SAMYANG ELECTRONICS

MM5Z2V4 --- MM5Z75

0.3W SILICON PLANAR ZENER DIODES

FEATURES

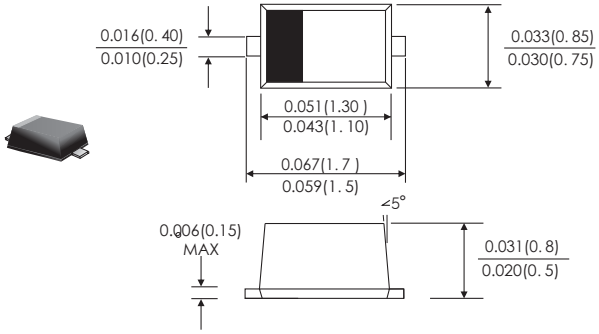
Total power dissipation: max. 300 mW

- Small plastic package suitable for surface mounted design
- Tolerance approximately ±5%
- High temperature soldering guaranteed: 260℃/10 seconds at terminals
- Component in accordance to RoHS 2015/863/EU

MECHANICAL DATA

- Case: SOD-523FL plastic case

SOD-523FL



Dimensions in inches and (millimeters)

ABSOLUTE MAXIMUM RATINGS(LIMITING VALUES) (T_A=25 C)

	Symbols	*Value*	*Units*
Zener current see table "Characteristics"			
Power dissipation	P_{tot}	300	mW
Junction temperature	T_J	150	°C
Storage temperature range	T_{STG}	-55 to+150	°C

ELECTRICAL CHARACTERISTICS (TA=25°C)

Device	Marking	Zener Voltage Range				Maximum Zener Impedance 3)			Maximum Reverse Current		Typical Temperature coefficent @ IZTC=mV/℃		Test Current IZTC
		Vz@Izt			Izt	Zzt @Izt	Zzk @Izk	Izk	IR	VR			
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	uA	V	Min	Max	mA
MM5Z 2V4	00	2.4	2.2	2.6	5	100	600	1.0	50	1.0	−3.5	0	5
MM5Z 2V7	01	2.7	2.5	2.9	5	100	600	1.0	20	1.0	−3.5	0	5
MM5Z 3V0	02	3.0	2.8	3.2	5	95	600	1.0	10	1.0	−3.5	0	5
MM5Z 3V3	05	3.3	3.1	3.5	5	95	600	1.0	5	1.0	−3.5	0	5
MM5Z 3V6	06	3.6	3.4	3.8	5	90	600	1.0	5	1.0	−3.5	0	5
MM5Z 3V9	07	3.9	3.7	4.1	5	90	600	1.0	3	1.0	−3.5	0	5
MM5Z 4V3	08	4.3	4.0	4.6	5	90	600	1.0	3	1.0	−3.5	0	5
MM5Z 4V7	09	4.7	4.4	5.0	5	80	500	1.0	3	2.0	−3.5	0.2	5
MM5Z 5V1	0A	5.1	4.8	5.4	5	60	480	1.0	2	2.0	−2.7	1.2	5

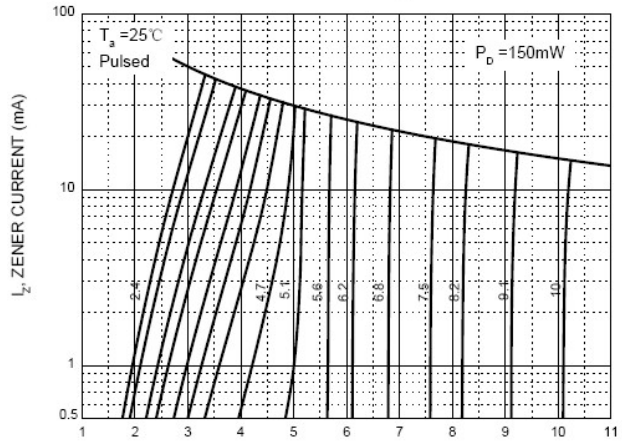
Electrical Characteristics (Ta=25°C)

