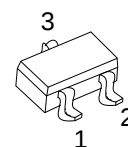




24W AND 40 WATT PEAK POWER ZENER TRANSIENT VOLTAGE SUPPRESSORS

DESCRIPTION

The UTC **UMMBZ** is a dual monolithic silicon zener diodes are designed for applications requiring transient overvoltage protection capability. They are intended for use in voltage and ESD sensitive equipment such as computers, printers, business machines, communication systems, medical equipment and other applications. Their dual junction common anode design protects two separate lines using only one package. These devices are ideal for situations where board space is at a premium.

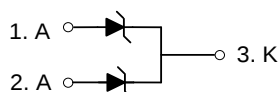


SOT-23
(JEDEC TO-236)

FEATURES

- * Configurations or a Single Bidirectional Configuration
- * Standard Zener Breakdown Voltage Range – 5.6 V to 39 V
- * Peak Power – 24 or 40 Watts (Unidirectional)
- * ESD Rating of Class N (exceeding 16 kV) per the Human Body Model
- * Maximum Clamping Voltage @ Peak Pulse Current
- * Low Leakage < 5.0 mA

SYMBOL



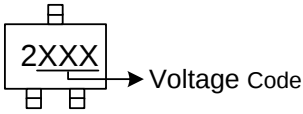
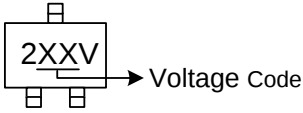
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UMMBZXVXL-AE3-R	UMMBZXVXG-AE3-R	SOT-23	A	A	K	Tape Reel
UMMBZXXVL-AE3-R	UMMBZXXVG-AE3-R	SOT-23	A	A	K	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

UMMBZXVXG-AE3-R	(1)Packing Type (2)Package Type (3)Green Package (4)Voltage Code	(1) R: Tape Reel (2) AE3: SOT-23 (3) G: Halogen Free and Lead Free, L: Lead Free (4)refer to MARKING INFORMATION
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■ MARKING INFORMATION

PACKAGE	VOLTAGE CODE	MARKING
SOT-23	5V6: 5.6V 6V2: 6.2V 6V8: 6.8V 9V1: 9.1V	 → Voltage Code
	10: 10V 12: 12V 15: 15V 18: 18V 20: 20V 27: 27V 33: 33V 39: 39V	 → Voltage Code

■ ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATINGS	UNIT
Peak Power Dissipation @ 1.0 ms (Note 1) (UMMBZ5V6 thru UMMBZ10)	P_{PK}	24	W
Peak Power Dissipation @ 1.0 ms (Note 1) (UMMBZ12 thru UMMBZ39)	P_{PK}	40	W
Power Dissipation at 75°C (Note 1)	P_D	300	mW
Operating Junction Temperature	T_J	-65 ~ +150	°C

Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. Mounted on 5.0mm² (.013mm thick) land areas.

3. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum.

■ ELECTRICAL CHARACTERISTICS

Part Number	Marking Code	V _{RWM}	IR @ V _{RWM}	Breakdown Voltage				Zener Impedance (Note 5)			V _C @ I _{PP}		θV _{BR}
				V _{BR} (Note 4) (V)			@ I _T	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	V _C	I _{PP}		
		V	μA	MIN	TYP	MAX	mA	Ω	Ω	mA	V	A	mV/°C
24 Watts, V _F = 0.9V Max. @ I _F = 10mA													
UMMBZ5V6	5V6	3.0	5.0	5.32	5.6	5.88	20	11	1600	0.25	8.0	3.0	1.26
UMMBZ6V2	6V2	3.0	0.5	5.89	6.2	6.51	1.0	-	-	-	8.7	2.76	2.80
UMMBZ9V1	9V1	6.0	0.3	8.65	9.1	9.56	1.0	-	-	-	14	1.7	7.5
UMMBZ10V	10	6.5	0.3	9.50	10	10.5	1.0	-	-	-	14.2	1.7	7.5
40 Watts, V _F = 1.1V Max. @ I _F = 200mA													
UMMBZ12V	12	8.5	200	11.40	12	12.60	1.0	-	-	-	17	2.35	7.5
UMMBZ15V	15	12.8	50	14.30	15	15.8	1.0	-	-	-	21.2	1.9	12.0
UMMBZ18V	18	14.5	50	17.10	18	18.90	1.0	-	-	-	25	1.6	15.3
UMMBZ20V	20	17	50	19.00	20	21.00	1.0	-	-	-	28	1.4	17.2
UMMBZ27V	27	22	50	25.65	27	28.35	1.0	-	-	-	38	1.0	26
UMMBZ33V	33	26	50	31.35	33	34.65	1.0	-	-	-	46	0.87	30.4
UMMBZ39V	39	31.2	50	37.05	39	40.95	1.0	-	-	-	55	0.76	35.3

Notes: V_{BR} measured at pulse test current I_T at an ambient temperature of 25°C.

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