

FEATURES

| 80W Peak Pulse Power (tp=8/20μs)

| Protects four I/O lines

| Low clamping voltage

| Small package: SOT-23-6

| Low leakage current

| Weight 16 Milligrams

| Meet AEC-Q101 Requirements

APPLICATIONS

| USB 2.0 Power and Data Line Protection

| Video Graphics Cards

| Monitors and Flat Panel Displays

| Digit Video Interface (DVI)

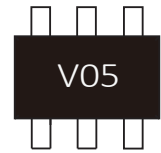
| 10/100/1000 Ethernet

| Notebook Computers

| ATM Interfaces



SOT-23-6



Marking

IEC COMPATIBILITY

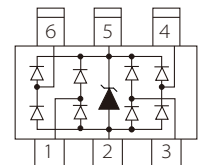
| IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)

| IEC61000-4-4 (EFT) 40A (5/50ns)

APPROVALS

RoHS Compliance with 2011/65/EU

HF Compliance with IEC61249-2-21:2003



Schematic Symbol

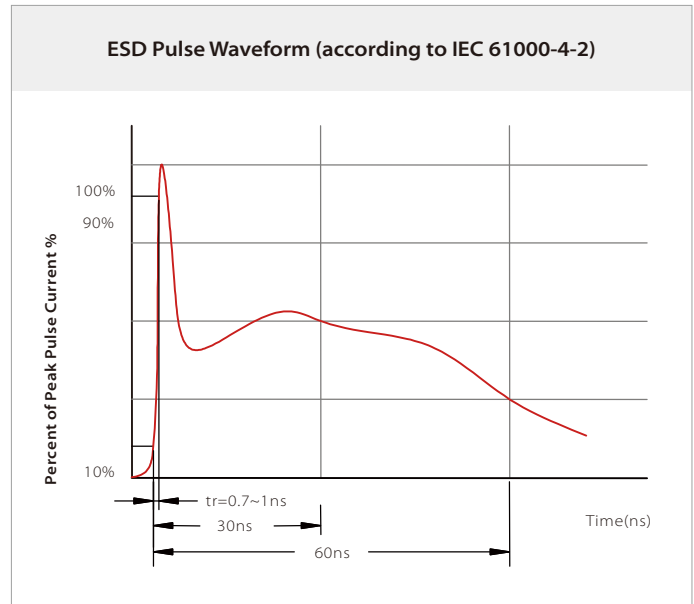
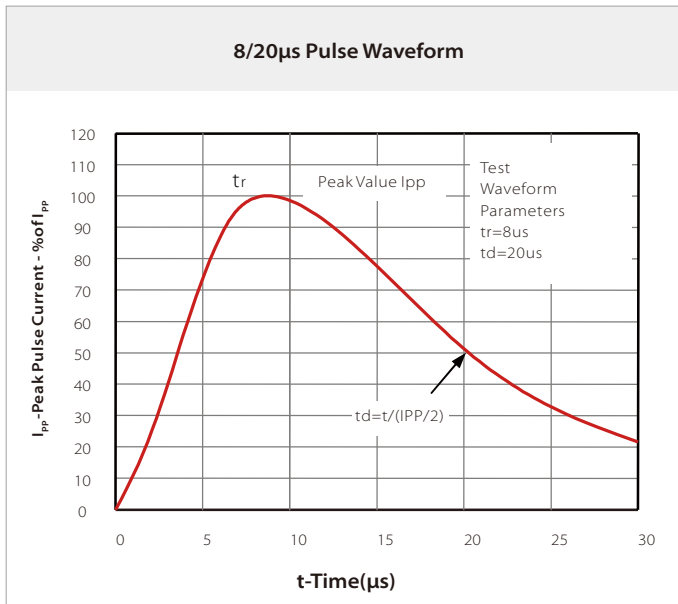
THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
P_{PP}	Peak Pulse Power (tp=8/20μs waveform)	80	Watts
T_J	Operating Temperature Range	-55 to +150	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

