UMW PESD2ETH-AXR

1.Description

Ultra low capacitance double rail-to-rail Electro-Static Discharge (ESD) protection diode in a small SOT143B Surface-Mounted Device (SMD) plastic package.The device is designed to protect two high-speed data lines or high-frequency signal lines from the damage caused by ESD and other transients.

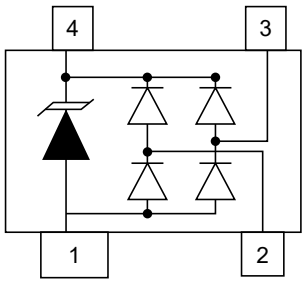
2.Features

- ESD protection of two high-speed data lines
- Ultra low capacitance: C_d=1.8 pF
- IEC 61000-4-2 up to 12 kV
- ISO 10605 (330 pF, 2 kΩ) up to 15 kV
- Very low reverse current

3.Applications

- Low-Voltage Differential Signaling (LVDS) automotive
- USB 2.0 automotive
- 100BASE-T1 / OPEN Alliance BroadR-Reach automotive Ethernet

4.Pinning information

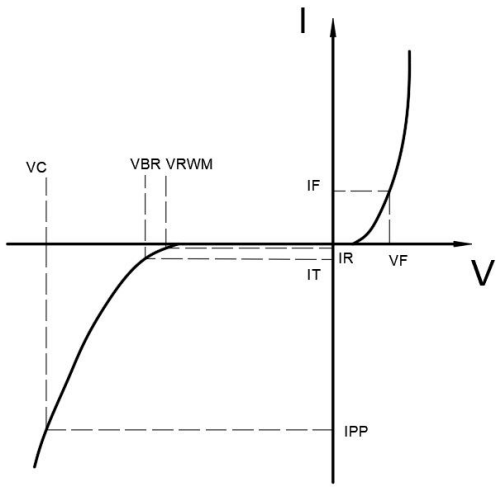


SOT-143

5.Electrical Characteristics (T_A= 25°C unless otherwise noted)

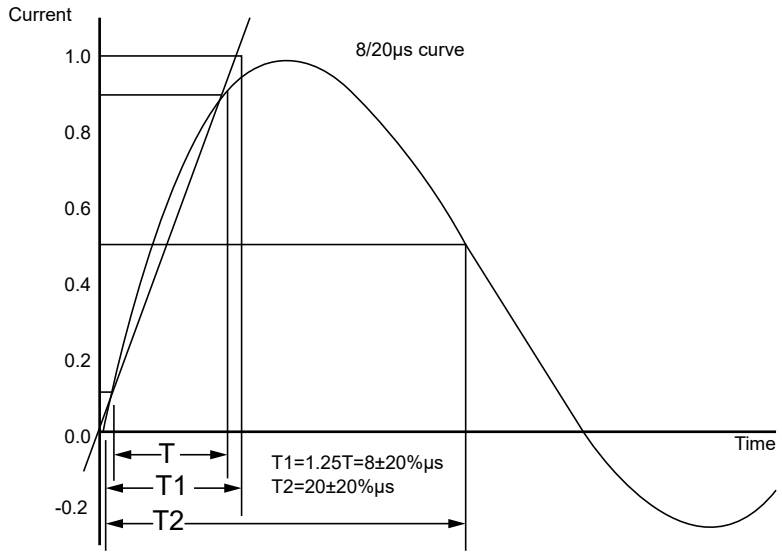
Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	6			V
Reverse Leakage Current	I_R	V_{RWM}=5V			1	μA
Clamping Voltage	V_C	I_{PP}=1A, t_p=8/20μs		8	10	V
		I_{PP}=9A, t_p=8/20μs		15	18	V
Junction capacitance	C_J	V_R=0V, f=1MHz, I/O pin to I/O pin		0.6	0.8	pF
		V_R=0V, f=1MHz, I/O pin to GND		1.2	1.6	pF

6.Electrical Parameters (T_A=25°C unless otherwise noted)

