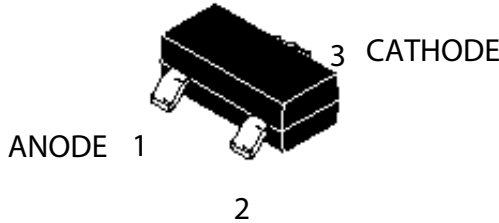
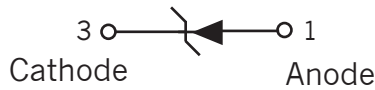
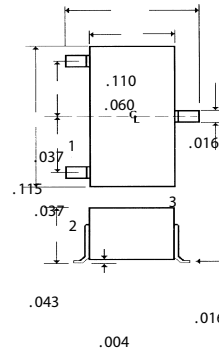


FMBZ5221B Series

Description



Mechanical Dimensions



Features:

- *225mw Power Dissipation
- *Ideal for Surface Mountted Application
- *Zener Breakdown Voltage Range 2.4V to 91V

Mechanical Data:

- *Case : SOT-23 Molded plastic
- *Terminals: Solderable per MIL-STD-202, Method 208
- *Polarity: Cathode Indicated by Polarity Band
- *Marking: Marking Code (See Table on Page 3)
- *Weigh: 0.008grams(approx)

Maximum Ratings and Electrical Characteristics (TA=25 °C Unless Otherwise Noted)

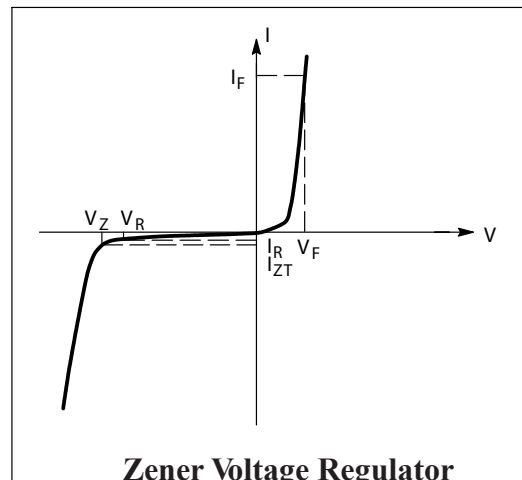
Characteristics	Symbol	Value	Unit
Total Power Dissipation on FR-5 Board ⁽¹⁾ @TA=25°C	PD	225	mW
Thermal Resistance Junction to Ambient Air ⁽¹⁾	RθJA	556	°C/W
Forward Voltage @ IF=10mA	VF	0.9	V
Junction and Storage Temperature Range	Tj,TSTG	-65 to+150	°C

NOTES:1.FR-5=1.0*0.75*0.62in

ELECTRICAL CHARACTERISTICS

(Pinout: 1-Anode, 2-No Connection, 3-Cathode) (TA = 25°C unless otherwise noted, VF = 0.9V Max. @ IF = 10 mA)

Symbol	Parameter
VZ	Reverse Zener Voltage @ IZT
IZT	Reverse Current
ZZT	Maximum Zener Impedance @ IZT
IR	Reverse Leakage Current @ VR
VR	Reverse Voltage
IF	Forward Current
VF	Forward Voltage @ IF
IZK	Reverse Current
ZZK	Maximum Zener Impedance@ IZK





ELECTRICAL CHARACTERISTICS

(Pinout: 1-Anode, 2-NC, 3-Cathode) ($V_F = 0.9\text{ V Max @ } I_F = 10\text{ mA}$ for all types.)

