

### FEATURES

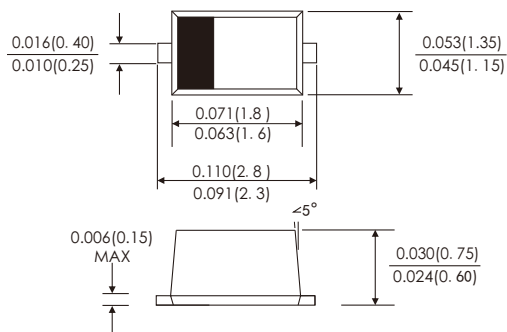
- Total power dissipation: max. 300 mW
- Small plastic package suitable for surface mounted design
- Tolerance approximately  $\pm 5\%$
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU



### MECHANICAL DATA

- Case: SOD-323FL plastic case

### SOD-323FL



Dimensions in inches and (millimeters)

### ABSOLUTE MAXIMUM RATINGS(LIMITING VALUES) ( $T_A=25^\circ\text{C}$ )

	<i>Symbols</i>	<i>Value</i>	<i>Units</i>
Zener current see table "Characteristics"			
Power dissipation	$P_{tot}$	300	mW
Junction temperature	$T_J$	150	$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

# M3Z... SILICON PLANAR ZENER DIODES

## ELECTRICAL CHARACTERISTICS (TA=25°C)

Type Number	Device Marking	Vz (V) *1			Zzt(Ω)	Iz	Zzk(Ω)	Izk	IR(μA)	VR (V)
		min.	typ.	max.	max.	(mA)	max.	(mA)	max.	
M3Z2V0C	2v0	1.90	2.0	2.10	100	5	600	1	120	1.0
M3Z2V2C	2v2	2.09	2.2	2.31	100	5	600	1	120	1.0
M3Z2V4C	2v4	2.20	2.4	2.60	90	5	600	1	120	1.0
M3Z2V7C	2v7	2.50	2.7	2..90	90	5	600	1	100	1.0
M3Z3V0C	3v0	2.80	3.0	3.20	85	5	600	1	50	1.0
M3Z3V3C	3v3	3.10	3.3	3.50	85	5	600	1	20	1.0
M3Z3V6C	3v6	3.40	3.6	3.80	85	5	600	1	10	1.0
M3Z3V9C	3v9	3.70	3.9	4.10	85	5	600	1	5	1.0
M3Z4V3C	4v3	4.00	4.3	4.60	80	5	600	1	5	1.0
M3Z4V7C	4v7	4.40	4.7	5.00	70	5	500	1	2	1.0
M3Z5V1C	5v1	4.80	5.1	5.40	50	5	480	1	2	1.5
M3Z5V6C	5v6	5.32	5.6	5.88	30	5	400	1	1	2.0
M3Z6V2C	6v2	5.89	6.2	6.51	10	5	150	1	1	3.0
M3Z6V8C	6v8	6.46	6.8	7.14	10	5	80	1	0.5	4.0
M3Z7V5C	7v5	7.11	7.5	7.86	10	5	50	1	0.5	5.0
M3Z8V2C	8v2	7.79	8.2	8.61	10	5	50	1	0.5	6.0
M3Z9V1C	9v1	8.65	9.1	9.56	10	5	50	1	0.5	7.0
M3Z10VC	10	9.50	10.0	10.50	15	5	70	1	0.1	7.5
M3Z11VC	11	10.45	11.0	11.55	20	5	70	1	0.1	8.0
M3Z12VC	12	11.40	12.0	12.60	20	5	90	1	0.1	9.0
M3Z13VC	13	12.35	13.0	13.65	26	5	110	1	0.1	10
M3Z15VC	15	14.25	15.0	15.75	30	5	110	1	0.1	11
M3Z16VC	16	15.20	16.0	16.80	40	5	170	1	0.1	12
M3Z18VC	18	17.10	18.0	18.90	45	5	170	1	0.1	14
M3Z20VC	20	19.00	20.0	21.00	55	5	220	1	0.1	15

