

## FEATURES

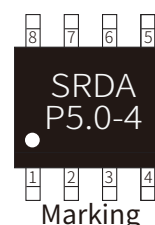
- | 600W Peak Pulse Power per Line (tp=8/20μs)
- | Protects up to Four I/O Lines and Vcc
- | Low Clamping Voltage

## APPLICATIONS

- | Automotive Infotainment
- | HDMI
- | ISDN interfaces
- | Industrial Equipment
- | USB 2.0
- | Access Equipment
- | Central Office Equipment
- | LVDS Interfaces



SOP-8



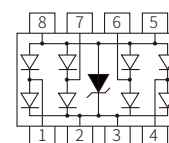
Marking

## IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±30kV (air), ±30kV (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

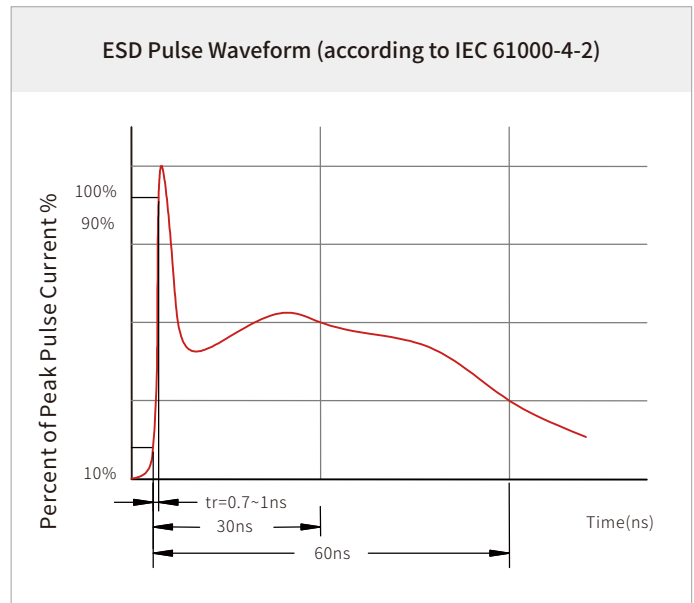
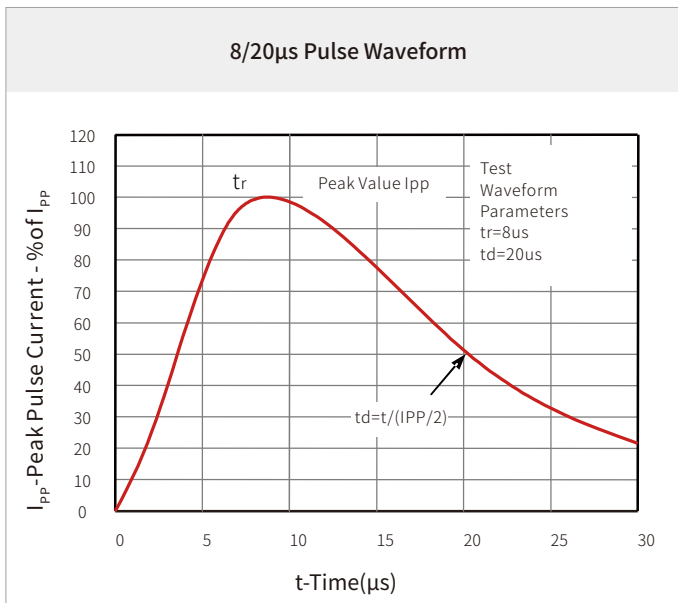
## THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
$P_{pp}$	Peak Pulse Power (tp=8/20μs waveform)	600	Watts
$T_J$	Operating Temperature Range	-40 to +125	°C
$T_{STG}$	Storage Temperature Range	-55 to +150	°C