Device	Device Marking	Zener Voltage (Note)				Zener Impedance			Leakage Current	
		V_Z (Volts)			@ I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}		I_R @ V_R	
		Min	Nom	Max	mA	Ω	Ω	mA	μA	Volts
FMBZ5221BLT1	18A	2.28	2.4	2.52	20	30	1200	0.25	100	1
FMBZ5222BLT1	18B	2.37	2.5	2.63	20	30	1250	0.25	100	1
FMBZ5223BLT1	18C	2.56	2.7	2.84	20	30	1300	0.25	75	1
FMBZ5224BLT1	18D	2.66	2.8	2.94	20	30	1400	0.25	75	1
FMBZ5225BLT1	18E	2.85	3	3.15	20	29	1600	0.25	50	1
FMBZ5226BLT1	8A	3.13	3.3	3.47	20	28	1600	0.25	25	1
FMBZ5227BLT1	8B	3.42	3.6	3.78	20	24	1700	0.25	15	1
FMBZ5228BLT1	8C	3.70	3.9	4.10	20	23	1900	0.25	10	1
FMBZ5229BLT1	8D	4.08	4.3	4.52	20	22	2000	0.25	5	1
FMBZ5230BLT1	8E	4.46	4.7	4.94	20	19	1900	0.25	5	2
<i>FMBZ5231BLT1</i>	<i>8F</i>	<i>4.84</i>	<i>5.1</i>	<i>5.36</i>	<i>20</i>	<i>17</i>	<i>1600</i>	<i>0.25</i>	<i>5</i>	<i>2</i>
<i>FMBZ5232BLT1</i>	<i>8G</i>	<i>5.32</i>	<i>5.6</i>	<i>5.88</i>	<i>20</i>	<i>11</i>	<i>1600</i>	<i>0.25</i>	<i>5</i>	<i>3</i>
FMBZ5233BLT1*	8H	5.70	6	6.30	20	7	1600	0.25	5	3.5
<i>FMBZ5234BLT1</i>	<i>8J</i>	<i>5.89</i>	<i>6.2</i>	<i>6.51</i>	<i>20</i>	<i>7</i>	<i>1000</i>	<i>0.25</i>	<i>5</i>	<i>4</i>
<i>FMBZ5235BLT1</i>	<i>8K</i>	<i>6.46</i>	<i>6.8</i>	<i>7.14</i>	<i>20</i>	<i>5</i>	<i>750</i>	<i>0.25</i>	<i>3</i>	<i>5</i>
FMBZ5236BLT1	8L	7.12	7.5	7.88	20	6	500	0.25	3	6
FMBZ5237BLT1	8M	7.79	8.2	8.61	20	8	500	0.25	3	6.5
FMBZ5238BLT1	8N	8.26	8.7	9.14	20	8	600	0.25	3	6.5
FMBZ5239BLT1	8P	8.64	9.1	9.56	20	10	600	0.25	3	7
<i>FMBZ5240BLT1</i>	<i>8Q</i>	<i>9.50</i>	<i>10</i>	<i>10.50</i>	<i>20</i>	<i>17</i>	<i>600</i>	<i>0.25</i>	<i>3</i>	<i>8</i>
FMBZ5241BLT1	8R	10.4	11	11.55	20	22	600	0.25	2	8.4
<i>FMBZ5242BLT1</i>	<i>8S</i>	<i>11.40</i>	<i>12</i>	<i>12.60</i>	<i>20</i>	<i>30</i>	<i>600</i>	<i>0.25</i>	<i>1</i>	<i>9.1</i>
FMBZ5243BLT1	8T	12.35	13	13.65	9.5	13	600	0.25	0.5	9.9
