

1.Features

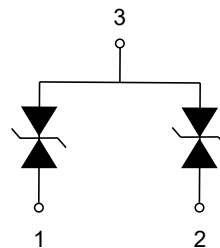
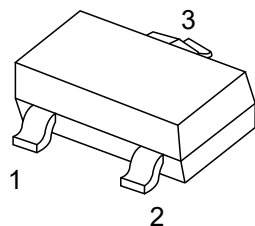
This new generation TVS is designed to meet the stringent requirements of Automotive Applications and to protect sensitive electronics from the damage due to ESD.

The combination of small size and high ESD surge capability makes it ideal to protect LIN and CAN transceiver from ESD, EMI and other harmful transient voltage events.

3.Mechanical Data

- Moisture Sensitivity: Level 1 per J-STD-020
- Weight: 0.009 grams (Approximate)

4.Pinning information



SOT-23

2.Features

- 350W Peak Power Dissipation Per Line (8/20 μ s Waveform)
- Air ± 30 kV, Contact ± 30 kV
2 Channels of ESD Protection
- Low Channel Input Capacitance
- Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. "Green" Device (Note 3)

- Terminals: Matte Tin Finish Annealed over Alloy 42 Leadframe



5. Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Symbol	Value	Units
Peak Pulse Power Dissipation	8/20 μs , Per in Fig. 1	P_{PP}	350	W
Peak Pulse Current	8/20 μs , Per in Fig. 1	I_{PP}	8	A
ESD Protection – Contact Discharge	Standard IEC 61000-4-2	$V_{ESD_Contact}$	± 30	kV
ESD Protection – Air Discharge	Standard IEC 61000-4-2	V_{ESD_Air}	± 30	kV

6. Thermal Characteristics

Parameter	Symbol	Value	Units
Package Power Dissipation (Note 6)	P_D	300	mW
Thermal Resistance, Junction to Ambient (Note 6)	$R_{\theta JA}$	417	$^{\circ}\text{C/W}$
Junction and Storage Temperature Range	T_J, T_{STG}	-65 to 150	$^{\circ}\text{C}$

7. Electrical Characteristic ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

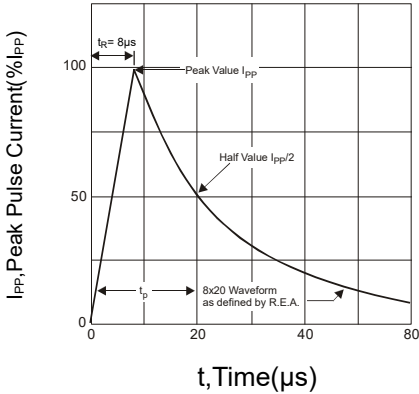
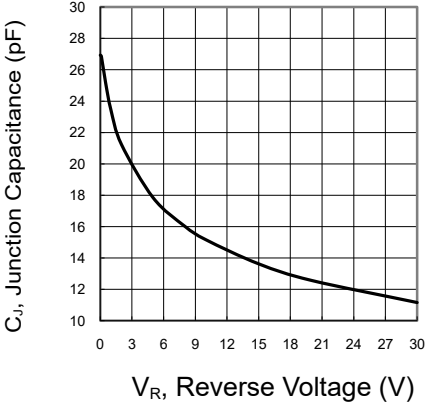
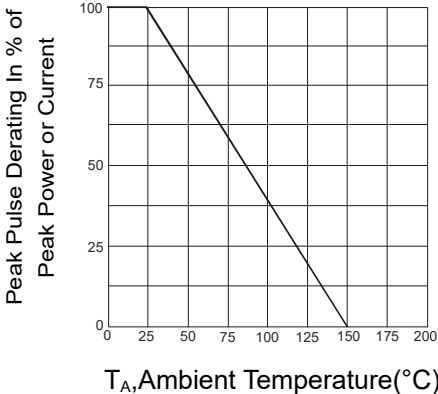
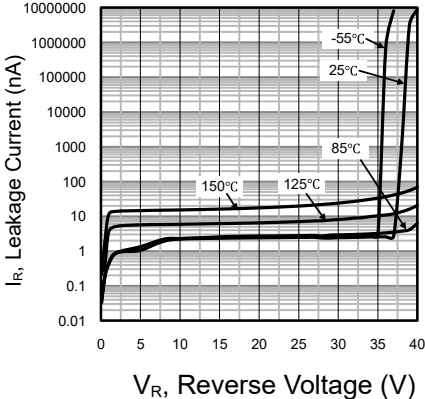
Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Stand off Voltage	V_{RWM}				32	V
Channel Leakage Current (Note 7)	I_{RM}	$V_{RWM}=32\text{V}$		10	100	nA
Clamping Voltage, Positive Transients	V_{CL}	$I_{PP}=5\text{A}$, $t_p=8/20\mu\text{s}$, Figure 1			59	V
		$I_{PP}=8\text{A}$, $t_p=8/20\mu\text{s}$, Figure 1			66	V
Breakdown Voltage	V_{BR}	$I_R=1\text{mA}$	35.6			V
Differential Resistance	R_{DIF}	$I_R=1\text{A}$, $t_p=8/20\mu\text{s}$		0.4		Ω
Channel Input Capacitance	C_T	$V_R=0\text{V}$, $f=1\text{MHz}$			30	pF

