

## FEATURES

| 60W Peak Pulse Power (tp=8/20μs)

| Protects four I/O lines

| Low clamping voltage

| Small package: SOT-23-6

| Low leakage current

## APPLICATIONS

| USB 2.0 Power and Data Line Protection

| Video Graphics Cards

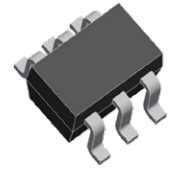
| Monitors and Flat Panel Displays

| Digit Video Interface (DVI)

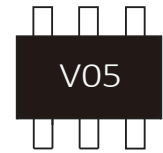
| 10/100/1000 Ethernet

| Notebook Computers

| ATM Interfaces



SOT-23-6



Marking

## IEC COMPATIBILITY

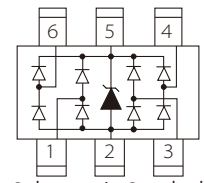
| IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)

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

## APPROVALS

**RoHS** Compliance with 2011/65/EU

**HF** Compliance with IEC61249-2-21:2003



Schematic Symbol

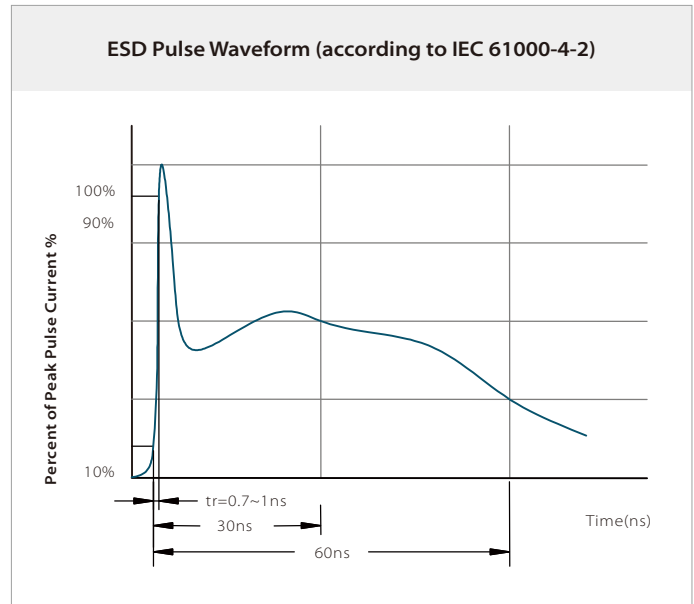
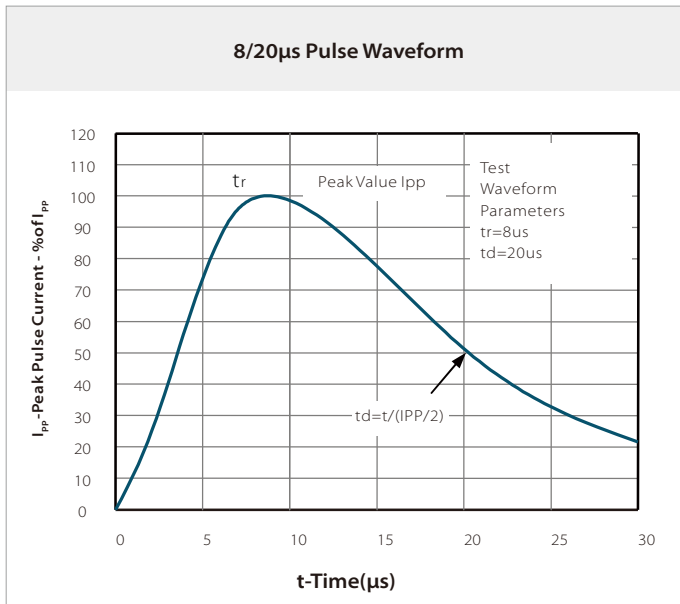
## THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
$P_{PP}$	Peak Pulse Power (tp=8/20μs waveform)	60	Watts
$T_J$	Operating Temperature Range	-55 to +150	°C
$T_{STG}$	Storage Temperature Range	-55 to +150	°C

