

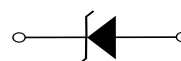
Features

- P_d 200mW
- V_z 2.0V- 75V

Applications

- Stabilizing Voltage

SOD - 523



Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	Max
Power dissipation	P_d	mW	$T_A=25^{\circ}\text{C}$	200
Zener current	I_z	mA		P_v / V_z
Maximum junction temperature	T_j	$^{\circ}\text{C}$		-65 to +150
Storage temperature range	T_{stg}	$^{\circ}\text{C}$		-65 to +150

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Conditions	Max
Thermal resistance	$R_{\theta JA}$	$^{\circ}\text{C}/\text{W}$	Between junction and ambient	625
Forward voltage	V_F	V	$I_F = 10\text{mA}$	0.9

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Type	Marking Code	Zener Voltage ¹⁾				Zener Impedance			Leakage Current	
		V_{ZT} (V)			at I_{ZT}	Z_{ZT}	Z_{ZK}	at I_{ZK}	I_R	at V_R
		Min.	Nom.	Max.	mA	Ω	Ω	mA	μA	V
MM5Z2V0	RD	1.8	2.0	2.15	5	100	-	-	120	0.5
MM5Z2V2	RE	2.08	2.2	2.33	5	100	-	-	120	0.7
MM5Z2V4	Z7	2.2	2.4	2.6	5	100	1000	1	120	1
MM5Z2V7	A8	2.5	2.7	2.9	5	100	1000	1	120	1
MM5Z3V0	B8	2.8	3.0	3.2	5	100	1000	1	50	1
MM5Z3V3	C8	3.1	3.3	3.5	5	95	1000	1	20	1
MM5Z3V6	D8	3.4	3.6	3.8	5	90	1000	1	10	1
MM5Z3V9	E8	3.7	3.9	4.1	5	90	1000	1	5	1
MM5Z4V3	F8	4	4.3	4.6	5	90	1000	1	5	1
MM5Z4V7	G8	4.4	4.7	5	5	80	800	1	2	1
MM5Z5V1	H8	4.8	5.1	5.4	5	60	500	1	2	1.5
MM5Z5V6	I8	5.2	5.6	6	5	40	200	1	1	2.5
MM5Z6V2	J8	5.8	6.2	6.6	5	10	100	1	1	3
MM5Z6V8	K8	6.4	6.8	7.2	5	15	160	1	0.5	3.5
MM5Z7V5	L8	7	7.5	7.9	5	15	160	1	0.5	4
MM5Z8V2	M8	7.7	8.2	8.7	5	15	160	1	0.5	5
MM5Z9V1	N8	8.5	9.1	9.6	5	15	160	1	0.5	6
MM5Z10	O8	9.4	10	10.6	5	20	160	1	0.1	7
MM5Z11	P8	10.4	11	11.6	5	20	160	1	0.1	8
MM5Z12	Q8	11.4	12	12.7	5	25	80	1	0.1	9
MM5Z13	R8	12.4	13	14.1	5	30	80	1	0.1	10
MM5Z15	S8	14.3	15	15.8	5	30	80	1	0.1	11
MM5Z16	T8	15.3	16	17.1	2	40	80	1	0.1	12
MM5Z18	U8	16.8	18	19.1	2	45	80	1	0.1	13
MM5Z20	V8	18.8	20	21.2	2	55	100	1	0.1	15
MM5Z22	W8	20.8	22	23.3	2	55	100	1	0.1	17
MM5Z24	X8	22.8	24	25.6	2	70	120	1	0.1	19
MM5Z27	Y8	25.1	27	28.9	2	80	300	1	0.1	21
MM5Z30	Z8	28	30	32	2	80	300	1	0.1	23
MM5Z33	A9	31	33	35	2	80	300	1	0.1	25
MM5Z36	B9	34	36	38	2	90	500	1	0.1	27
MM5Z39	C9	37	39	41	2	130	500	1	2	30
MM5Z43	D9	40	43	46	1	150	500	1	2	33
MM5Z47	E9	44	47	50	1	170	500	1	2	36
MM5Z51	F9	48	51	54	1	180	500	1	1	39
MM5Z56	G9	52	56	60	1	200	500	1	1	43
MM5Z62	H9	58	62	66	1	215	500	1	0.2	47
MM5Z68	I9	64	68	72	1	240	500	1	0.2	52
MM5Z75	J9	70	75	79	1	255	500	1	0.2	57

¹⁾ Tested with pulses $t_p = 20$ ms.

