

## Features

- Solid-state Silicon technology
- Low Capacitance
- Low Clamping Voltage
- Halogen Free. "Green" Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C

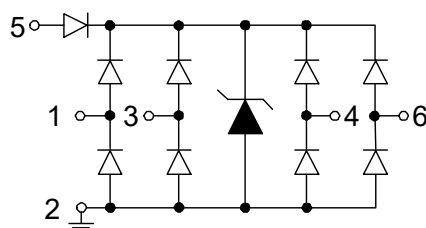
MCC Part Number	Device Marking
SRV05-4D	1208 5U

IEC61000-4-2(ESD)	Air Contact	±30KV ±30KV
Peak Pulse Current(8/20μs)	I <sub>PP</sub>	6A
Peak Pulse Power (8/20μs)	P <sub>PK</sub>	72W

Note :

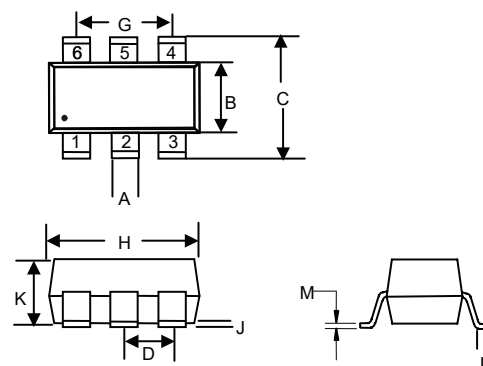
1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

## Internal Structure



# Snap Back ESD Protection Device

## SOT23-6L



## DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.012	0.020	0.30	0.50	
B	0.051	0.070	1.30	1.80	
C	0.087	0.126	2.20	3.20	
D	0.037		0.95		TYP.
G	0.074		1.90		TYP.
H	0.106	0.122	2.70	3.10	
J	0.002	0.006	0.05	0.15	
K	0.030	0.051	0.75	1.30	
L	0.012	0.024	0.30	0.60	
M	0.003	0.008	0.08	0.22	

## Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
<b>I/O Pins</b>						
Reverse Working Voltage	$V_{RWM}$				5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	7	8	9	V
Reverse Leakage Current	$I_R$	$V_{RWM}=5V$		<1	100	nA
Forward Voltage	$V_F$	$I_F = 10mA$	0.6	0.9	1.2	V
Clamping Voltage <sup>(Note 1)</sup>	$V_C$	$I_{PP}=16A, t_p=100ns$		11		V
Dynamic Resistance <sup>(Note 1)</sup>	$R_{DYN}$			0.31		$\Omega$
Clamping Voltage <sup>(Note 2)</sup>	$V_C$	$V_{ESD}=8KV$		12		V
Clamping Voltage <sup>(Note 3)</sup>	$V_C$	$I_{PP}=1A, t_p=8/20\mu s$		6.6	8	V
Clamping Voltage <sup>(Note 3)</sup>	$V_C$	$I_{PP}=6A, t_p=8/20\mu s$		10	12	V
Junction Capacitance	$C_J$	$V_R=0V, f=1MHz,$ Any I/O pin to GND		1.2	1.6	pF
Junction Capacitance	$C_J$	$V_R=0V, f=1MHz,$ Between any I/O pins		0.6	0.8	pF
<b>VDD Pins</b>						
Reverse Working Voltage	$V_{RWM}$				6	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR}=1mA$	7	8	9	V
Reverse Leakage Current	$I_R$	$V_{RWM}=6V$			1	$\mu A$
Forward Voltage	$V_F$	$I_F = 10mA$	0.6	0.9	1.2	V
Clamping Voltage <sup>(Note 1)</sup>	$V_C$	$I_{PP}=16A, t_p=100ns$		9.5		V
Dynamic Resistance <sup>(Note 1)</sup>	$R_{DYN}$	$t_p=100ns$		0.2		$\Omega$
Clamping Voltage <sup>(Note 2)</sup>	$V_C$	$V_{ESD}=8KV$		10		V
Clamping Voltage	$V_C$	$I_{PP}=1A, t_p=8/20\mu s$		6.4	7	V
Clamping Voltage	$V_C$	$I_{PP}=9A, t_p=8/20\mu s$		9.5	11	V

Note:

1. TLP Parameter:  $Z_0=50\Omega, t_p=100ns, t_r=2ns$ , Averaging Window from 60ns to 80ns. RDYN is Calculated from 4A to 16A.
2. Contact Discharge Mode, According to IEC61000-4-2.
3. Non-repetitive Current Pulse, According to IEC61000-4-5.

