

**UMMSZ52XXB****ZENER DIODE****SURFACE MOUNT SILICON
ZENER DIODE****DESCRIPTION**

The UTC **UMMSZ52XXB** is a surface mount silicon zener diode, it uses UTC's advanced technology to provide customers with low reverse leakage current, etc.

The UTC **UMMSZ52XXB** is suitable for automated assembly processes.

FEATURES

* Low reverse leakage current

SYMBOL

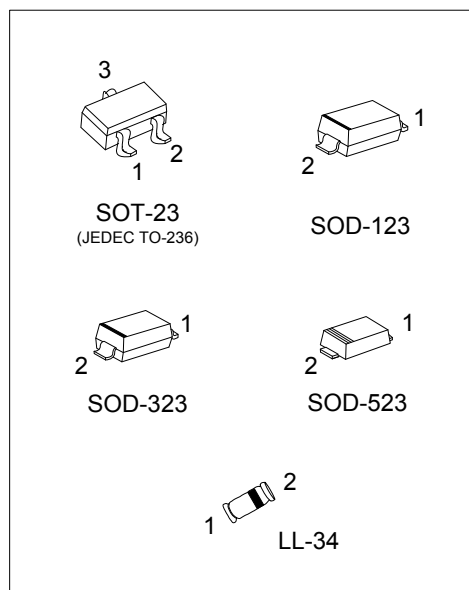
SOT-23	SOD-123 / SOD-323 SOD-523 / LL34

ORDERING INFORMATION

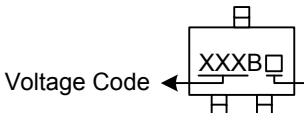
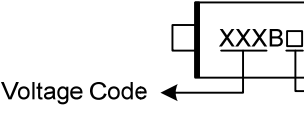
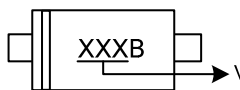
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UMMSZ52XXBL-AE3-R	UMMSZ52XXBG-AE3-R	SOT-23	A	NC	K	Tape Reel
UMMSZ52XXBL-CA2-R	UMMSZ52XXBG-CA2-R	SOD-123	A	K	-	Tape Reel
UMMSZ52XXBL-CB2-R	UMMSZ52XXBG-CB2-R	SOD-323	A	K	-	Tape Reel
UMMSZ52XXBL-CC2-R	UMMSZ52XXBG-CC2-R	SOD-523	A	K	-	Tape Reel
UMMSZ52XXBL-LL34-R	UMMSZ52XXBG-LL34-R	LL-34	A	K	-	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

UMMSZ52XXBG-AE3-R (1) Packing Type (2) Package Type (3) Green Package	(1) R: Tape Reel (2) AE3: SOT-23, CA2 : SOD-123, CB2: SOD-323 CC2: SOD-523, LL34: LL-34 (3) G: Halogen Free and Lead Free, L: Lead Free
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MARKING INFORMATION

PACKAGE	VOLTAGE CODE		MARKING
SOT-23	2.4: 2.4V	11: 11V	 Voltage Code ← XXXB → L: Lead Free G: Halogen Free
	2.5: 2.5V	12: 12V	
	2.7: 2.7V	13: 13V	
	2.8: 2.8V	14: 14V	
	3.0: 3.0V	15: 15V	
	3.3: 3.3V	16: 16V	
SOD-123 SOD-323	3.6: 3.6V	17: 17V	 Voltage Code ← XXXB → L: Lead Free G: Halogen Free
	3.9: 3.9V	18: 18V	
	4.3: 4.3V	19: 19V	
	4.7: 4.7V	20: 20V	
	5.1: 5.1V	22: 22V	
	5.6: 5.6V	24: 24V	
SOD-523	6.0: 6.0V	25: 25V	 Voltage Code ← XXXB →
	6.2: 6.2V	27: 27V	
	6.8: 6.8V	28: 28V	
	7.5: 7.5V	30: 30V	
	8.2: 8.2V	33: 33V	
	8.7: 8.7V	36: 36V	
	9.1: 9.1V	39: 39V	
	10: 10V		

■ ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATINGS	UNIT
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (Note 2)	I_{FSM}	4.0	A
Power Dissipation at 75°C (Note 1)	P_D	500	mW
		330	
		250	
		200	
Operating Junction Temperature	T_J	-55 ~ +150	°C

