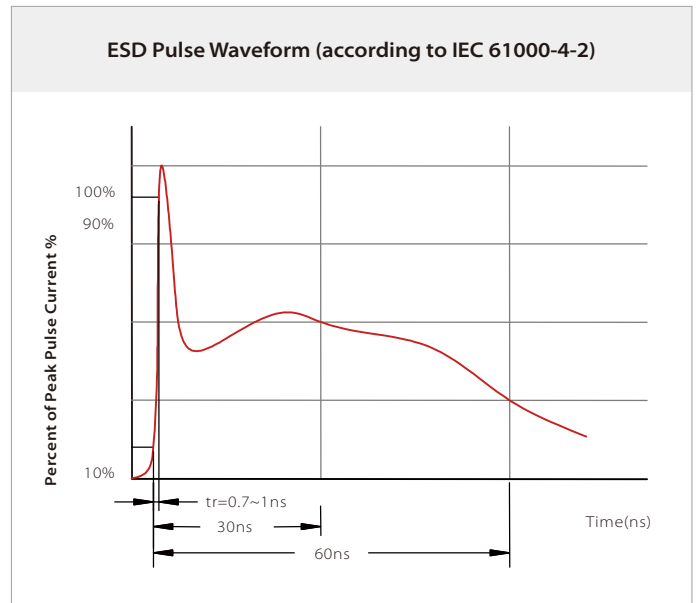
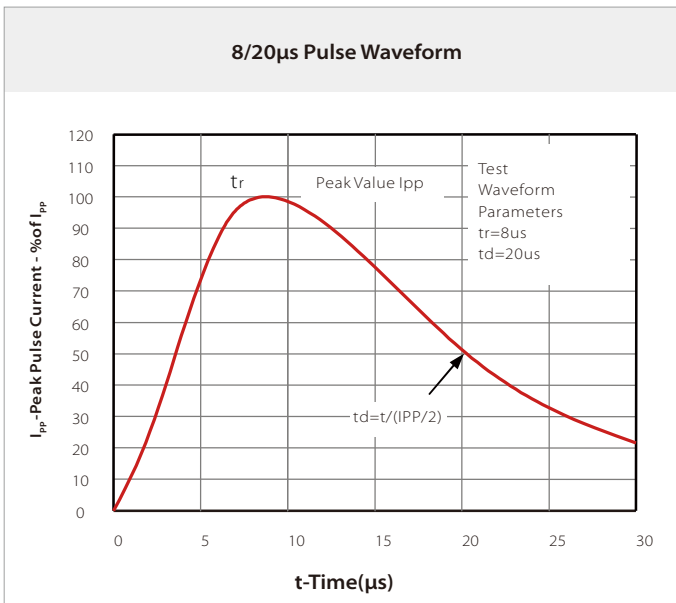
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
$V_{RWM}$	Reverse Stand-off Voltage				5	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T=1\text{mA}$	6			V
$I_R$	Reverse Leakage Current	$V_{RWM}=5\text{V}$			0.5	μA
$V_C$	Clamping Voltage (Tp=8/20us)	$I_{PP}=7.5\text{A}, tp=8/20\text{us}$			8	V
$V_C$	Clamping Voltage (Tp=8/20us)	$I_{PP}=13\text{A}, tp=8/20\text{us}$			10	V
$I_{PP}$	Peak Pulse Current (Tp=8/20us)	tp=8/20us			7.5	A
$C_J$	Off State Junction Capacitance	$V_R=0\text{V}, f=1\text{MHz}$ I/O-GND		0.8		pF
$C_J$	Off State Junction Capacitance	$V_R=0\text{V}, f=1\text{MHz}$ I/O-I/O		0.4		pF

## ELECTRICAL PARAMETERS ( $T_A = 25^\circ\text{C}$ )

- $V_{RWM}$  ..... 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 @  $I_{PP}$

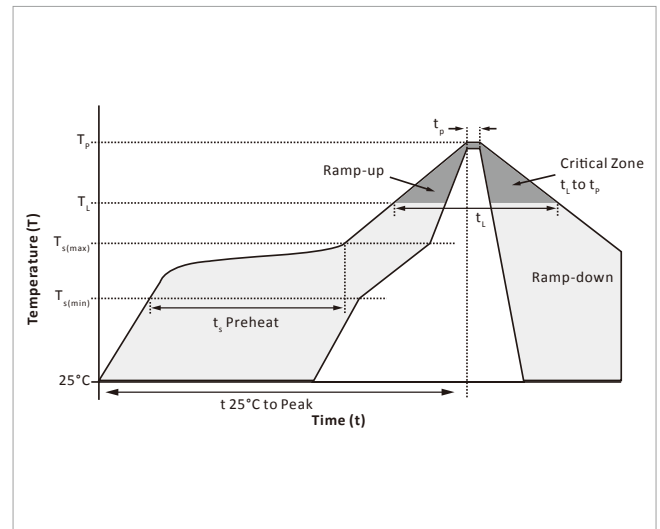


## CHARACTERISTIC CURVES

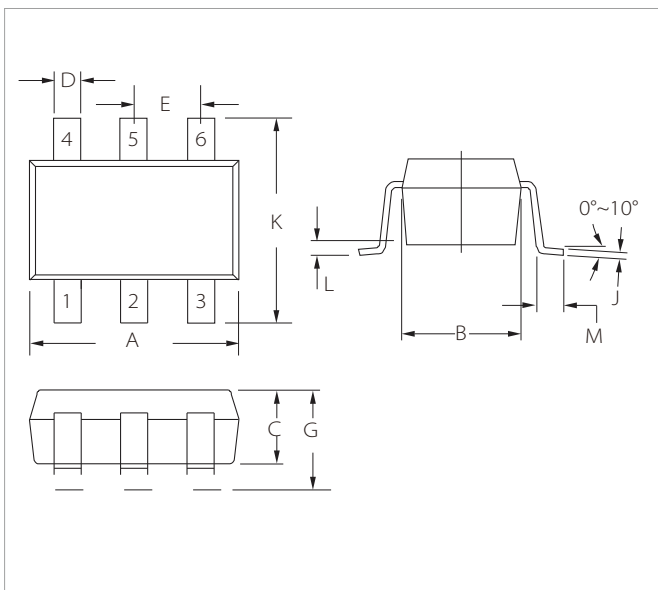


## SOLDERING PARAMETERS

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

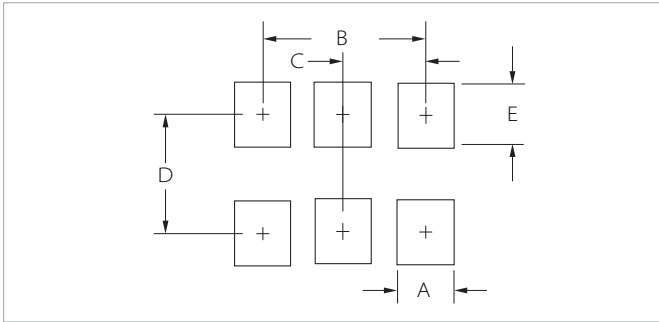


## SOT-23-6 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.05	0.110	0.120
B	1.50	1.75	0.059	0.070
C	0.90	1.30	0.036	0.051
D	0.25	0.50	0.010	0.020
E	0.85	1.05	0.033	0.040
G	0.90	1.45	0.036	0.057
J	0.09	0.20	0.003	0.008
K	2.60	3.00	0.102	0.118
L	0.0	0.15	0.0	0.006
M	0.30	0.60	0.012	0.024

## 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
SESRV05-4-SP	SOT-23-6	3000PCS	7"

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