## ELECTRICAL CHARACTERISTICS

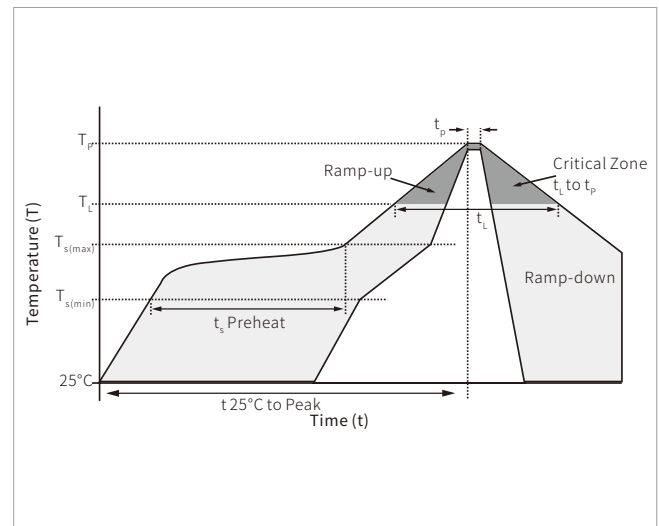
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
$V_{RWM}$	Reverse Stand-off Voltage				6	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T=1mA$	6.3			V
$I_R$	Reverse Leakage Current	$V_{RWM}=6V$			0.1	μA
$V_C$	Clamping Voltage	$I_{pp}=1A, tp=8/20\mu s$			8.7	V
$V_C$	Clamping Voltage	$I_{pp}=20A, tp=8/20\mu s$			15	V
$V_C$	Clamping Voltage	$I_{pp}=30A, tp=8/20\mu s$			20	V
$I_{PP}$	Peak Pulse Current	tp=8/20μs			30	A
$C_J$	Off State Junction Capacitance	$V_R=0V, f=1MHz$ I/O-GND		5		pF
$C_J$	Off State Junction Capacitance	$V_R=0V, f=1MHz$ I/O-I/O		2.5		pF

## CHARACTERISTIC CURVES

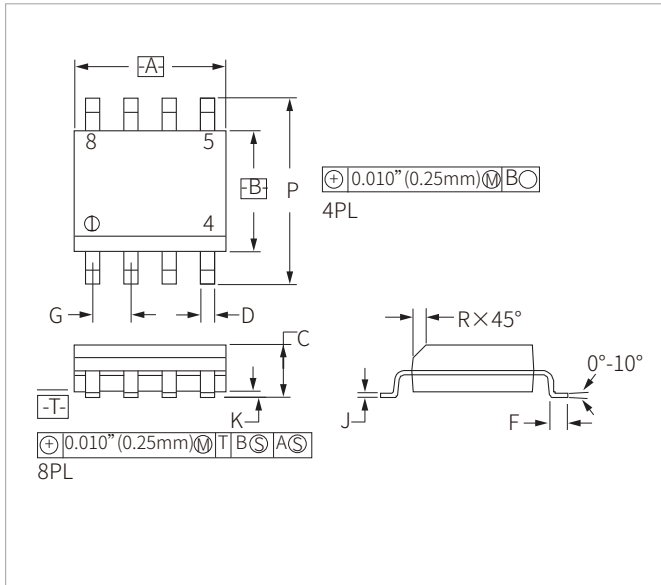


## SOLDERING PARAMETERS

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

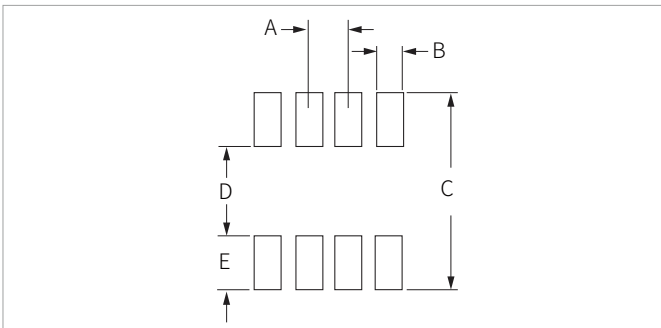


## SOP-8 PACKAGE MECHANICAL DATA



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.70	5.30	0.185	0.209
B	3.80	4.20	0.150	0.165
C	1.35	1.75	0.054	0.068
D	0.35	0.49	0.014	0.019
F	0.40	1.25	0.016	0.049
G	1.27BSC		0.050BSC	
J	0.18	0.25	0.007	0.009
K	0.10	0.25	0.004	0.008
P	5.80	6.20	0.229	0.244
R	0.25	0.50	0.010	0.019

## RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.14	1.40	0.045	0.055
B	0.64	0.89	0.025	0.035
C	6.22	-	0.245	-
D	3.94	4.17	0.155	0.165
E	1.02	1.27	0.040	0.050

## ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SES60U6.0LD	SOP-8	2500PCS	13"

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