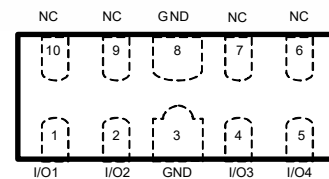
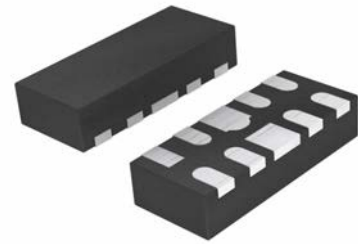


RLDSON10Q034UC

ESD Protection Diode Array

Features

- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low clamping voltage: $V_{CL} = 5.6V$ typ. @ $I_{PP} = 16A$ (TLP)
- Low capacitance ($C_j = 0.3pF$ typ. IO-IO)
- IEC 61000-4-2 $\pm 10kV$ (contact discharge)
 $\pm 15kV$ (air discharge)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 4.5A (8/20 μs)



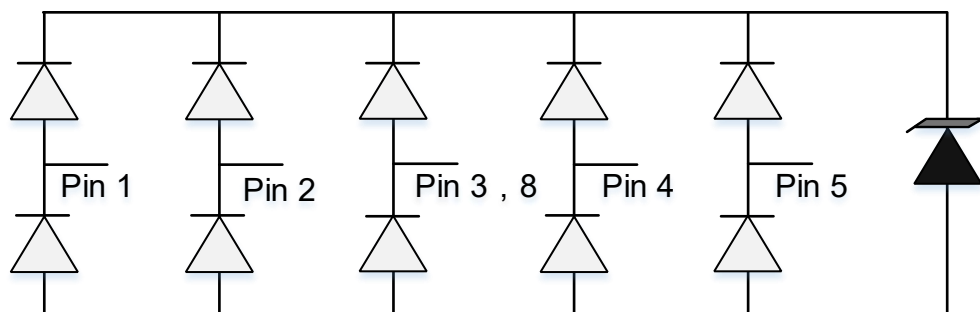
Applications

- USB3.0, USB3.1 interface
- HDMI1.3, HDMI1.4 and HDMI2.0
- industrial equipment
- Digital Visual Interface
- Notebooks

Mechanical Data

- Tiny DFN10L(2.5mmx1.0mm) package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Absolute Maximum Rating

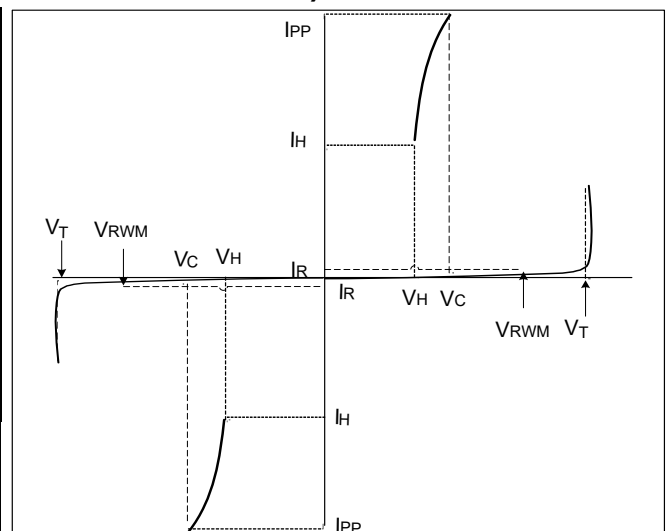
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	35	Watts
Peak Pulse Current ($t_p = 8/20\mu s$) (note1)	I_{PP}	4.5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	15 10	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Junction Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{stg}	-55 to + 125	°C