Notes:

1. Device mounted on FR-4 PCB pad layout (2oz copper).
2. Short duration pulse test used to minimize self-heating effect.

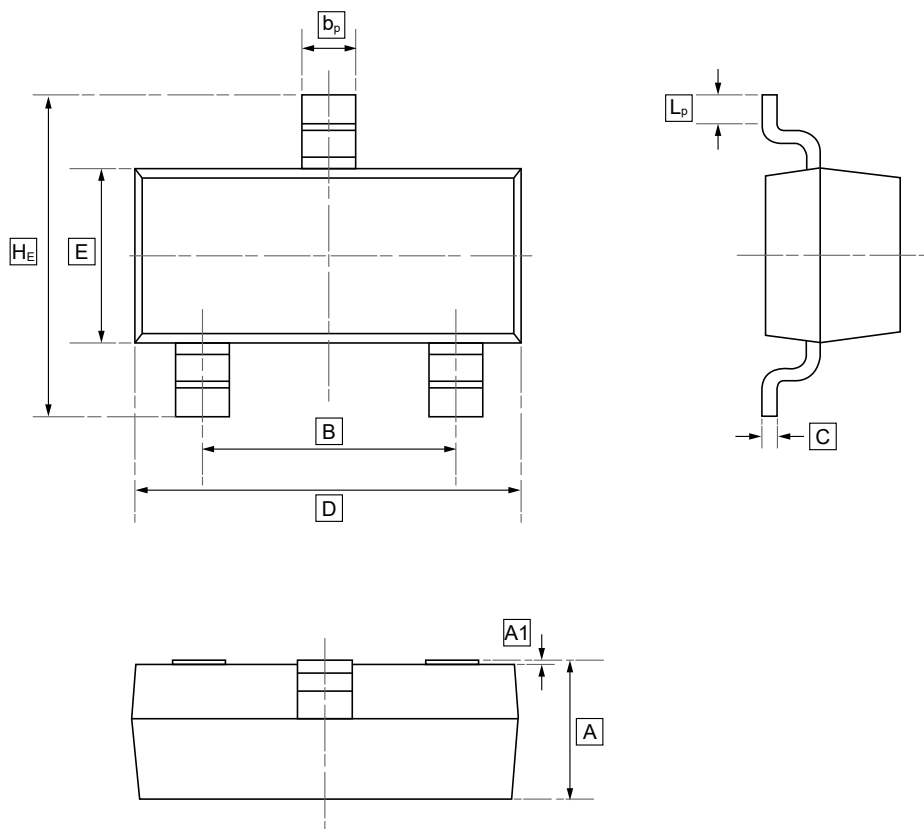


8. Typical characteristic

	
Figure 1: Typical 8 x 20µs Pulse Waveform	Figure 2: Typical Junction Capacitance
	
Figure 3: Power Dissipation vs. Ambient Temperature	Figure 4: Typical Reverse Characteristics



9.SOT-23 Package Outline Dimensions

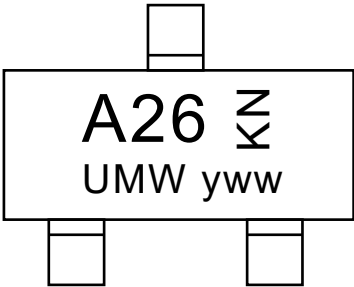


DIMENSIONS (mm are the original dimensions)

Symbol	A	B	b _p	C	D	E	H _E	A1	L _p
Min	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20
Max	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50



10.Ordering information



yww: Batch Code

Order Code	Package	Base QTY	Delivery Mode
UMW DUP3105SOQ-7	SOT-23	3000	Tape and reel



11.Disclaimer

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