# M3Z... SILICON PLANAR ZENER DIODES

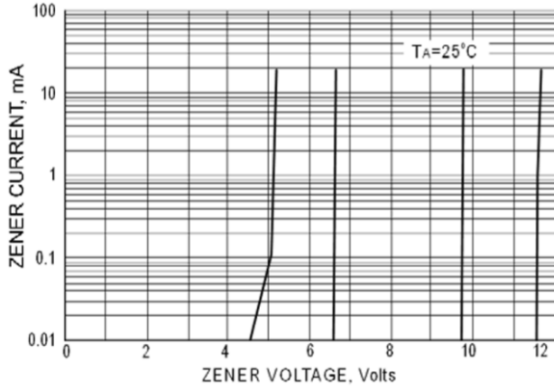
## ELECTRICAL CHARACTERISTICS (TA=25°C)

Device No	Device Marking	Vz(V) *1			Zzt(Ω)	Iz	Zzk(Ω)	Izk	I <sub>R</sub> (μA)	V <sub>R</sub> (V)
		min.	typ.	max.	max.	(mA)	max.	(mA)	max.	
M3Z22VC	22	20.90	22.0	23.10	55	5	220	1	0.1	17
M3Z24VC	24	22.80	24.0	25.20	70	5	220	1	0.1	19
M3Z27VC	27	25.65	27.0	28.35	80	5	220	1	0.1	20
M3Z30VC	30	28.50	30.0	31.50	80	5	220	1	0.1	22
M3Z33VC	33	31.35	33.0	34.65	80	5	220	1	0.1	24
M3Z36VC	36	34.20	36.0	37.80	80	5	220	1	0.1	27
M3Z39VC	39	37.05	39.0	40.95	90	2.5	500	0.5	0.1	29
M3Z43VC	43	40.85	43.0	45.15	90	2.5	600	0.5	0.1	32
M3Z47VC	47	44.65	47.0	49.35	110	2.5	700	0.5	0.1	35
M3Z51VC	51	48.45	51.0	53.55	125	2.5	700	0.5	0.1	38
M3Z56VC	56	53.20	56.0	58.80	135	2.5	1000	0.5	0.1	42
M3Z62VC	62	58.90	62.0	65.10	150	2.5	1000	0.5	0.1	47
M3Z68VC	68	64.60	68.0	71.40	200	2.5	1000	0.5	0.1	51
M3Z75VC	75	71.25	75.0	78.75	250	2.5	1500	0.5	0.1	56