Electrical Characteristics

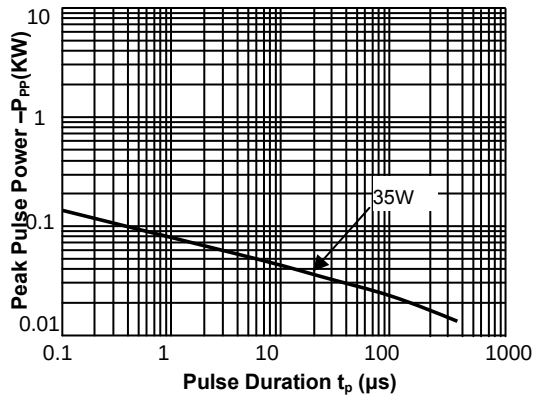
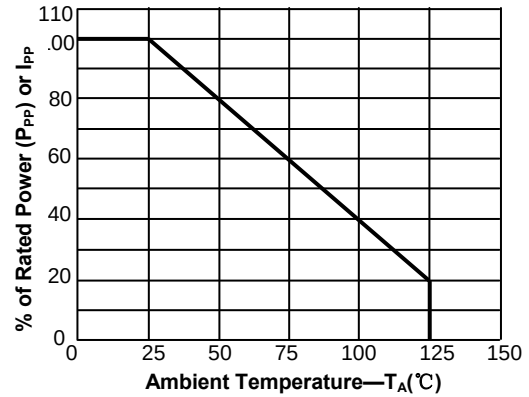
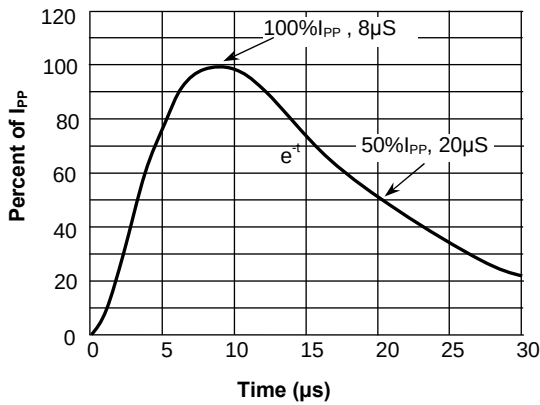
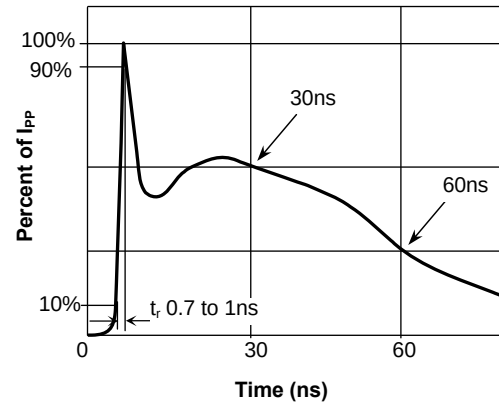
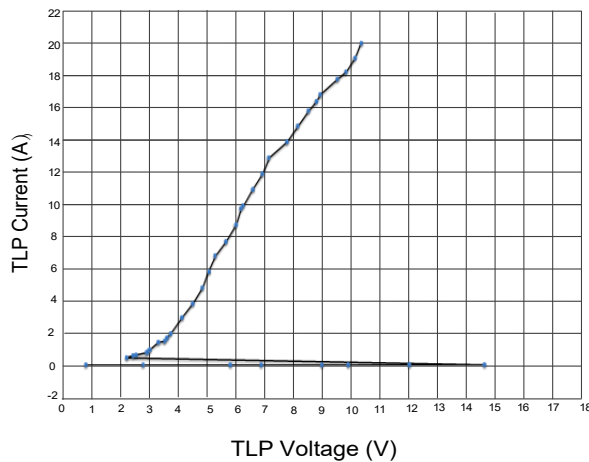
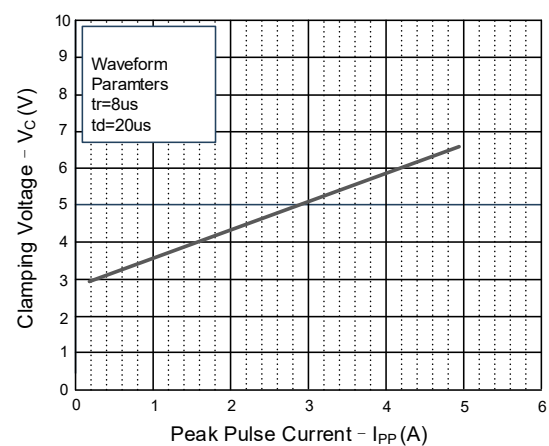
Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				3.3	V
Holding Voltage	V_H	$I_T = I_H$	2.2			V
Holding Current	I_H		15			mA
Reverse Leakage Current	I_R	$V_{RWM} = 3.3V, T = 25^\circ C$			200	nA
Clamping Voltage	V_C	$I_{PP} = 4.5A, t_p = 8/20\mu s$		5.6	7	V
Trigger Voltage	V_T			12	19	V
Junction Capacitance	C_j	$V_R = 1.5V, f = 1MHz$ IO to IO		0.3		pF
		$V_R = 1.5V, f = 1MHz$ IO to Gnd		0.4		pF

Electrical Parameters (TA = 25°C unless otherwise noted)