Note: 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

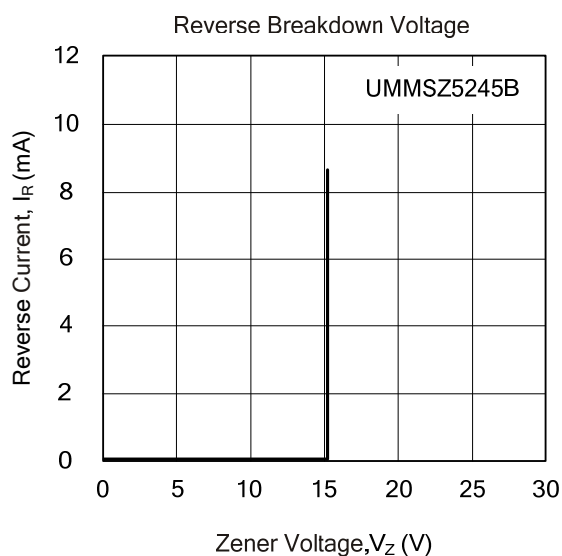
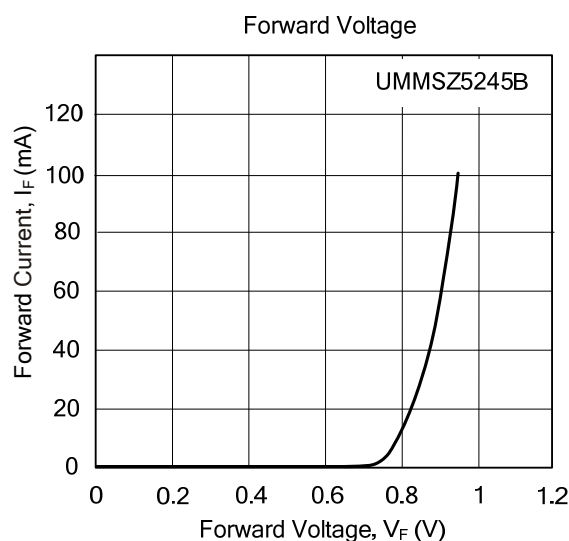
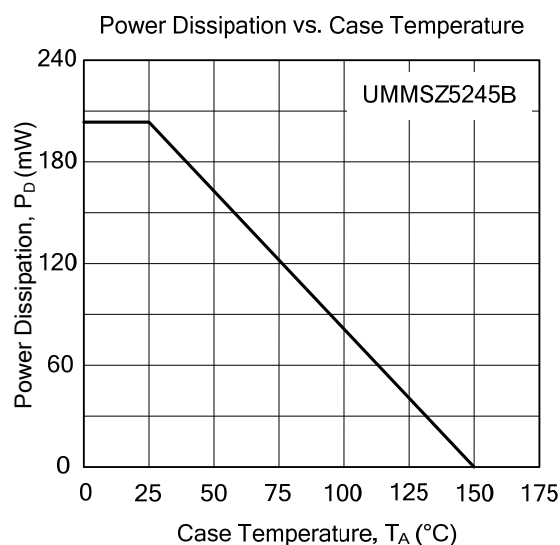
($V_F = 1.2V$ Max @ $I_F = 100mA$ for all types.)

