Technical Data
Data Sheet N0205, Rev. C

RoHS HF

MMSZ5221B-MMSZ5267B ZENER DIODES

SOD-123

Features

- Planar Die Construction
- 500mW Power Dissipation
- 2.4V- 75V Standoff Voltage
- 5% Nominal Zener Voltage
- Designed for Surface Mount Application
- Plastic Material-UL Recognition Flammability Classification 94V-O
- This is a Halogen Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram

Mechanical Data

- Case: SOD-123, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.01 grams(approx)

Maximum Ratings @T_A=25°C unless otherwise specified

Characteristic	Symbol	Value	Units
Power Dissipation (Note 1)	P_D	500	mW
Forward Voltage (Note 2) @ I_F = 10mA	V_F	0.9	V
Typical Thermal resistance junction to Ambient Air	$R_{\theta JA}$	357	°C/W
Operating Junction and Storage Temperature Range	T_J,T_{STG}	-55 to 150	°C

Notes: 1. Device mounted on ceramic PCB; 7.6 mm x 9.4 mm x 0.87 mm with pad areas 25 mm^2.
2. Tested with pulses, Tp≤1.0ms.

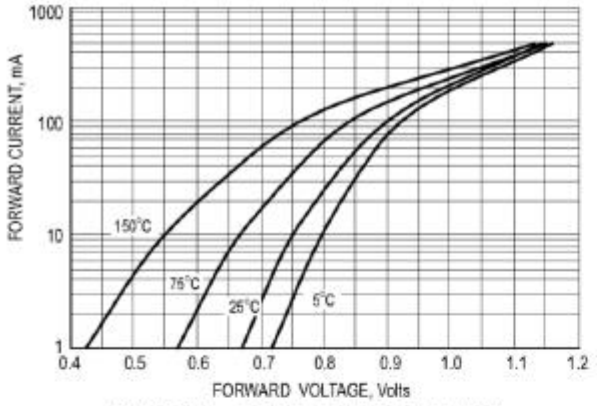
Electrical Characteristics @T_A=25°C unless otherwise specified

Type Number	Device Marking	V_Z (V) @I_{ZT} *1			I_{ZT}	Z_{ZT}@I_{ZT}	Z_{ZK}@I_{ZK}	Izk	I_R	V_R
		Nom(V)	Min(V)	Max(V)	mA	Ω		(mA)	(uA)	(V)
MMSZ5221B	C1	2.4	2.28	2.52	20	30	1200	0.25	100	1.0
MMSZ5223B	C3	2.7	2.57	2.84	20	30	1300	0.25	75	1.0
MMSZ5225B	C5	3.0	2.85	3.15	20	30	1600	0.25	50	1.0
MMSZ5226B	G1	3.3	3.14	3.47	20	28	1600	0.25	25	1.0
MMSZ5227B	G2	3.6	3.42	3.78	20	24	1700	0.25	15	1.0
MMSZ5228B	G3	3.9	3.71	4.10	20	23	1900	0.25	10	1.0
MMSZ5229B	G4	4.3	4.09	4.52	20	22	2000	0.25	5	1.0
MMSZ5230B	G5	4.7	4.47	4.94	20	19	1900	0.25	5	2.0
MMSZ5231B	E1	5.1	4.85	5.36	20	17	1600	0.25	5	2.0
MMSZ5232B	E2	5.6	5.32	5.88	20	11	1600	0.25	5	3.0
MMSZ5233B	E3	6.0	5.70	6.30	20	7	1600	0.25	5	3.5
MMSZ5234B	E4	6.2	5.89	6.51	20	7	1000	0.25	5	4.0
MMSZ5235B	E5	6.8	6.46	7.14	20	5	750	0.25	3	5.0
MMSZ5236B	F1	7.5	7.13	7.88	20	6	500	0.25	3	6.0
MMSZ5237B	F2	8.2	7.79	8.61	20	8	500	0.25	3	6.5
MMSZ5238B	F3	8.7	8.27	9.14	20	8	600	0.25	3	6.5
MMSZ5239B	F4	9.1	8.65	9.56	20	10	600	0.25	3	7.0
MMSZ5240B	F5	10	9.50	10.50	20	17	600	0.25	3	8.0
MMSZ5241B	H1	11	10.45	11.55	20	22	600	0.25	2.0	8.4
MMSZ5242B	H2	12	11.40	12.60	20	30	600	0.25	1.0	9.1
MMSZ5243B	H3	13	12.35	13.65	9.5	13	600	0.25	0.5	9.9
MMSZ5244B	H4	14	13.30	14.70	9.0	15	600	0.25	0.1	10
MMSZ5245B	H5	15	14.25	15.75	8.5	16	600	0.25	0.1	11
MMSZ5246B	J1	16	15.20	16.80	7.8	17	600	0.25	0.1	12
MMSZ5247B	J2	17	16.15	17.85	7.4	19	600	0.25	01	13
MMSZ5248B	J3	18	17.10	18.90	7.0	21	600	0.25	0.1	14
MMSZ5250B	J5	20	19.00	21.00	6.2	25	600	0.25	0.1	15
MMSZ5251B	K1	22	20.90	23.10	5.6	29	600	0.25	0.1	17
MMSZ5252B	K2	24	22.80	25.20	5.2	33	600	0.25	0.1	18
MMSZ5253B	K3	25	23.75	26.25	5.0	35	600	0.25	0.1	19
MMSZ5254B	K4	27	25.65	28.35	5.0	41	600	0.25	0.1	21
MMSZ5255B	K5	28	26.60	29.40	4.5	44	600	0.25	0.1	21
MMSZ5256B	M1	30	28.50	31.50	4.2	49	600	0.25	0.1	23
MMSZ5257B	M2	33	31.35	34.65	3.8	58	700	0.25	0.1	25
MMSZ5258B	M3	36	34.20	37.80	3.4	70	700	0.25	0.1	27
MMSZ5259B	M4	39	37.05	40.95	3.2	80	800	0.25	0.1	30
MMSZ5260B	M5	43	40.85	45.15	3.0	93	900	0.25	0.1	33
MMSZ5261B	N1	47	44.65	49.35	2.7	105	1000	0.25	0.1	36
MMSZ5262B	N2	51	48.45	53.55	2.5	125	1100	0.25	0.1	39
MMSZ5263B	M8	56	53.2	58.8	2.2	150	1300	0.25	0.1	43
MMSZ5265B	N5	62	58.9	65.1	2.0	185	1400	0.25	0.1	47
MMSZ5267B	P2	75	71.25	78.75	1.7	270	1700	0.25	0.1	56