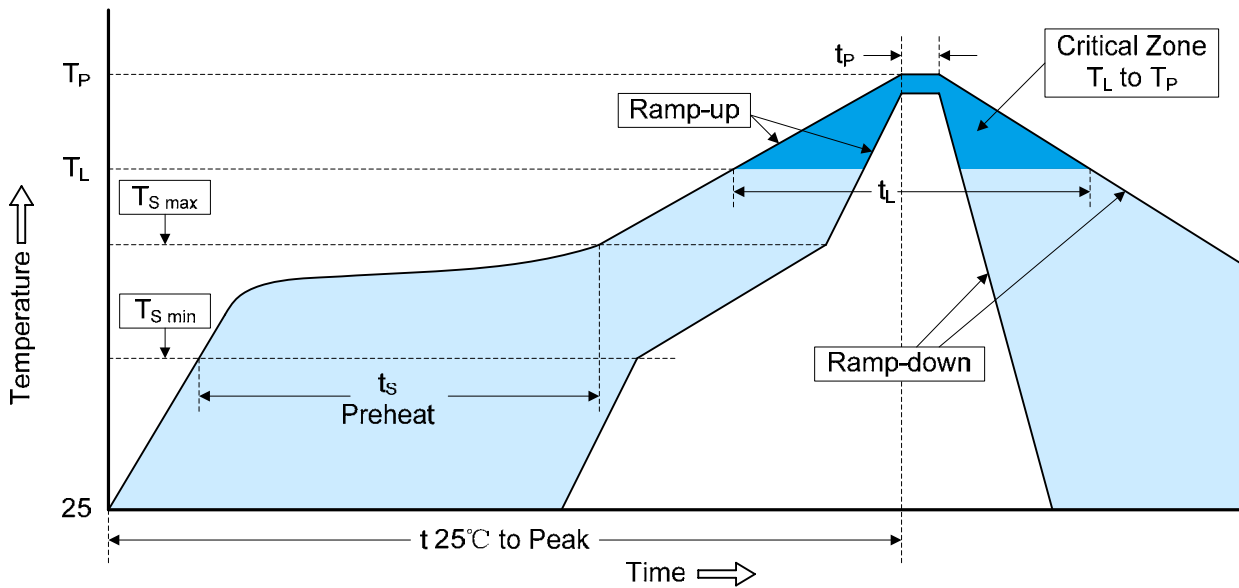
Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_T	Trigger voltage
I_T	Test Current
V_H	Holding voltage
I_H	Holding Current



Typical Characteristic Curves

Fig.1 Peak Pulse Power Rating Curve

Fig.2 Pulse Derating Curve

Fig.3 Pulse Waveform-8/20μs

Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

Fig.5 Measurement

Fig.6 Clamping Voltage vs. Peak Pulse Current


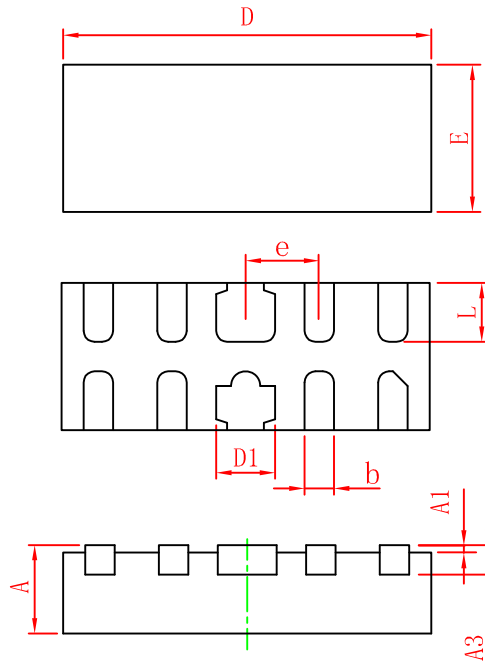
Recommended Soldering Conditions



Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat	
-Temperature Min ($T_{S \min}$)	150°C
-Temperature Max ($T_{S \max}$)	200°C
-Time (min to max) (t_s)	60-180 seco
$T_{S \max}$ to T_L	
-Ramp-up Ra	3°C/second max.
Time maintained above:	
-Temperature (T_L)	217°C
-Time (t_L)	60-150 seco
Peak Temperature (T_P)	260°C
Time within 5°C of actual Peak Temperature (t_P)	20-40 seco
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

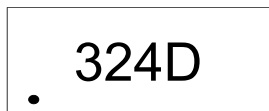


Outline Drawing – DFN10L(2.5mmx1.0mm)



Symbol	Dimensions in millimeters		
	Min	Nom	Max
A	0.45	0.50	0.60
A1	-	0.02	0.05
A3	0.10	0.15	0.20
D	2.45	2.50	2.55
E	0.95	1.00	1.05
D1	0.35	0.40	0.45
b	0.15	0.20	0.25
e	0.50BSC		
L	0.35	0.40	0.45

Marking



Ordering information

Order code	Package	Base qty	Delivery mode
RLDSO10Q034UC	DFN10L(2.5mmx1.0mm)	3k	Tape and reel