FMBZ5244BLT1	8U	13.30	14	14.70	9	15	600	0.25	0.1	10
<i>FMBZ5245BLT1</i>	<i>8V</i>	<i>14.25</i>	<i>15</i>	<i>15.75</i>	<i>8.5</i>	<i>16</i>	<i>600</i>	<i>0.25</i>	<i>0.1</i>	<i>11</i>
FMBZ5246BLT1*	8W	15.20	16	16.80	7.8	17	600	0.25	0.1	12
FMBZ5247BLT1	8X	16.15	17	17.85	7.4	19	600	0.25	0.1	13
<i>FMBZ5248BLT1</i>	<i>8Y</i>	<i>17.10</i>	<i>18</i>	<i>18.90</i>	<i>7</i>	<i>21</i>	<i>600</i>	<i>0.25</i>	<i>0.1</i>	<i>14</i>
FMBZ5249BLT1	8Z	18.05	19	19.95	6.6	23	600	0.25	0.1	14
<i>FMBZ5250BLT1</i>	<i>81A</i>	<i>19.00</i>	<i>20</i>	<i>21.00</i>	<i>6.2</i>	<i>25</i>	<i>600</i>	<i>0.25</i>	<i>0.1</i>	<i>15</i>
FMBZ5251BLT1*	81B	20.90	22	23.10	5.6	29	600	0.25	0.1	17
FMBZ5252BLT1*	81C	22.80	24	25.20	5.2	33	600	0.25	0.1	18
FMBZ5253BLT1	81D	23.75	25	26.25	5	35	600	0.25	0.1	19
<i>FMBZ5254BLT1</i>	<i>81E</i>	<i>25.65</i>	<i>27</i>	<i>28.35</i>	<i>4.6</i>	<i>41</i>	<i>600</i>	<i>0.25</i>	<i>0.1</i>	<i>21</i>
FMBZ5255BLT1	81F	26.60	28	29.40	4.5	44	600	0.25	0.1	21
FMBZ5256BLT1	81G	28.50	30	31.50	4.2	49	600	0.25	0.1	23
<i>FMBZ5257BLT1</i>	<i>81H</i>	<i>31.35</i>	<i>33</i>	<i>34.65</i>	<i>3.8</i>	<i>58</i>	<i>700</i>	<i>0.25</i>	<i>0.1</i>	<i>25</i>
FMBZ5258BLT1	81J	34.20	36	37.80	3.4	70	700	0.25	0.1	27
FMBZ5259BLT1	81K	37.05	39	40.95	3.2	80	800	0.25	0.1	30
FMBZ5260BLT1	81L	40.85	43	45.15	3	93	900	0.25	0.1	33
FMBZ5261BLT1	81M	44.65	47	49.35	2.7	105	1000	0.25	0.1	36
FMBZ5262BLT1	81N	48.45	51	53.55	2.5	125	1100	0.25	0.1	39
FMBZ5263BLT1	81P	53.20	56	58.80	2.2	150	1300	0.25	0.1	43
FMBZ5264BLT1	81Q	57.00	60	63.00	2.1	170	1400	0.25	0.1	46
FMBZ5265BLT1	81R	58.90	62	65.10	2	185	1400	0.25	0.1	47
FMBZ5266BLT1	81S	64.60	68	71.40	1.8	230	1600	0.25	0.1	52
FMBZ5267BLT1	81T	71.25	75	78.75	1.7	270	1700	0.25	0.1	56
FMBZ5268BLT1	81U	77.90	82	86.10	1.5	330	2000	0.25	0.1	62
FMBZ5269BLT1	81V	82.65	87	91.35	1.4	370	2200	0.25	0.1	68
FMBZ5270BLT1	81W	86.45	91	95.55	1.4	400	2300	0.25	0.1	69