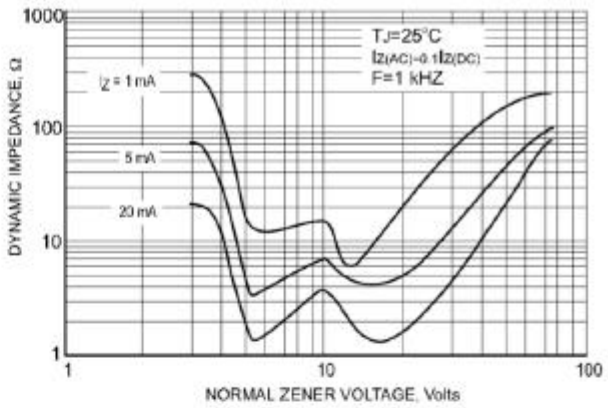
Technical Data
Data Sheet N0205, Rev. C

RoHS HF

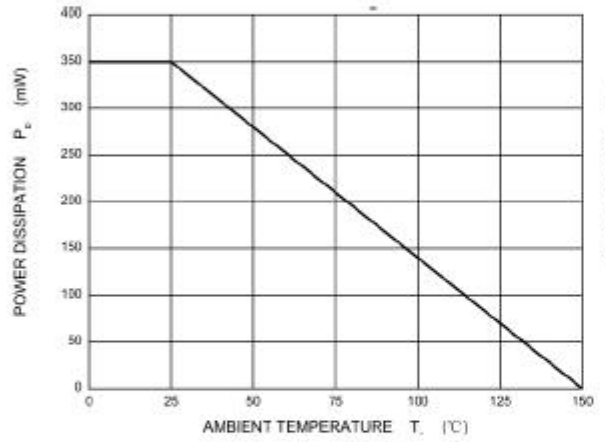
Ratings and Characteristics Curves



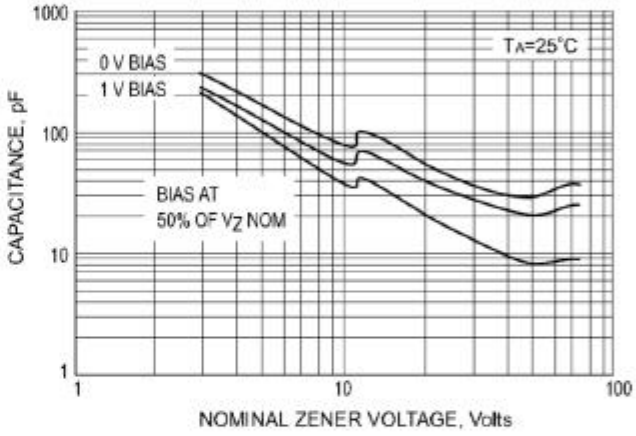
TYPICAL FORWARD VOLTAGE



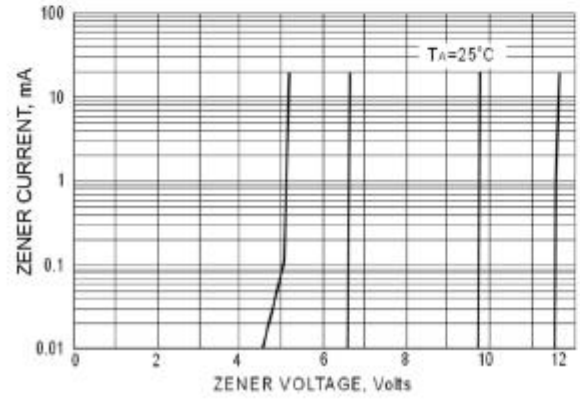
EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE



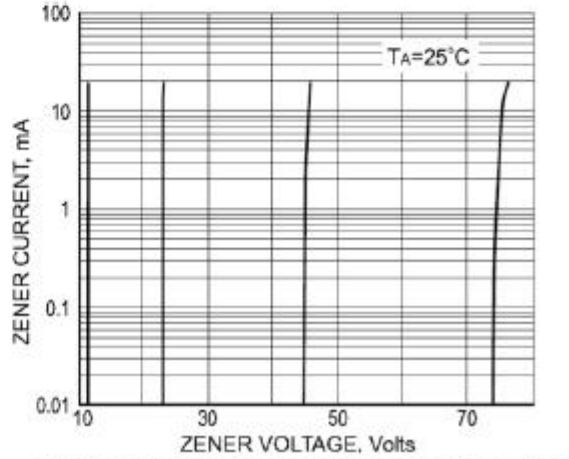
POWER DISSIPATION VS. AMBIENT TEMP



TYPICAL CAPACITANCE



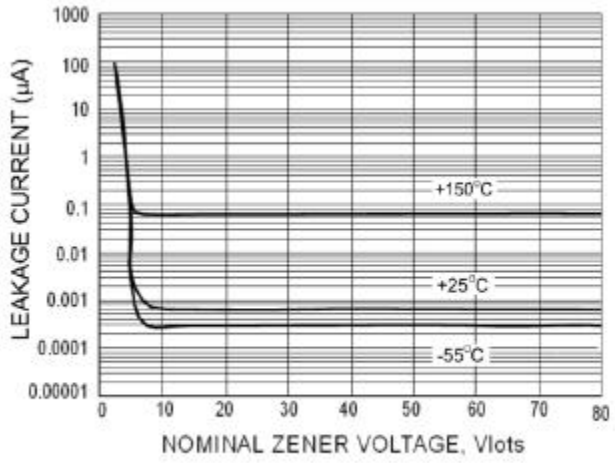
ZENER BREAKDOWN CHARACTERISTICS



ZENER BREAKDOWN CHARACTERISTICS

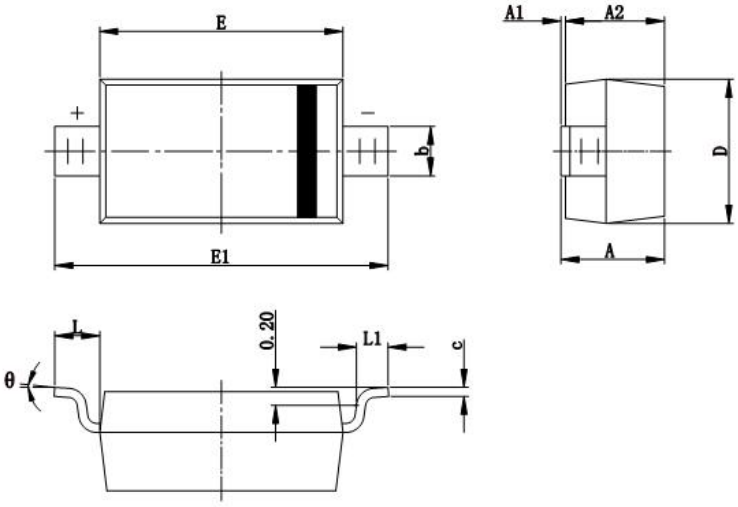
Technical Data
Data Sheet N0205, Rev. C

RoHS HF



TYPICAL LEAKGE CURRENT

Mechanical Dimensions SOD-123



SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF.		0.020 REF.	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

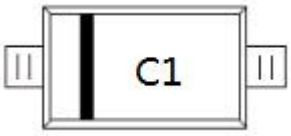
Note: If date code is before 2016 year, please contact with factory about marking.

Ordering Information

Device	Package	Shipping
MMSZ5221B-MMSZ5267B	SOD-123	3000pcs / reel
MMSZ5221BTR-MMSZ5267TR	SOD-123	3000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram

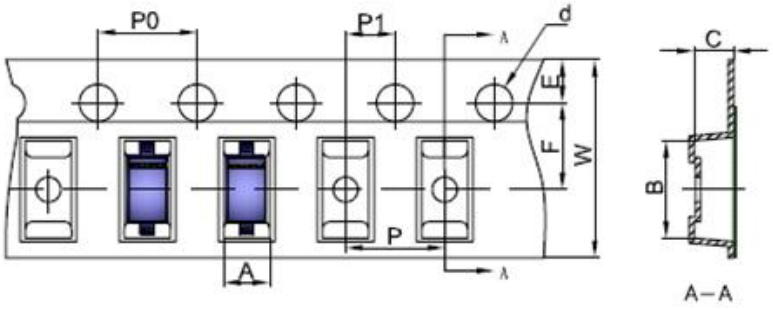


C1 = Marking code

Technical Data
Data Sheet N0205, Rev. C

RoHS HF

Carrier Tape Specification SOD-123



SYMBOL	Millimeters	
	Min.	Max.
A	1.80	1.90
B	3.89	3.99
C	1.52	1.62
d	1.45	1.65
E	1.65	1.85
F	3.40	3.60
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30