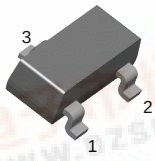
FAIRCHILD
SEMICONDUCTOR®

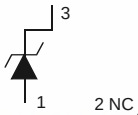
Zeners
MMBZ5221B-MMBZ5257B

Tolerance = 5%



SOT-23

CONNECTION DIAGRAM



Absolute Maximum Ratings *

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
P_D	Power Dissipation	350	mW
T_{STG}	Storage Temperature Range	-55 to +150	°C
T_J	Operating Junction Temperature	+150	°C

* These ratings are limiting values above which the serviceability of the diode may be impaired.

NOTES:
1) These ratings are based on a maximum junction temperature of 150 degrees C.
2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Electrical Characteristics

T_A=25°C unless otherwise noted

Device	Mark	V_Z (V)	Z_Z(Ω) @ I_Z (mA)		Z_{ZK}(Ω) @ I_{ZK} (mA)		I_R (μA) @ V_R (V)	
MMBZ5221B	18A	2.4	30	20	1,200	0.25	100	1.0
MMBZ5223B	18C	2.7	30	20	1,300	0.25	75	1.0
MMBZ5226B	8A	3.3	28	20	1,600	0.25	25	1.0
MMBZ5227B	8B	3.6	24	20	1,700	0.25	15	1.0
MMBZ5228B	8C	3.9	23	20	1,900	0.25	10	1.0
MMBZ5229B	8D	4.3	22	20	1,000	0.25	5.0	1.0
MMBZ5230B	8E	4.7	19	20	1,900	0.25	5.0	2.0
MMBZ5231B	8F	5.1	17	20	1,600	0.25	5.0	2.0
MMBZ5232B	8G	5.6	11	20	1,600	0.25	5.0	3.0
MMBZ5233B	8H	6.0	7.0	20	1,600	0.25	5.0	3.5
MMBZ5234B	8J	6.2	7.0	20	1,000	0.25	5.0	4.0
MMBZ5235B	8K	6.8	5.0	20	750	0.25	3.0	5.0
MMBZ5236B	8L	7.5	6.0	20	500	0.25	3.0	6.0
MMBZ5237B	8M	8.2	8.0	20	500	0.25	3.0	6.5
MMBZ5238B	8N	8.7	8.0	20	600	0.25	3.0	6.5
MMBZ5239B	8P	9.1	10	20	600	0.25	3.0	7.0
MMBZ5240B	8Q	10	17	20	600	0.25	3.0	8.0
MMBZ5241B	8R	11	22	20	600	0.25	2.0	8.4
MMBZ5242B	8S	12	30	20	600	0.25	1.0	8.1
MMBZ5243B	8T	13	13	9.5	600	0.25	500	9.9
MMBZ5244B	8U	14	15	9.0	600	0.25	100	10
MMBZ5245B	8V	15	16	8.5	600	0.25	100	11
MMBZ5246B	8W	16	17	7.8	600	0.25	100	12
MMBZ5247B	8X	17	19	7.4	600	0.25	100	13

