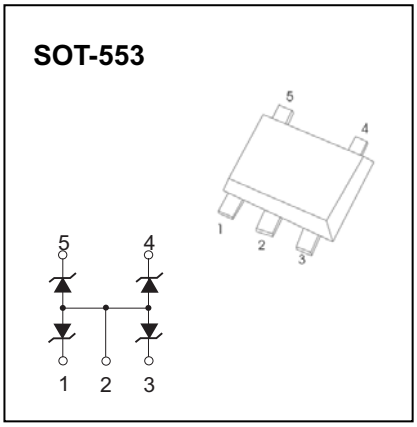
JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOT-553 Plastic-Encapsulate Diodes

CESDLC5V0L4



Low Capacitance Quad Array for ESD Protection

DESCRIPTION

The CESDLC5V0L4 is designed to protect voltage sensitive components from ESD. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to ESD. Because of its small size, it is suited for use in cellular phones, MP3 players, digital cameras and many other portable applications where board space is at a premium.

FEATURES

- Four Separate Unidirectional Configurations for Protection
- Low Leakage Current <1μA @ 5 Volts
- Small Package
- Low Capacitance
- Complies to USB 1.1 Low Speed & Full Speed Specifications
- These are Pb-Free Devices

BENEFITS

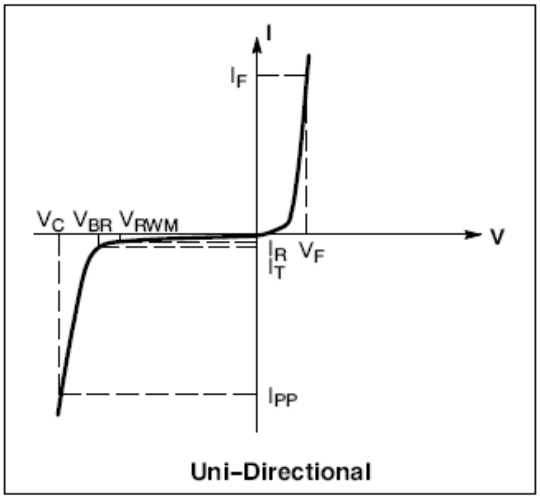
- Protects Four Lines Against Transient Voltage Conditions
- Minimize Power Consumption of the System
- Minimize PCB Board Space

TYPICAL APPLICATIONS

- Instrumentation Equipment
- Serial and Parallel Ports
- Microprocessor Based Equipment
- Notebooks, Desktops, Servers
- Cellular and Portable Equipment

ELECTRICAL CHARACTERISTICS (Ta = 25℃ 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_{BR}	Breakdown Voltage @ I_T
I_T	Test Current



Maximum Ratings (Ta=25℃ unless otherwise noted)

Parameter	Symbol	Limit	Unit
Peak Power Dissipation @ 8 X 20 μ s @T_A= 25°C (Note 1)	P_{pk}	20	W
Steady State Power -- 1 Diode (Note 2)	**P_D**	150	mW
Thermal Resistance Junction−to−Ambient Above 25 °C, derate	$R_{\Theta JA}$	833	℃/W
Maximum Junction Temperature	**T_{jmax}**	150	℃
Operating Junction and Storage Temperature Range	**T_j, T_{stg}**	-55 ~ +150	℃
Lead Solder Temperature (10 Seconds Duration)	**T_L**	260	℃

Stresses exceeding maximum ratings may damage the device. Maximum ratings are stress ratings only. Functional operation above the recommended. Operating conditions is not implied. Extended exposure to stresses above the recommended operating conditions may affect device reliability.

ELECTRICAL CHARACTERISTICS (Ta = 25°C unless otherwise noted, V_F = 0.9 V Max. @ I_F = 10mA for all types)

Device	Device Marking	Breakdown voltage V_{BR} @ 1mA(Volts)			Leakage current I_{RM} @ V_{RM}		V_C Max @I_{PP}		Capacitance @V_R=0V Bias (pF) (Note 3)	Capacitance @V_R=3V Bias (pF) (Note 3)
		Min	Mon	Max	V_{RWM}	I_{RWM} (μA)	V_C (V)	I_{PP} (A)	Max	Max
CESDLC5V0L4	5H	6.0	6.5	7.2	5.0	1.0	11	1.6	14	11.5

1. Non-repetitive current per Figure 1.
2. Only 1 diode under power. For all 4 diodes under power, P_D will be 25%. Mounted on FR-4 board with min pad.
3. Capacitance of one diode at f = 1MHz, Ta = 25°C