Typical Characteristics

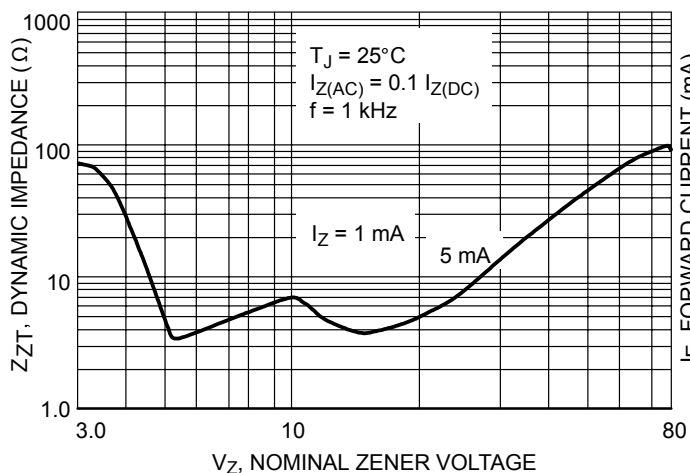


Figure 1. Effect of Zener Voltage on Zener Impedance

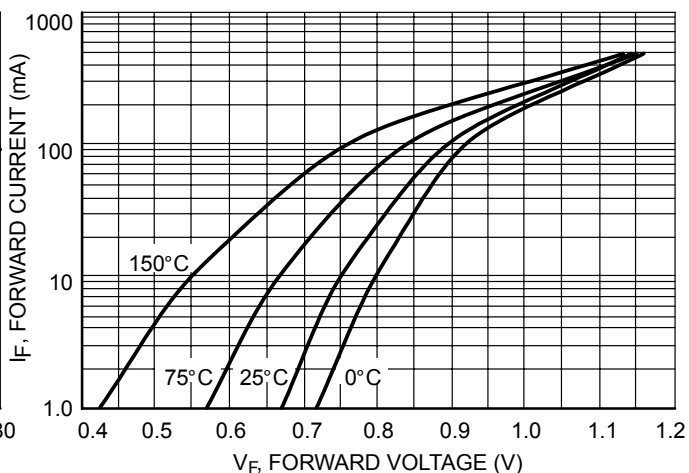


Figure 2. Typical Forward Voltage

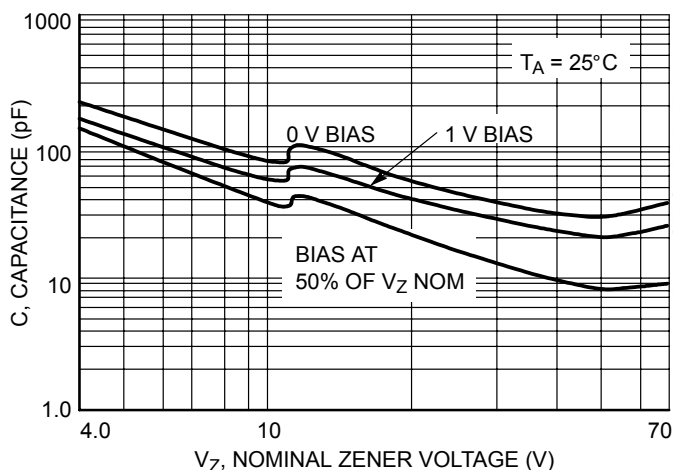


Figure 3. Typical Capacitance

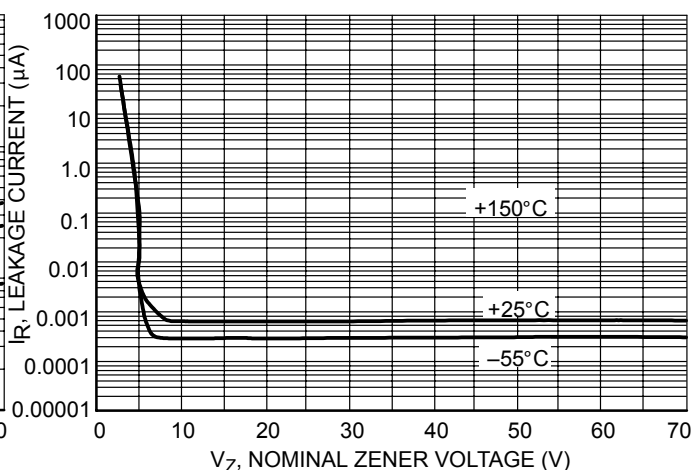


Figure 4. Typical Leakage Current

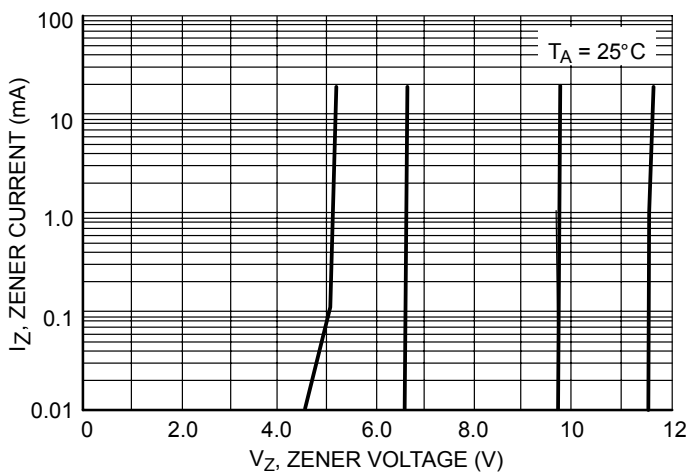


Figure 5. Zener Voltage versus Zener Current (V_Z Up to 12 V)