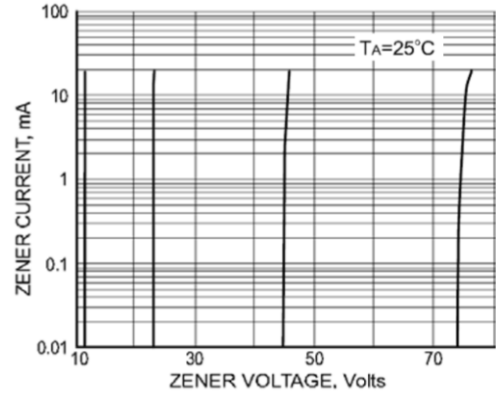
\*1 Pulse width = 10 ms

# M3Z... SILICON PLANAR ZENER DIODES

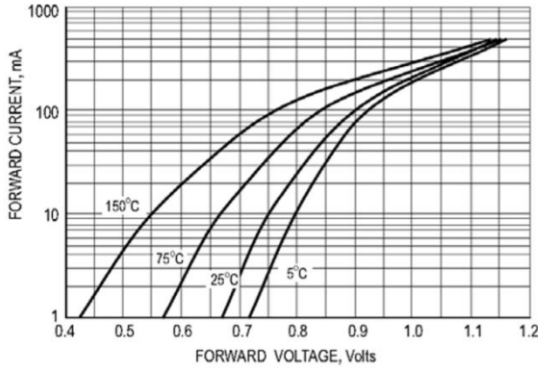
## Typical Characteristics



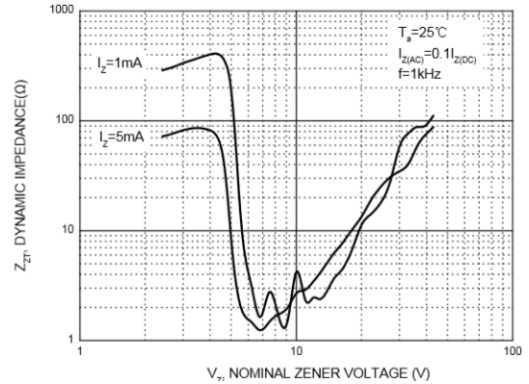
ZENER BREAKDOWN CHARACTERISTIC



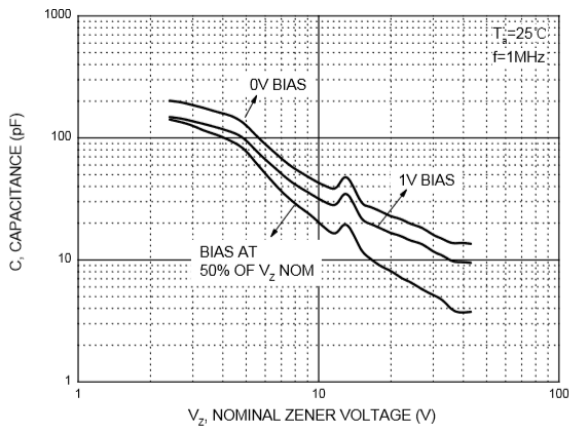
ZENER BREAKDOWN CHARACTERISTICS



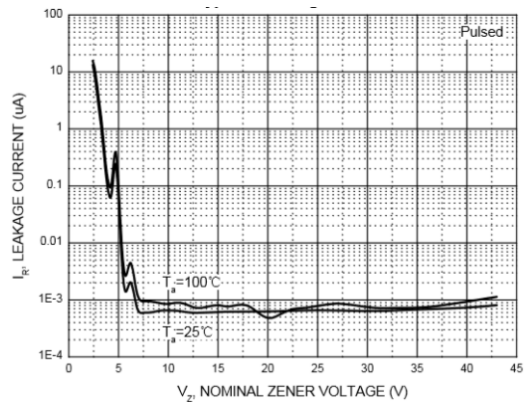
TYPICAL FORWARD VOLTAGE



Effect of Zener Voltage on Zener Impedance

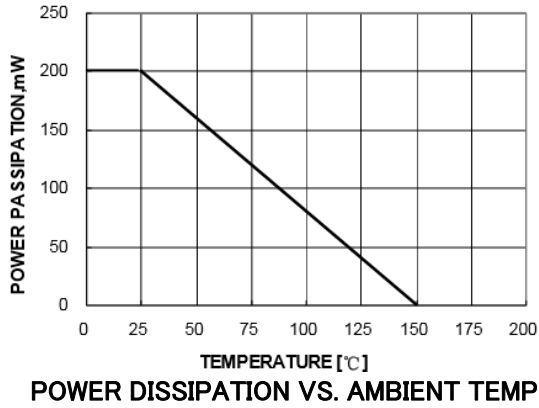


Typical Capacitance



Typical Leakage Current

# M3Z... SILICON PLANAR ZENER DIODES



## Ordering Information

Device	Package	Shipping	Tape wide	Emboss pitch	Tape specification	Notes
M3Z2V0C – M3Z75VC series	SOD323FL	Tape & Reel 3000pcs /7” Reel	8 mm	4 mm	Conductive	