Device	Marking	Zener Voltage Range				Maximum Zener Impedance 3)			Maximum Reverse Current		Typical Temperature coefficent @ IZTC=mV/℃		Test Current IZTC
		Vz@Izt			Izt	Zzt @Izt	Zzk @Izk	Izk	IR	VR			
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	uA	V	Min	Max	mA
MM5Z5V6	0C	5.6	5.21	5.43	0.4	40	400	1.0	1	2.0	-2.0	2.5	5
MM5Z6V2	0E	6.2	5.8	6.6	5	10	150	1.0	3	4.0	0.4	3.7	5
MM5Z6V8	0F	6.8	6.4	7.2	5	15	80	1.0	2	4.0	1.2	4.5	5
MM5Z7V5	0G	7.5	7.0	7.9	5	15	80	1.0	1	5.0	2.5	5.3	5
MM5Z8V2	0H	8.2	7.7	8.7	5	15	80	1.0	0.7	5.0	3.2	6.2	5
MM5Z9V1	0K	9.1	8.5	9.6	5	15	100	1.0	0.5	6.0	3.8	7.0	5
MM5Z10	0L	10	9.4	10.6	5	20	150	1.0	0.2	7.0	4.5	8.0	5
MM5Z11	0M	11	10.4	11.6	5	20	150	1.0	0.1	8.0	5.4	9.0	5
MM5Z12	0N	12	11.4	12.7	5	25	150	1.0	0.1	8.0	6.0	10.0	5
MM5Z13	0P	13	12.4	14.1	5	30	170	1.0	0.1	8.0	7.0	11.0	5
MM5Z15	0T	15	13.8	15.6	5	30	200	1.0	0.1	10.5	9.2	13.0	5
MM5Z16	0U	16	15.3	17.1	5	40	200	1.0	0.1	11.2	10.4	14.0	5
MM5Z18	0W	18	16.8	19.1	5	45	225	1.0	0.1	12.6	12.4	16.0	5
MM5Z20	0Z	20	18.8	21.2	5	55	225	1.0	0.1	14.0	14.4	18.0	5
MM5Z22	10	22	20.8	23.3	5	55	250	1.0	0.1	15.4	16.4	20.0	5
MM5Z24	11	24	22.8	25.6	5	70	250	1.0	0.1	16.8	18.4	22.0	5
MM5Z27	12	27	25.1	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3	2
MM5Z30	14	30	28.0	32.0	2	80	300	0.5	0.1	21.0	24.4	29.4	2
MM5Z33	18	33	31.0	35.0	2	80	325	0.5	0.1	23.1	27.4	33.4	2
MM5Z36	19	36	34.0	38.0	2	90	350	0.5	0.1	25.2	30.4	37.4	2
MM5Z39	20	39	37.0	41.0	2	130	350	0.5	0.1	27.3	33.4	41.2	2
MM5Z43	21	43	40.0	46.0	2	100	700	1.0	0.1	32.0	10.0	12.0	5

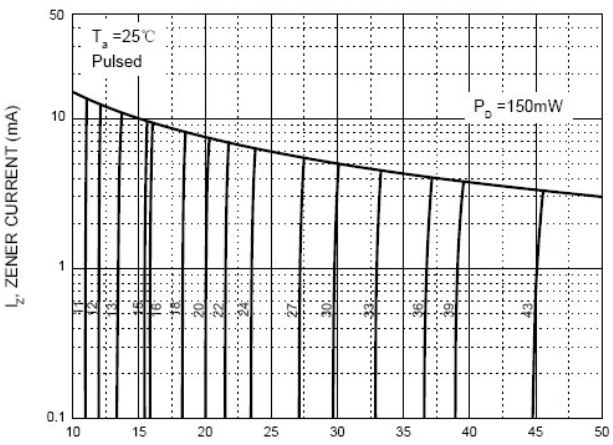
*1 Pulse width = 10 ms

Typical characteristics

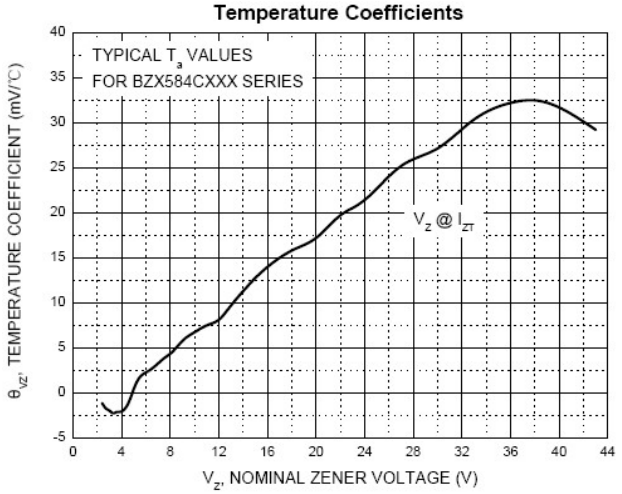
Zener Characteristics (V_Z Up to 10 V)