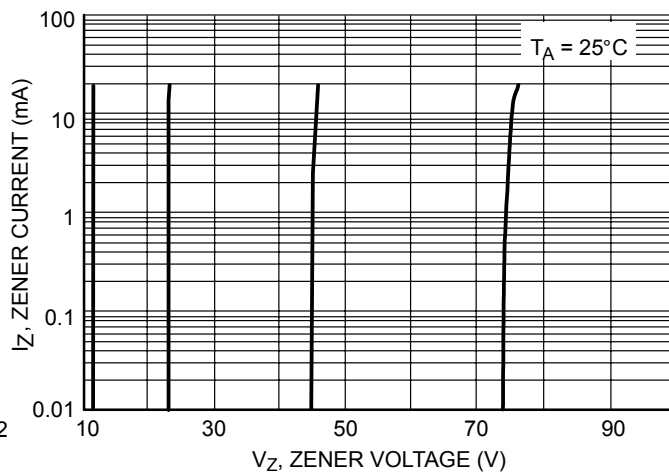
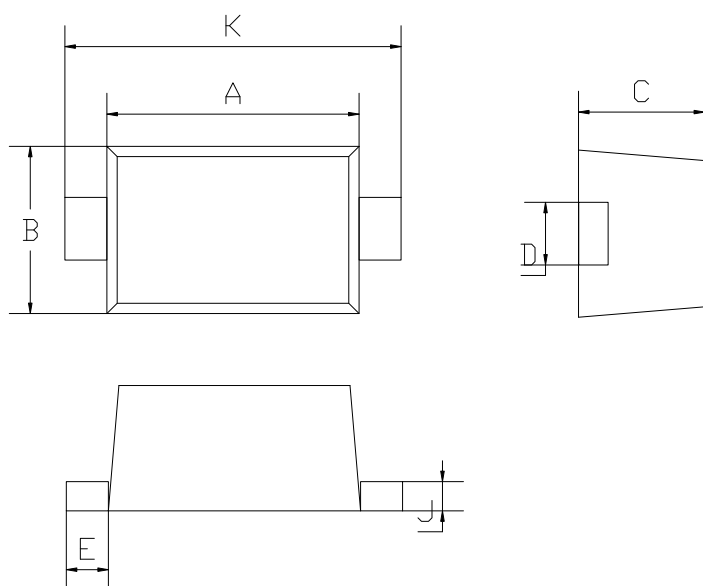


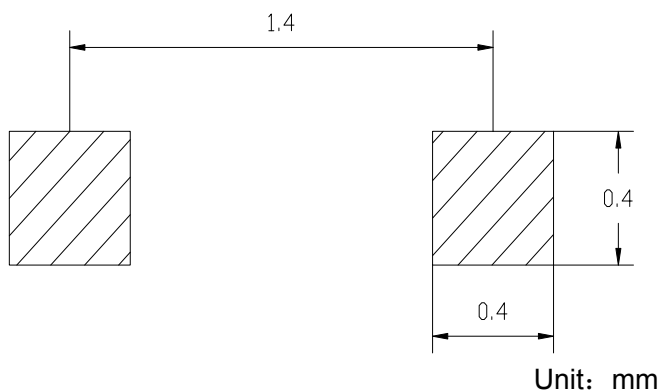
Figure 6. Zener Voltage versus Zener Current (12 V to 75 V)

SOD523 Package Outline Dimensions



SOD-523		
Dim	Min	Max
A	1.10	1.30
B	0.70	0.90
C	0.50	0.70
D	0.25	0.35
E	0.15	0.25
J	0.05	0.15
K	1.50	1.70
All Dimensions in mm		

SOD523 Suggested Pad Layout



Package Information

TYPE	REEL	Reel Size	Box	Carton
MM5Z2V0 THRU MM5Z75	3000 pcs	7 Inch	45,000 pcs	180,000 pcs