## ELECTRICAL CHARACTERISTICS

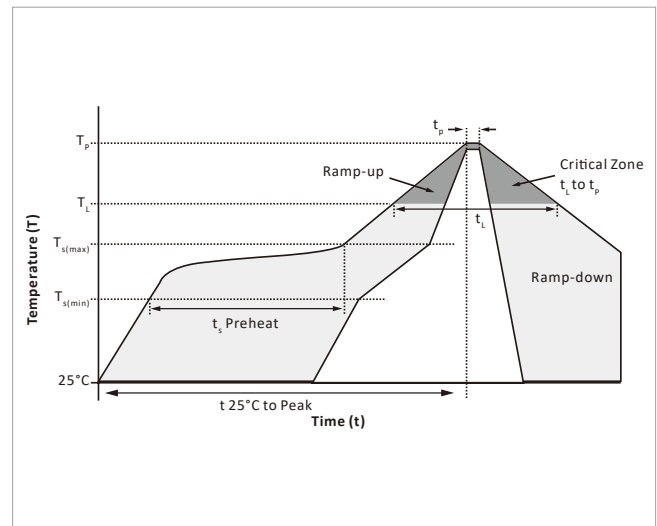
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
$V_{RWM}$	Reverse Stand-off Voltage				5	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T=1mA$	6			V
$I_R$	Reverse Leakage Current	$V_{RWM}=5V$			0.5	μA
$V_C$	Clamping Voltage (Tp=8/20us)	$I_{pp}=1A, tp=8/20us$			11	V
$V_C$	Clamping Voltage (Tp=8/20us)	$I_{pp}=4A, tp=8/20us$			15	V
$I_{pp}$	Peak Pulse Current (Tp=8/20us)	tp=8/20us			4	A
$C_J$	Off State Junction Capacitance	$V_R=0V, f=1MHz$ I/O-GND			0.8	pF
$C_J$	Off State Junction Capacitance	$V_R=0V, f=1MHz$ I/O-I/O		0.3	0.4	pF

## CHARACTERISTIC CURVES

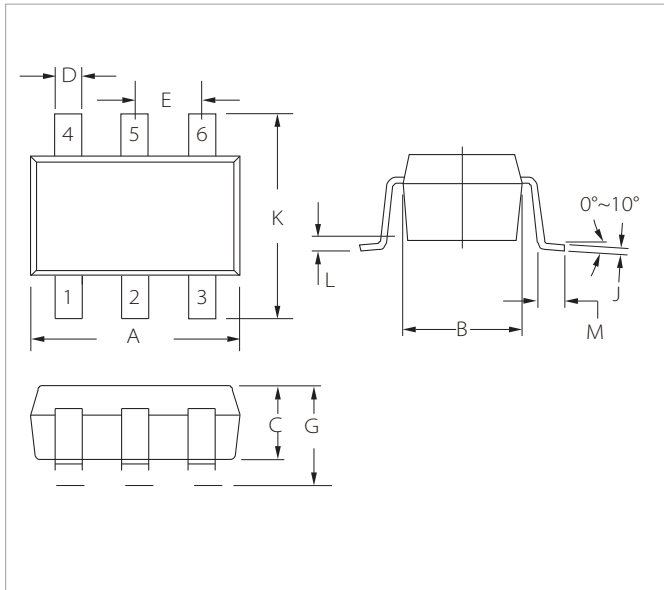


## SOLDERING PARAMETERS

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

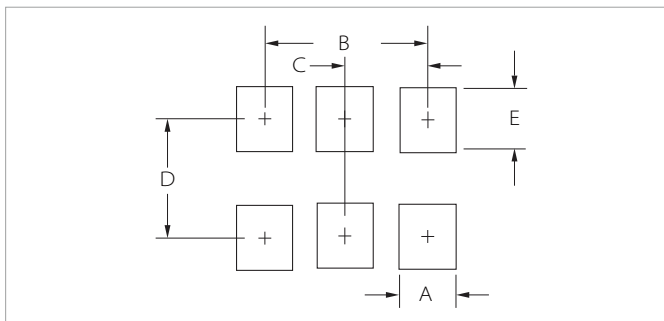


## SOT-23-6 PACKAGE INFORMATION



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
SESRV05-4A	SOT-23-6	3000PCS	7"

To find your local partner within Semiwell' s website : [www.semiwell.com.cn](http://www.semiwell.com.cn)

© 2023 Semiwell Microelectronics Co.,Ltd.

The content of this document has been carefully checked and understood. However, neither Semiwell nor its subsidiaries assume any liability whatsoever for any errors or inaccuracies of this document and the consequences thereof. Published specifications are subject to change without notice. Product suitability for any area of application must ultimately be determined by the customer. In all cases, products must never be operated outside their published specifications. Semiwell does not guarantee the availability of all published products. This disclaimer shall be governed by substantive Chinese law and resulting disputes shall be settled by the courts at the place of business of Semiwell. Latest publications and a complete disclaimer can be downloaded from the Semiwell website. All trademarks recognized.