V_F Forward Voltage = 0.9V Maximum @ I_F = 10mA for all MMBZ5200 series

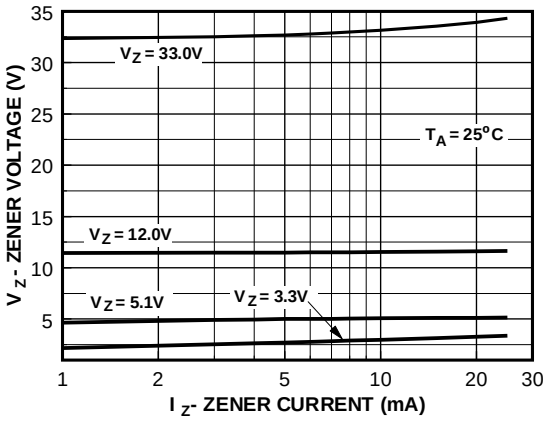
Electrical Characteristics

T_A=25°C unless otherwise noted

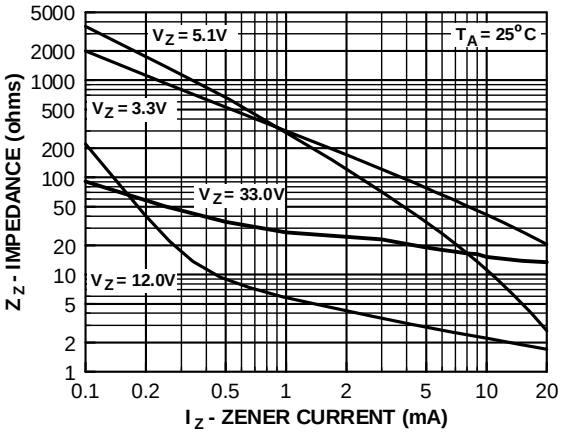
Device	Mark	V_Z (V)	Z_Z(Ω) @ I_Z (mA)		Z_{ZK}(Ω) @ I_{ZK} (mA)		I_R (μA) @ V_R (V)	
MMBZ5248B	8Y	18	21	7.0	600	0.25	100	14
MMBZ5249B	8Z	19	23	6.6	600	0.25	100	14
MMBZ5250B	81A	20	25	6.2	600	0.25	100	15
MMBZ5251B	81B	22	29	5.6	600	0.25	100	17
MMBZ5252B	81C	24	33	5.2	600	0.25	100	18
MMBZ5253B	81D	25	35	5.0	600	0.25	100	19
MMBZ5254B	81E	27	41	4.6	600	0.25	100	21
MMBZ5255B	81F	28	44	4.5	600	0.25	100	21
MMBZ5256B	81G	30	49	4.2	600	0.25	100	23
MMBZ5257B	81H	33	58	3.8	600	0.25	100	25

V_F Forward Voltage = 0.9V Maximum @ I_F = 10mA for all MMBZ5200 series

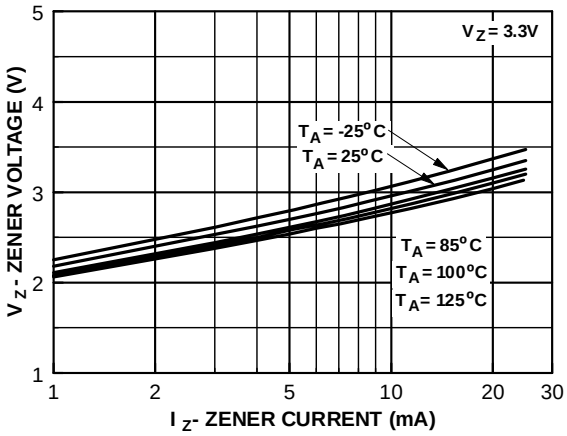
Typical Characteristics



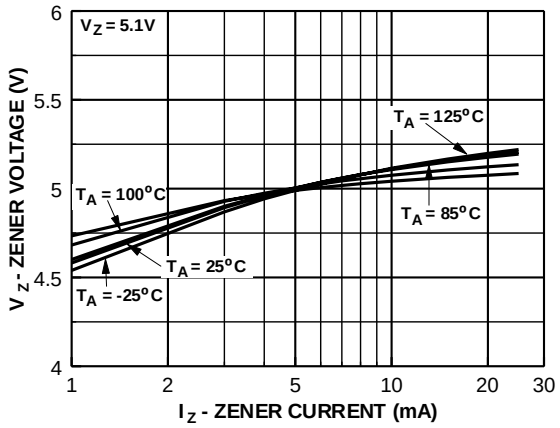
Zener Current vs. Zener Voltage



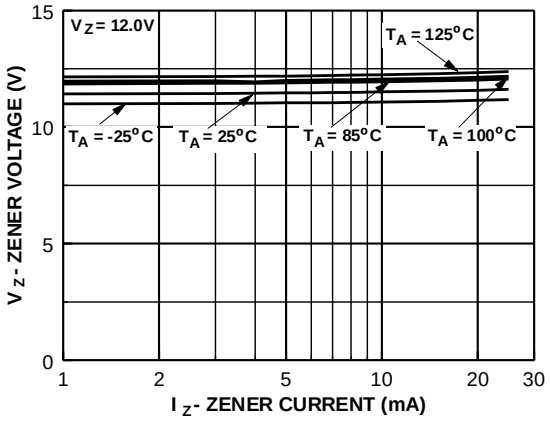
Zener Current vs. Zener Impedence



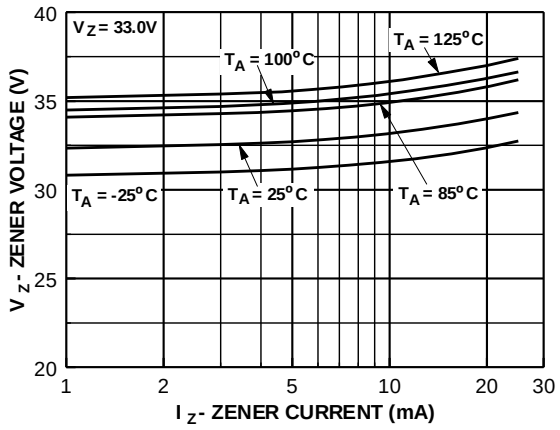
3.3 Zener Voltage vs. Temperature



5.1 Zener Voltage vs. Temperature



12 Zener Voltage vs. Zener Temperature



33 Zener Voltage vs. Zener Temperature

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Definition of Terms

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