## Curve Characteristics

Fig. 1 - 8 X 20 $\mu$ s Pulse Waveform

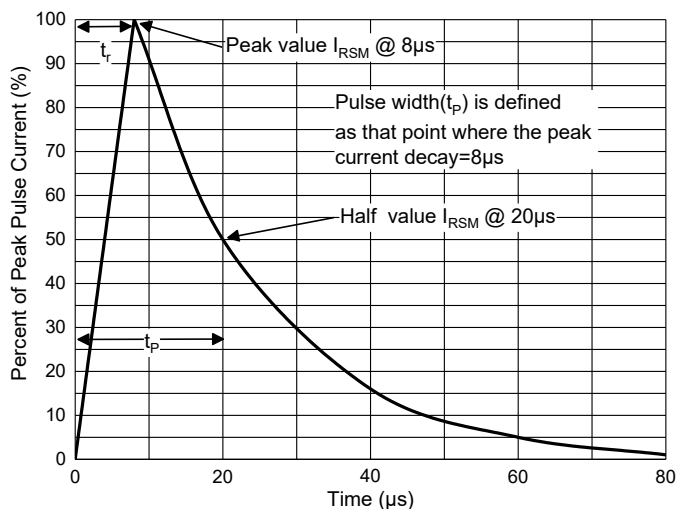


Fig. 2 - Non-Repetitive Peak Pulse Power

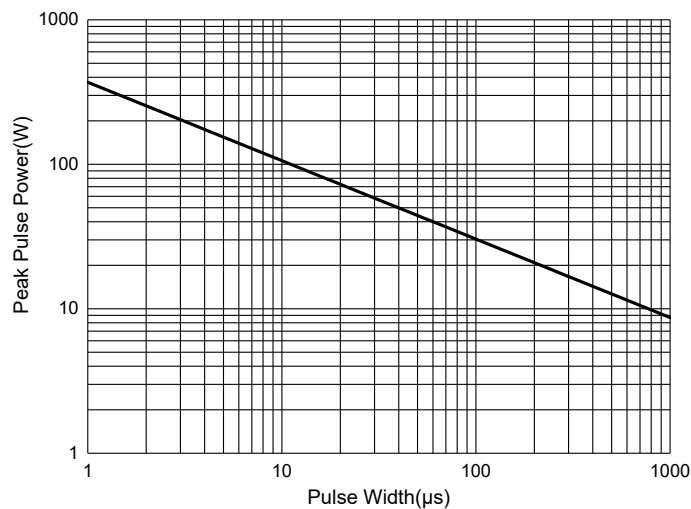


Fig. 3 - Capacitance Characteristics

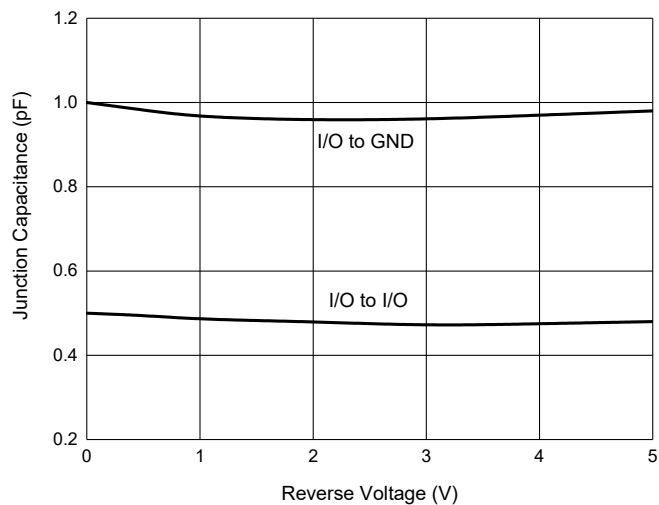


Fig. 4 - Clamping Voltage Characteristics

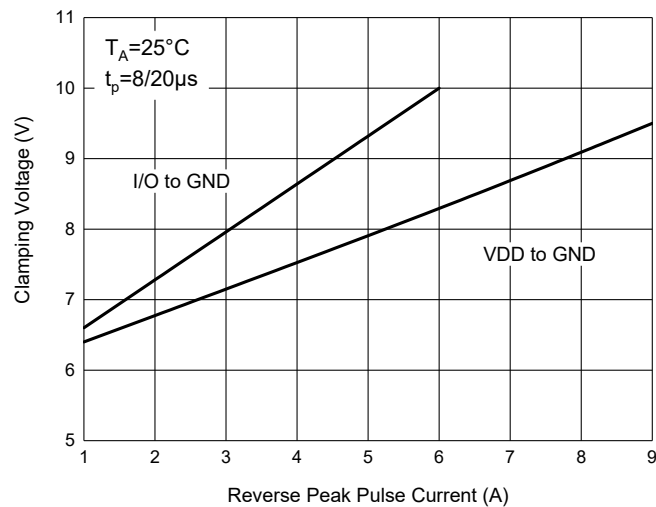