ELECTRICAL CHARACTERISTICS

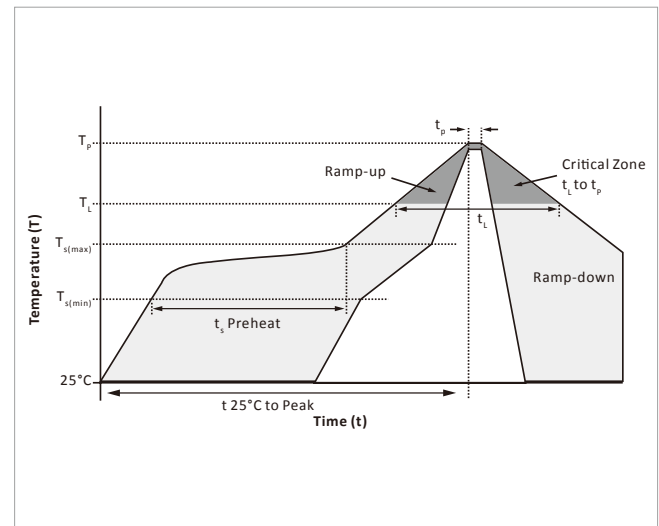
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
V_{RWM}	Reverse Stand-off Voltage				5	V
V_{BR}	Reverse Breakdown Voltage	$I_T=1\text{mA}$	6			V
I_R	Reverse Leakage Current	$V_{RWM}=5\text{V}$			1	μA
V_C	Clamping Voltage (Tp=8/20us)	$I_{pp}=1\text{A}, tp=8/20\text{us}$			12.5	V
V_C	Clamping Voltage (Tp=8/20us)	$I_{pp}=5\text{A}, tp=8/20\text{us}$			17.5	V
I_{pp}	Peak Pulse Current (Tp=8/20us)	tp=8/20us			5	A
C_J	Off State Junction Capacitance	$V_R=0\text{V}, f=1\text{MHz}$ I/O-GND		0.6		pF
C_J	Off State Junction Capacitance	$V_R=0\text{V}, f=1\text{MHz}$ I/O-I/O		0.3		pF

CHARACTERISTIC CURVES

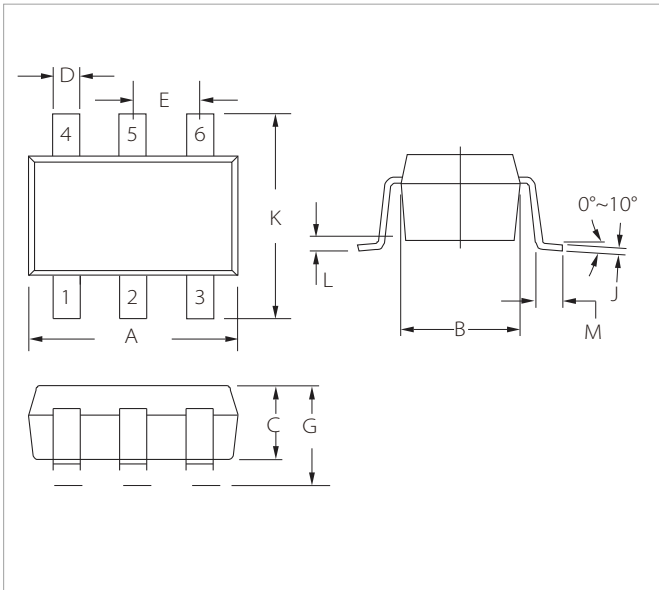


SOLDERING PARAMETERS

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_p)	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

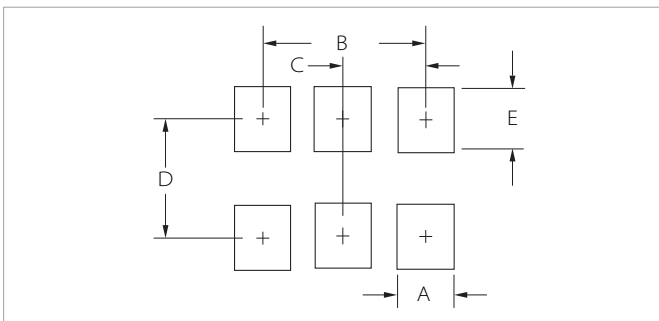


SOT-23-6 PACKAGE INFORMATION



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
TPSESRV05-4	SOT-23-6	3000PCS	7"

Headquarters

No.3387 Shendu Road Pujiang
I&E Park
Minhang Shanghai China
201000

Hotline

400-021-5756

Web

<https://www.semiware.com>

Sales Center

Tel: 86-21-3463-7458
Email: sales18@semiware.com

Customer Service

Tel: 86-21-5484-1001
Email: sales17@semiware.com

Technical Support

Tel: 86-21-3463-7654
Email: fae01@semiware.com

Complaint & Suggestions

Tel: 86-21-3463-7172
Ext: 8868
Email: cs03@semiware.com

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Website



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