NOTE. Zener voltage is measured with a pulse test current I_Z at an ambient temperature of 25°C

TYPICAL CHARACTERISTICS

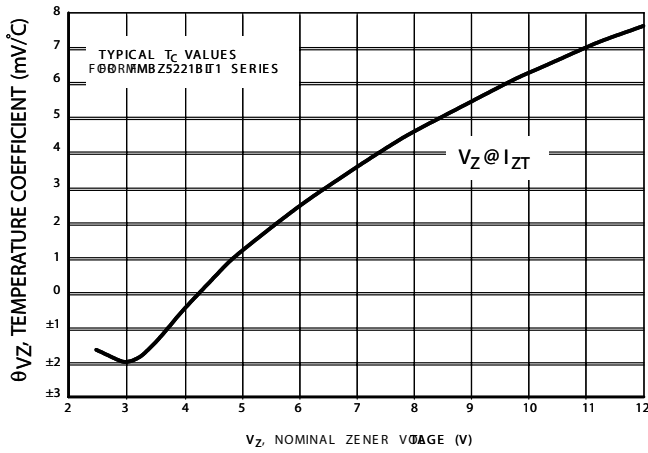


Figure 1. Temperature Coefficients (Temperature Range $\pm 55^{\circ}\text{C}$ to $+150^{\circ}\text{C}$)