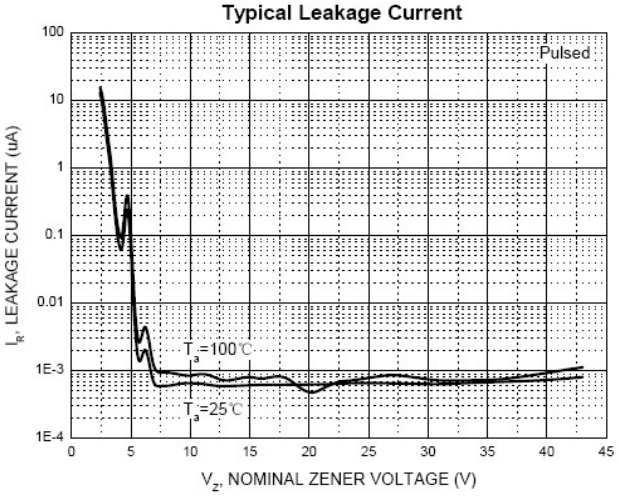
Zener Characteristics (11 V to 43 V)



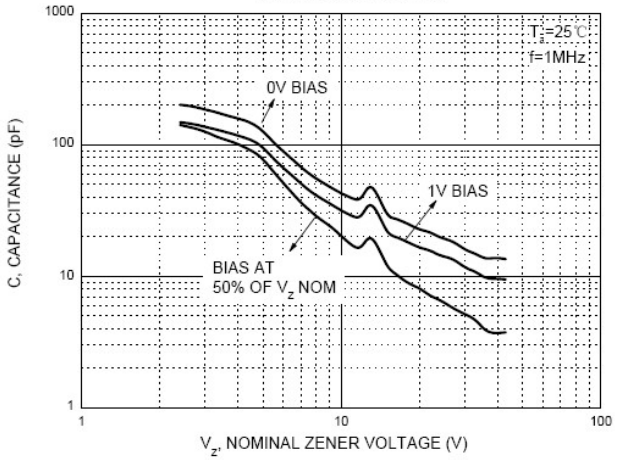
Temperature Coefficients



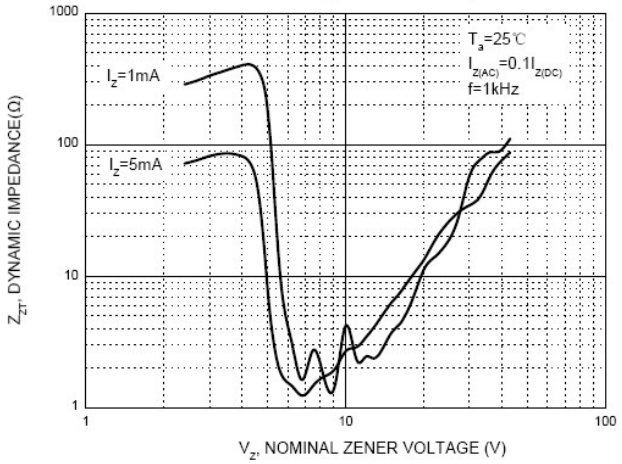
Typical Leakage Current

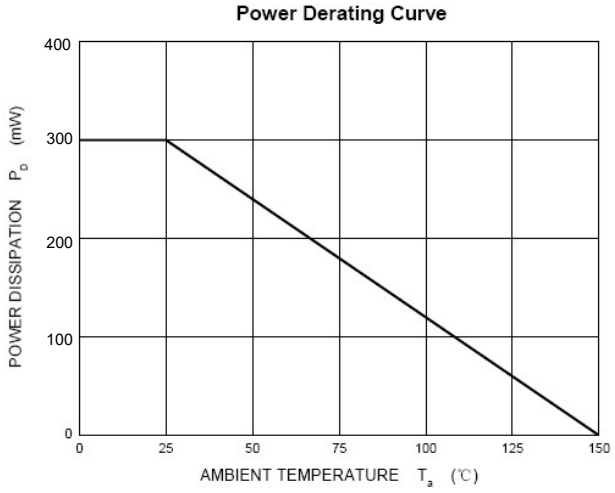


Typical Capacitance



Effect of Zener Voltage on Zener Impedance




Power Derating Curve
400
300
200
100
0
POWER DISSIPATION P_D (mW)
0
25
50
75
100
125
150
AMBIENT TEMPERATURE T_a (℃)