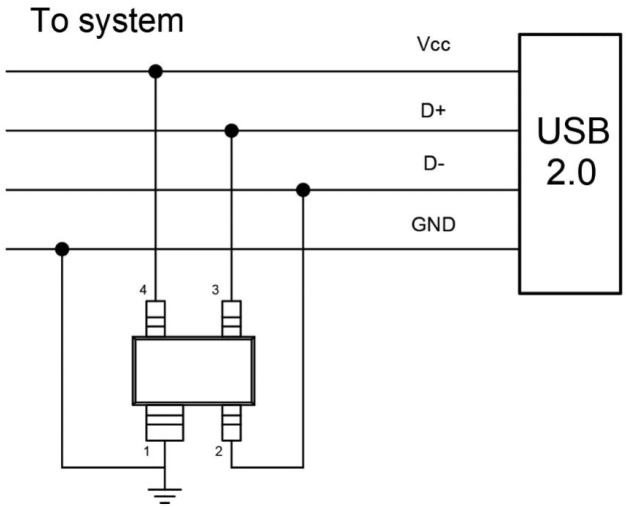


Symbol	Parameter
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
I_F	Forward Current
V_F	Forward Voltage @ I_F

7.Typical Characteristic

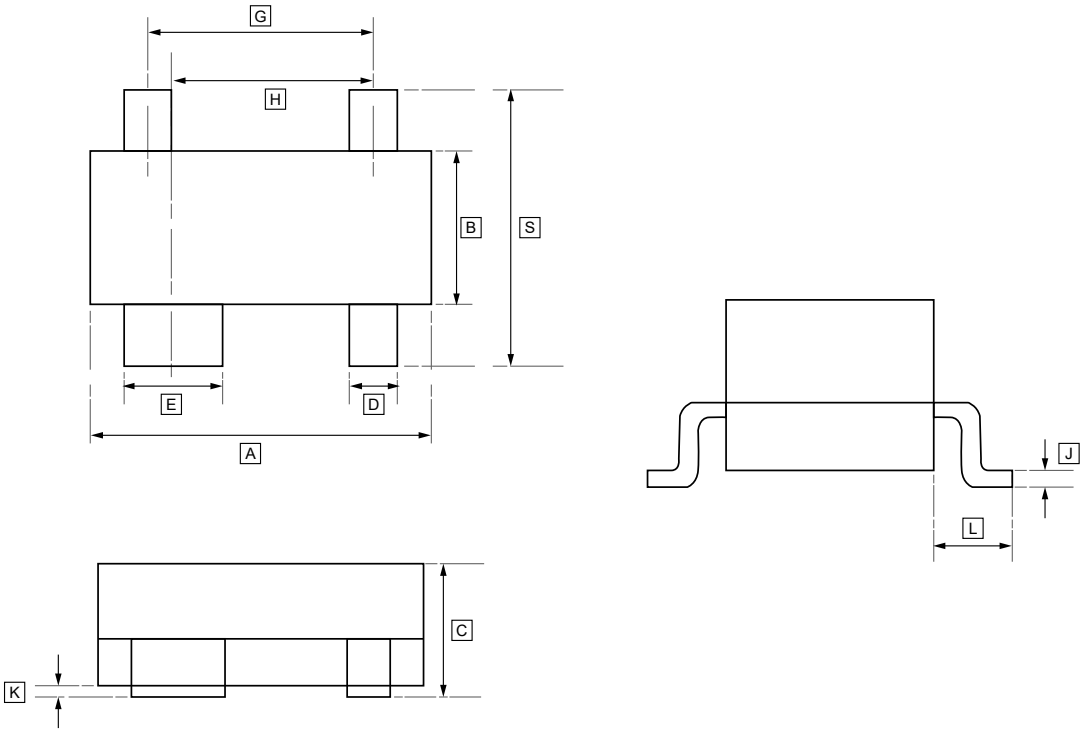


8.Typical Application



Typical Interface Application

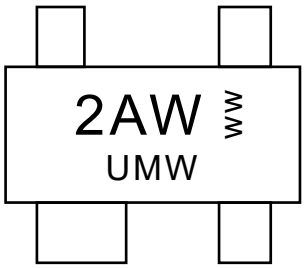
9.SOT-143 Package Outline Dimensions



DIMENSIONS (mm are the original dimensions)

Symbol	A	B	C	D	E	G	H	J	K	L	S
Min	2.80	1.20	0.80	0.37	0.76	1.92	1.72	0.085	0.013	0.254	2.10
Max	3.04	1.40	1.20	0.510	0.940	BSC	BSC	0.180	0.10	0.55	2.64

10.Ordering information



ww: Batch Code

Order Code	Package	Base QTY	Delivery Mode
UMW PESD2ETH-AXR	SOT-143	3000	Tape and reel



11.Disclaimer

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