Fig. 5 - Pulse Derating Curve

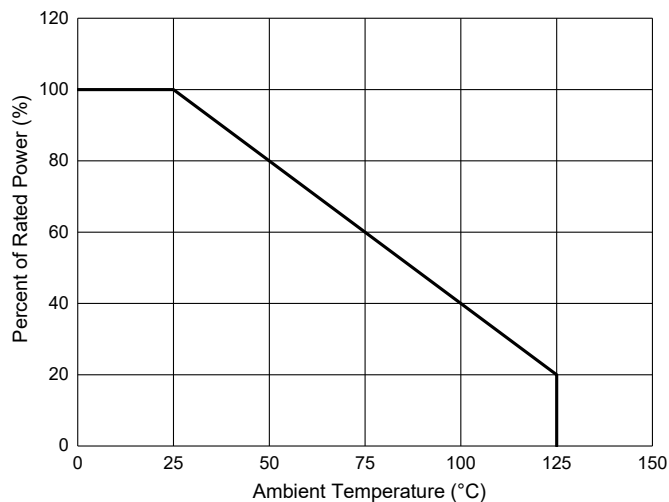
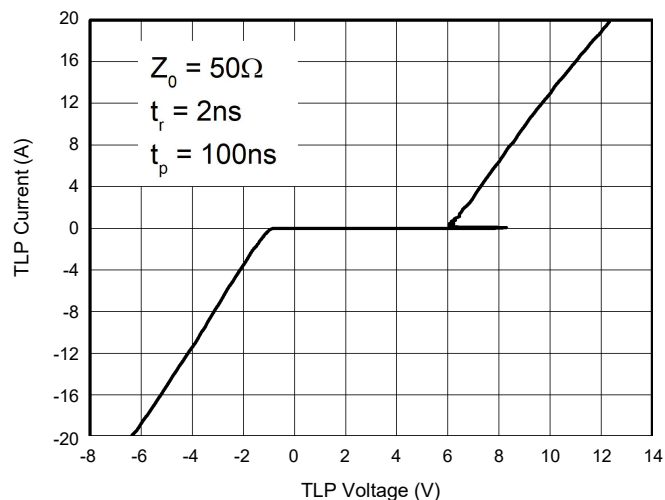
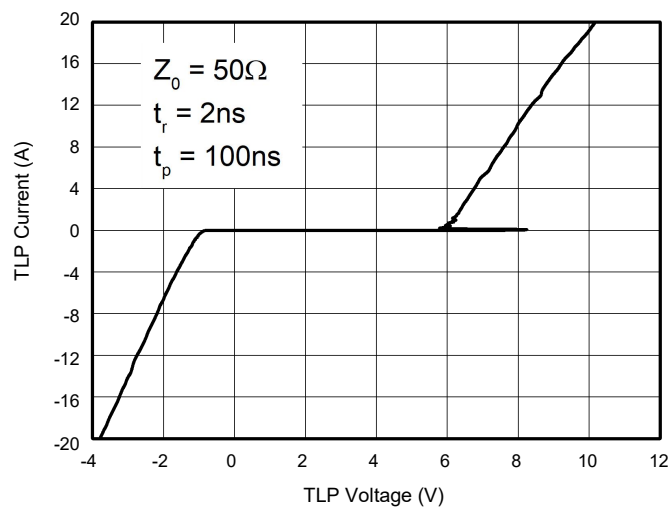


Fig. 6 - TLP Measurement - I/O to GND



## Curve Characteristics

Fig. 7 - TLP Measurement - VDD to GND



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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