

SOD-123 DEVICES (continued)

Zener Diodes (continued)

Cathode = Notch ( $V_F = 0.9\text{ V Max. @ } I_F = 10\text{ mA}$  for all types) continued

ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted <sup>(25)</sup> , ( $V_F = 0.9\text{ V Max. @ } I_F = 10\text{ mA}$ for all types)										
Type Number	Marking	Zener Voltage $V_{Z1}$ (Volts) @ $I_{ZT1} = 5\text{ mA}$ (25)(27)			Max Zener Impedance $Z_{ZT1}$ @ $I_{ZT1} = 5\text{ mA}$ (21) $\Omega$	Max Reverse Leakage Current		Zener Voltage $V_{Z2}$ (Volts) @ $I_{ZT2} = 1\text{ mA}$ (27)		Max Zener Impedance $Z_{ZT2}$ @ $I_{ZT1} = 1\text{ mA}$ (21) $\Omega$
		Nom	Min	Max		$I_R$ $\mu\text{A}$	@ $V_R$ Volts	Min	Max	
<b>MMSZ6V2T1</b>	V1	6.2	5.89	6.51	10	3	4	5.6	6.6	150
MMSZ6V8T1	V2	6.8	6.46	7.14	15	2	4	6.3	7.2	80
MMSZ7V5T1	V3	7.5	7.13	7.88	15	1	5	6.9	7.9	80
MMSZ8V2T1	V4	8.2	7.79	8.61	15	0.7	5	7.6	8.7	80
MMSZ9V1T1	V5	9.1	8.65	9.56	15	0.5	6	8.4	9.6	100
MMSZ10T1	A1	10	9.50	10.50	20	0.2	7	9.3	10.6	150
MMSZ11T1	A2	11	10.45	11.55	20	0.1	8	10.2	11.6	150
MMSZ12T1	A3	12	11.40	12.60	25	0.1	8	11.2	12.7	150
MMSZ13T1	A4	13	12.35	13.65	30	0.1	8	12.3	14.0	170
MMSZ15T1	A5	15	14.25	15.75	30	0.05	10.5	13.7	15.5	200
MMSZ16T1	X1	16	15.20	16.80	40	0.05	11.2	15.2	17.0	200
<b>MMSZ18T1</b>	X2	18	17.10	18.90	45	0.05	12.6	16.7	19.0	225
MMSZ20T1	X3	20	19.00	21.00	55	0.05	14	18.7	21.1	225
MMSZ22T1	X4	22	20.80	23.10	55	0.05	15.4	20.7	23.2	250
MMSZ24T1	X5	24	22.80	25.20	70	0.05	16.8	22.7	25.5	250

Cathode = Notch ( $V_F = 0.9\text{ V Max. @ } I_F = 10\text{ mA}$  for all types)

Type Number	Marking	Zener Voltage $V_{Z1}$ (Volts) @ $I_{ZT1} = 2\text{ mA}$ (25)(27)			Max Zener Impedance $Z_{ZT1}$ @ $I_{ZT1} = 2\text{ mA}$ (21) $\Omega$	Max Reverse Leakage Current		Zener Voltage $V_{Z2}$ (Volts) @ $I_{ZT2} = 0.1\text{ mA}$ (27)		Max Zener Impedance $Z_{ZT2}$ @ $I_{ZT1} = 0.5\text{ mA}$ (21)(23) $\Omega$
		Nom	Min	Max		$I_R$ $\mu\text{A}$	@ $V_R$ Volts	Min	Max	
MMSZ27T1	Y1	27	25.65	28.35	80	0.05	18.9	25	28.9	300
MMSZ30T1	Y2	30	28.50	31.50	80	0.05	21	27.8	32	300
MMSZ33T1	Y3	33	31.35	34.65	80	0.05	23.1	30.8	35	325
MMSZ36T1	Y4	36	34.20	37.80	90	0.05	25.2	33.8	38	350
<b>MMSZ39T1</b>	Y5	39	37.05	40.95	130	0.05	27.3	36.7	41	350
MMSZ43T1	Z1	43	40.85	45.15	150	0.05	30.1	39.7	46	375
MMSZ47T1	Z2	47	44.65	49.35	170	0.05	32.9	43.7	50	375
MMSZ51T1	Z3	51	48.45	53.55	180	0.05	35.7	47.6	54	400
MMSZ56T1	Z4	56	53.20	58.80	200	0.05	39.2	51.5	60	425
MMSZ62T1	Z5	62	58.90	65.10	215	0.05	43.4	57.4	66	450
MMSZ68T1	Z6	68	64.60	71.40	240	0.05	47.6	63.4	72	475
MMSZ75T1	Z7	75	71.25	78.75	255	0.05	52.5	69.4	79	500

<sup>(21)</sup>  $Z_{ZT}$  and  $Z_{ZK}$  are measured by dividing the AC voltage drop across the device by the AC current applied.

The specified limits are for  $I_{Z(AC)} = 0.1 I_{Z(DC)}$ , with the AC frequency = 1 kHz.

<sup>(23)</sup> The zener impedance,  $Z_{ZT2}$ , for the 27 through 75 volt types is tested at 0.5 mA rather than the test current of 0.1 mA used for  $V_{Z2}$ .

<sup>(25)</sup> All part numbers shown indicate a  $V_Z$  tolerance of  $\pm 5\%$ .

<sup>(27)</sup> Zener voltage is measured with the zener current applied for  $PW = 1.0\text{ ms}$ .

See Packaging Information under Technical Data Section for reel size, quantity and ordering information.

See Surface Mount Notes in SMB section.

Devices listed in bold, italic are Motorola preferred devices.