Part Number	Marking Code	Nominal Zener Voltage			Zener Impedance				Reverse Leakage Current		Zener Current
		$V_Z @ I_{ZT}$ (V)			$Z_{ZT} @ I_{ZT}$		$Z_{ZK} @ I_{ZK}$		$I_R @ V_R$		$I_{ZM} @ T_A$
		MIN	TYP	MAX	Max (Ω)	I_Z (mA)	Max (Ω)	I_Z (mA)	Max (μA)	@ V_R (V)	mA
UMMSZ5221B	2.4	2.28	2.4	2.52	30	20	1200	0.25	100	1	188
UMMSZ5222B	2.5	2.38	2.5	2.63	30	20	1250	0.25	100	1	180
UMMSZ5223B	2.7	2.57	2.7	2.84	30	20	1300	0.25	75	1	
UMMSZ5224B	2.8	2.66	2.8	2.94	30	20	1400	0.25	75	1	167
UMMSZ5225B	3.0	2.85	3.0	3.15	30	20	1600	0.25	50	1	150
UMMSZ5226B	3.3	3.14	3.3	3.47	28	20	1600	0.25	25	1	138
UMMSZ5227B	3.6	3.42	3.6	3.78	24	20	1700	0.25	15	1	126
UMMSZ5228B	3.9	3.71	3.9	4.10	23	20	1900	0.25	10	1	115
UMMSZ5229B	4.3	4.09	4.3	4.52	22	20	2000	0.25	5	1	106
UMMSZ5230B	4.7	4.47	4.7	4.94	19	20	1900	0.25	5	2	
UMMSZ5231B	5.1	4.85	5.1	5.36	17	20	1600	0.25	5	2	89
UMMSZ5232B	5.6	5.32	5.6	5.88	11	20	1600	0.25	5	3	81
UMMSZ5233B	6.0	5.70	6.0	6.30	7	20	1600	0.25	5	3.5	
UMMSZ5234B	6.2	5.89	6.2	6.51	7	20	1000	0.25	5	4	73
UMMSZ5235B	6.8	6.46	6.8	7.14	5	20	750	0.25	3	5	67
UMMSZ5236B	7.5	7.13	7.5	7.88	6	20	500	0.25	3	6	61
UMMSZ5237B	8.2	7.79	8.2	8.61	8	20	500	0.25	3	6	55
UMMSZ5238B	8.7	8.27	8.7	9.14	8	20	600	0.25	3	6.5	
UMMSZ5239B	9.1	8.65	9.1	9.56	10	20	600	0.25	3	6.5	50
UMMSZ5240B	10	9.50	10	10.50	17	20	600	0.25	3	8	45
UMMSZ5241B	11	10.45	11	11.55	22	20	600	0.25	2	8.4	41
UMMSZ5242B	12	11.40	12	12.60	30	20	600	0.25	1	9.1	38
UMMSZ5243B	13	12.35	13	13.65	13	9.5	600	0.25	1	9.9	35
UMMSZ5244B	14	13.30	14	14.70	15	9.0	600	0.25	0.1	10.5	
UMMSZ5245B	15	14.25	15	15.75	16	8.5	600	0.25	0.1	11	30
UMMSZ5246B	16	15.20	16	16.80	17	7.8	600	0.25	0.1	12	28
UMMSZ5247B	17	16.15	17	17.85	19	7.5	600	0.25	0.1	13	
UMMSZ5248B	18	17.10	18	18.90	21	7.0	600	0.25	0.1	14	25
UMMSZ5249B	19	18.05	19	19.95	23	6.6	600	0.25	0.1	14	
UMMSZ5250B	20	19.00	20	21.00	25	6.2	600	0.25	0.1	15	23
UMMSZ5251B	22	20.90	22	23.10	29	5.6	600	0.25	0.1	17	21

■ ELECTRICAL CHARACTERISTICS (Cont.)

Part Number	Marking Code	Nominal Zener Voltage			Zener Impedance				Reverse Leakage Current		Zener Current
		$V_Z @ I_{ZT} (V)$			$Z_{ZT} @ I_{ZT}$		$Z_{ZK} @ I_{ZK}$		$I_R @ V_R$		$I_{ZM} @ T_A$
		MIN	TYP	MAX	Max (Ω)	$I_Z (mA)$	Max (Ω)	$I_Z (mA)$	Max (μA)	@ $V_R (V)$	mA
UMMSZ5252B	24	22.80	24	25.20	33	5.2	600	0.25	0.1	18	19.1
UMMSZ5253B	25	23.75	25	26.25	35	5.0	600	0.25	0.1	19	
UMMSZ5254B	27	25.65	27	28.35	41	5.0	600	0.25	0.1	21	16.8
UMMSZ5255B	28	26.60	28	29.40	44	4.5	600	0.25	0.1	21	16.2
UMMSZ5256B	30	28.50	30	31.50	49	4.2	600	0.25	0.1	23	15.1
UMMSZ5257B	33	31.35	33	34.65	58	3.8	700	0.25	0.1	25	13.8
UMMSZ5258B	36	34.20	36	37.80	70	3.4	700	0.25	0.1	27	12.6
UMMSZ5259B	39	37.05	39	40.95	80	3.2	800	0.25	0.1	30	11.6

■ TYPICAL CHARACTERISTICS



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