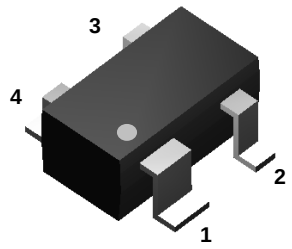
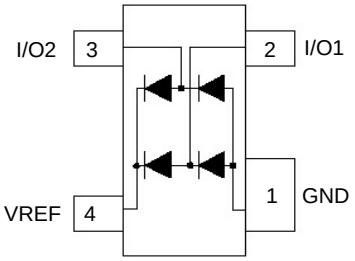
DRAFT SPEC

Low Capacitance Diode Array

This diode array is configured to protect up to two data transmission lines acting as a line terminator, minimizing overshoot and undershoot conditions due to bus impedance as well as protect against over-voltage events as electrostatic discharges





SOT143

SPECIFICATION FEATURES

- **Maximum Capacitance of 5.0pF at 0Vdc 1MHz Line-to-Ground**
- **Maximum Leakage Current of 1μA @ VRWM**
- **Industry Standard SMT Package SOT143**
- **IEC61000-4-2 Full Compliance; 15kV Air, 8kV Contact**
- **100% Tin Matte finish (LEAD-FREE PRODUCT)**

APPLICATIONS

- **USB 2.0 and Firewire Port Protection**
- **LAN/WLAN Access Point terminals**
- **Video Signal line protection**
- **I^2C Bus Protection**

MAXIMUM RATINGS Tj = 25°C Unless otherwise noted

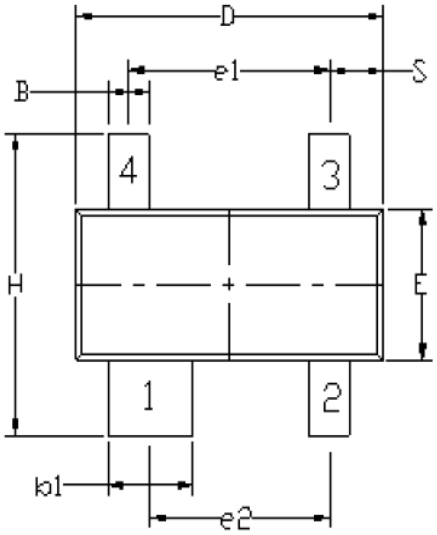
Rating	Symbol	Value	Units
Peak Pulse Current (8/20μs Waveform)	I_{PPM}	24	A
Rectifier Repetitive Peak Reverse Voltage	V_{RRM}	70	V
Operating Junction Temperature Range	T_J	-55 to +125	°C
Storage Temperature Range	T_{stg}	-55 to +150	°C
Soldering Temperature, t max = 10s	T_L	260	°C

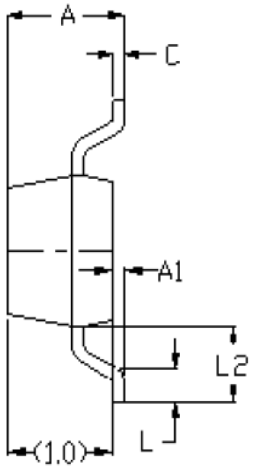
ELECTRICAL CHARACTERISTICS

Tj = 25°C unless otherwise noted

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				70	V
Reverse Breakdown Voltage	V_{BR}	I_{BR} = 50µA	85			V
Reverse Leakage Current	I_R	V_R = 70V			1	µA
Clamping Voltage (8/20µs)	V_{FC}	I_{pp} = 1A			1.5	V
Clamping Voltage (8/20µs)	V_{FC}	I_{pp} = 10A			3.3	V
Clamping Voltage (8/20µs)	V_{FC}	I_{pp} = 24A			7	V
Off State Junction Capacitance	Cj	0 Vdc Bias f = 1MHz Between I/O pins and GND			5	pF
		0 Vdc Bias f = 1MHz Between I/O pins			3	pF

PACKAGE DIMENSIONS - SOT143





DIMENSIONS				
SYMBOL	INCHES		MILIMETERS	
	MIN	MAX	MIN	MAX
A	-	0.043	-	1.09
A1	0.001	0.003	0.025	0.09
B	0.015	0.018	0.370	0.455
b1	0.031	0.033	0.780	0.840
C	0.004	0.006	0.107	0.140
D	0.110	0.118	2.8	3.0
E	0.047	0.055	1.20	1.40
e1	0.071	0.079	1.80	2.00
e2	0.065	0.069	1.650	1.750
H	0.087	0.098	2.20	2.49
L	0.010	0.014	0.265	0.365
L2	0.024	0.027	0.60	0.68
S	0.018	0.022	0.450	0.550