



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.

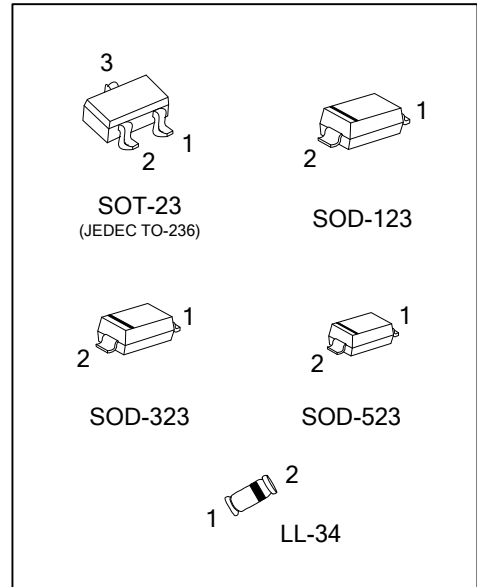
The UTC **UMMSZ52XXB** is suitable for automated assembly processes.

FEATURES

* Low reverse leakage current

SYMBOL

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



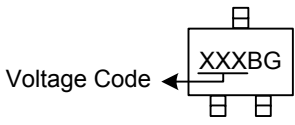
ORDERING INFORMATION

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

Note: Pin Assignment: A: Anode K: Cathode

<p>UMMSZ52XXBG-AE3-R</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Green Package</p> <p>(4) Output Voltage</p>	<p>(1) R: Tape Reel</p> <p>(2) AE3: SOT-23, CA2: SOD-123, CB2: SOD-323 CC2: SOD-523, LL34: LL-34</p> <p>(3) G: Halogen Free and Lead Free</p> <p>(4) refer to ELECTRICAL CHARACTERISTICS</p>
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■ MARKING INFORMATION

PACKAGE	VOLTAGE CODE	MARKING
SOT-23	2.4: 2.4V	 <p>The diagram shows a SOT-23 package with the marking 'XXXBG' on its top surface. An arrow labeled 'Voltage Code' points to the 'X' character in the marking.</p>
	2.5: 2.5V	
	2.7: 2.7V	
	2.8: 2.8V	
	3.0: 3.0V	
	3.3: 3.3V	
	3.6: 3.6V	
	3.9: 3.9V	
	4.3: 4.3V	
	4.7: 4.7V	
	5.1: 5.1V	
	5.6: 5.6V	
	6.0: 6.0V	
	6.2: 6.2V	
	6.8: 6.8V	
	7.5: 7.5V	
	8.2: 8.2V	
	8.7: 8.7V	
	9.1: 9.1V	
	SOD-123 SOD-323 SOD-523	
11: 11V		
12: 12V		
13: 13V		
14: 14V		
15: 15V		
16: 16V		
17: 17V		
18: 18V		
19: 19V		
20: 20V		
22: 22V		
24: 24V		
25: 25V		
27: 27V		
28: 28V		
30: 30V		
33: 33V		
36: 36V		
39: 39V		
43: 43V		
47: 47V		
51: 51V		

■ 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	SOD-123/LL-34	500
		SOD-323	330
		SOD-523	250
		SOT-23	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

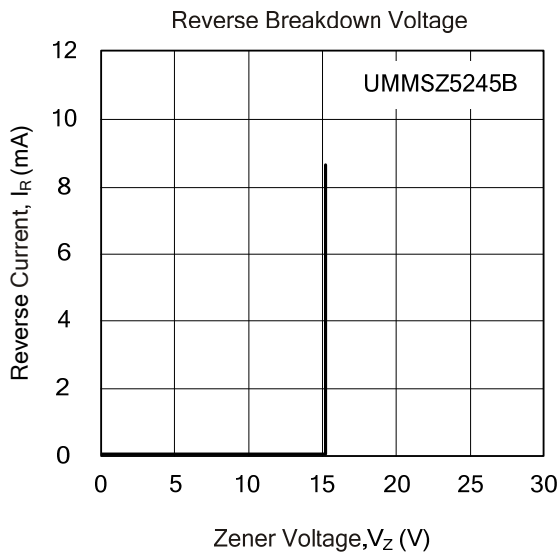
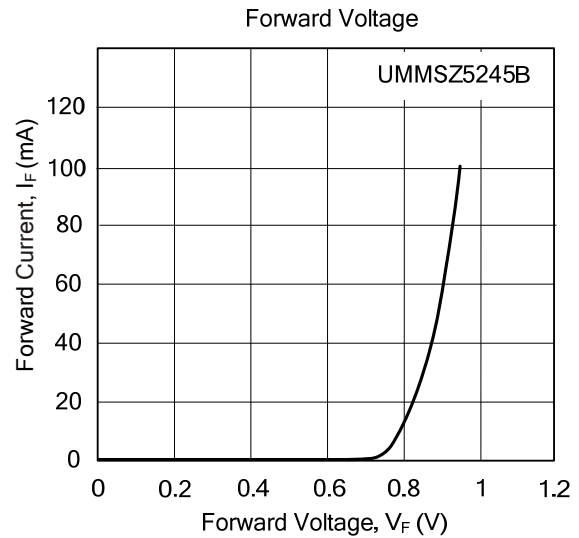
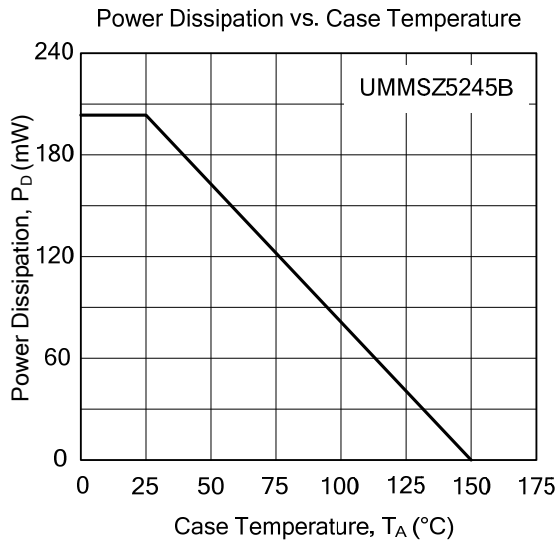
($V_F = 1.2V$ Max @ $I_F = 100mA$ for all types.)

Device	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.)

Device	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	2525	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
UMMSZ5260B	43	40.85	43	45.15	93	3.0	900	0.25	0.1	33	
UMMSZ5261B	47	44.65	47	49.35	105	2.7	1000	0.25	0.1	36	
UMMSZ5262B	51	48.45	51	53.55	125	2.5	1100	0.25	0.1	39	

TYPICAL CHARACTERISTICS



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