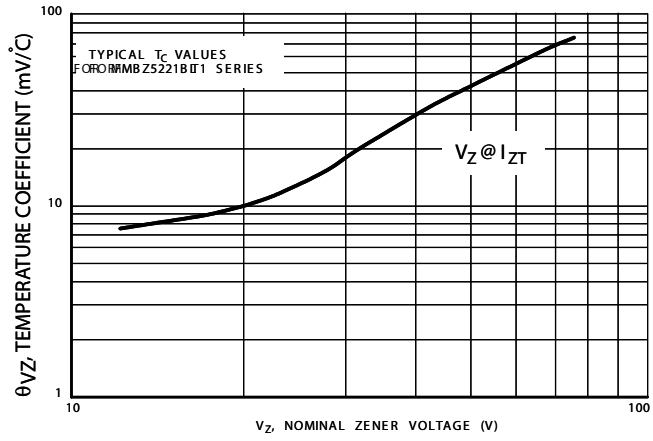


Figure 2. Temperature Coefficients (Temperature Range $\pm 55^{\circ}\text{C}$ to $+150^{\circ}\text{C}$)

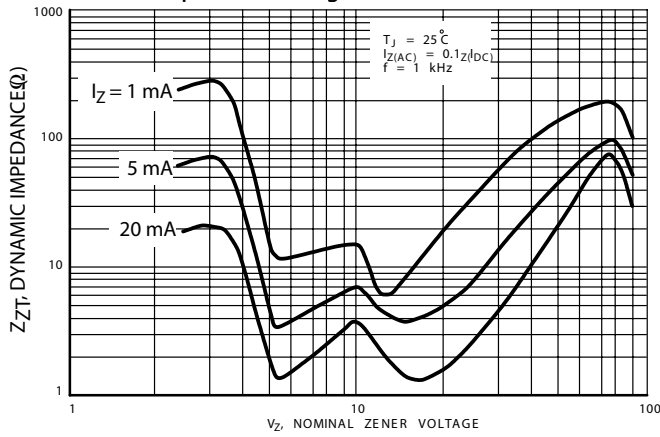


Figure 3. Effect of Zener Voltage on Zener Impedance

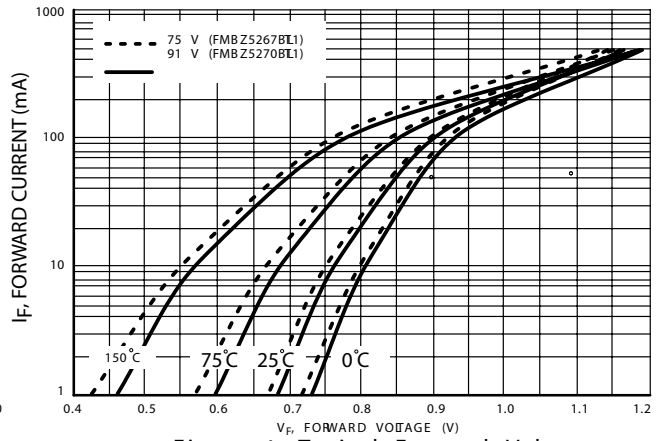


Figure 4. Typical Forward Voltage

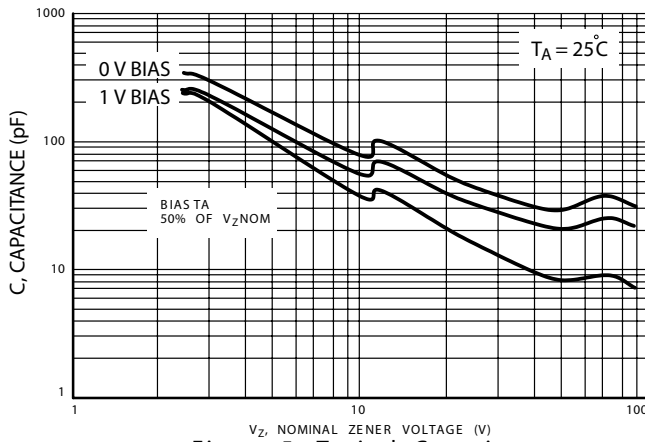


Figure 5. Typical Capacitance

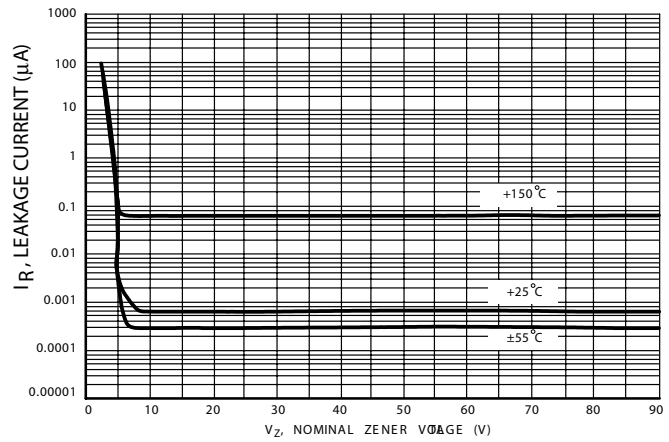


Figure 6. Typical Leakage Current

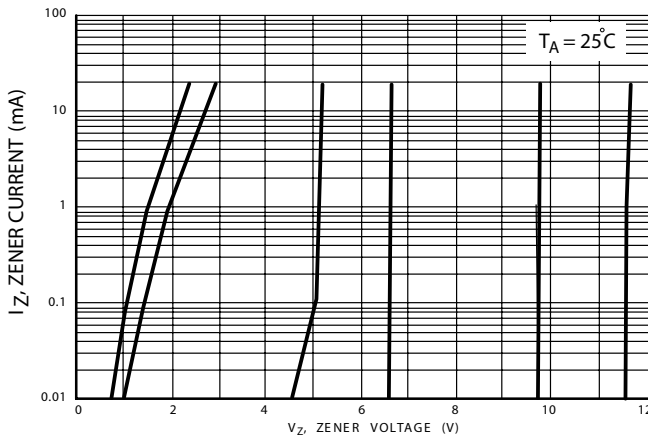


Figure 7. Zener Voltage versus Zener Current (V_z Up to 12 V)

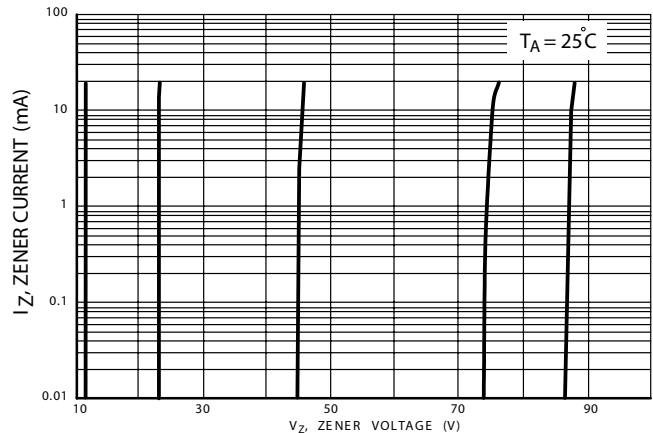


Figure 8. Zener Voltage versus Zener Current (12 V to 91 V)