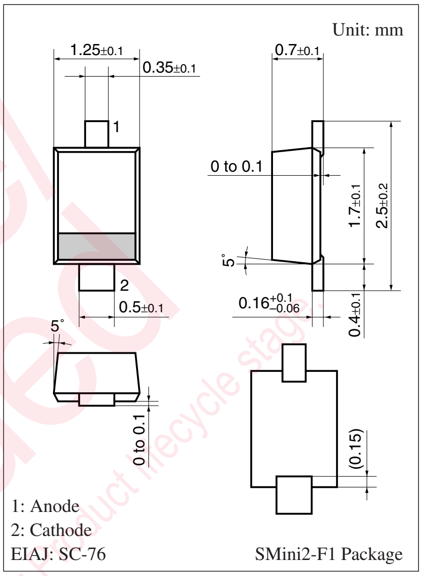
MAZ8xxx Series (MA8000 Series)

Silicon planar type

For stabilization of power supply



Features

- Extremely low noise voltage caused from the diode (2.4 V to 39V, 1/3 to 1/10 of our conventional MAZ3xxx series)
- Extremely good rising performance (in the low-current range)
- Easy-to-select the optimum diode because of their finely divided zener-voltage ranks
- Guaranteed reliability, equivalent to that of conventional products (Mini type package)
- Allowing to reduce the mounting area, thickness and weight substantially, compared with those of the conventional products
- Allowing both reflow and flow mode of automatic soldering
- Allowing automatic mounting by an existing chip mounter

Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Repetitive peak forward current	I_{FRM}	200	mA
Power dissipation *	P_D	150	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

Note) *: P_D = 150 mW achieved with a printed circuit board

Marking Symbol

Refer to the list of the electrical characteristics within part numbers
(Example) MAZ8082: 8_2 or 8-2 or 8^2

Common Electrical Characteristics $T_a = 25°C \pm 3°C$ [*1]

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	V_F	I_F = 10 mA		0.9	1.0	V
Zener voltage [*2]	V_Z	I_Z Specified value	Refer to the list of the electrical characteristics within part numbers			V
Zener rise operating resistance	R_{ZK}	I_Z Specified value				Ω
Zener operating resistance	R_Z	I_Z Specified value				Ω
Reverse current	I_R	V_R Specified value				µA
Temperature coefficient of zener voltage [*3]	S_Z	I_Z Specified value				mV/°C

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.
2. Absolute frequency of input and output is 5 MHz.
3. *1: The temperature must be controlled 25°C for V_Z mesurement.
V_Z value measured at other temperature must be adjusted to V_Z (25°C)
*2: V_Z guaranteed 20 ms after current flow.
*3: T_j = 25°C to 150°C

Note) The part number in the parenthesis shows conventional part number.

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■ Electrical Characteristics within Part Numbers $T_a = 25°C \pm 3°C$

Part number	Zener voltage V_Z (V)				Reverse current I_R (μA)		Zener operating resistance R_Z (Ω)		Zener rise operating resistance R_{ZK} (Ω)		Temperature coefficient of zener voltage S_Z (mV/°C)		Marking symbol	Conventional products
	Min	Nom	Max	I_Z (mA)	Max	V_R (V)	Max	I_Z (mA)	Max	I_Z (mA)	Typ	I_Z (mA)		
MAZ8024	2.28	2.40	2.60	5	120	1.0	100	5	—	—	−1.6	5	2.4	MAZ3024
MAZ8027	2.50	2.70	2.90	5	120	1.0	110	5	—	—	−2.0	5	2_7or2^7	MAZ3027
MAZ8030	2.80	3.00	3.20	5	50	1.0	120	5	—	—	−2.1	5	3_0or3^0	MAZ3030
MAZ8033	3.10	3.30	3.50	5	20	1.0	130	5	—	—	−2.4	5	3_3or3^3	MAZ3033
MAZ8036	3.40	3.60	3.80	5	10	1.0	130	5	—	—	−2.4	5	3_6or3^6	MAZ3036
MAZ8039	3.70	3.90	4.10	5	10	1.0	130	5	—	—	−2.5	5	3_9or3^9	MAZ3039
MAZ8043	4.00	4.30	4.60	5	10	1.0	130	5	—	—	−2.5	5	4_3or4−3or4^3	MAZ3043
MAZ8047	4.40	4.70	5.00	5	2.0	1.0	80	5	800	1.0	−1.4	5	4_7or4−7or4^7	MAZ3047
MAZ8051	4.80	5.10	5.40	5	1.0	2.0	60	5	500	1.0	−0.8	5	5_1or5−1or5^1	MAZ3051
MAZ8056	5.30	5.60	6.00	5	0.5	2.5	40	5	200	0.5	1.2	5	5_6or5−6or5^6	MAZ3056
MAZ8062	5.80	6.20	6.60	5	0.2	4.0	30	5	100	0.5	2.3	5	6_2or6−2or6^2	MAZ3062
MAZ8068	6.40	6.80	7.20	5	0.1	4.0	20	5	60	0.5	3.0	5	6_8or6−8or6^8	MAZ3068
MAZ8075	7.00	7.50	7.90	5	0.1	5.0	20	5	60	0.5	4.0	5	7_5or7-5or7^5	MAZ3075
MAZ8082	7.70	8.20	8.70	5	0.1	5.0	20	5	60	0.5	4.6	5	8_2or8−2or8^2	MAZ3082
MAZ8091	8.50	9.10	9.60	5	0.1	6.0	20	5	60	0.5	5.5	5	9_1or9−1or9^1	MAZ3091
MAZ8100	9.40	10.00	10.60	5	0.05	7.0	30	5	60	0.5	6.4	5	10_or10−or10^	MAZ3100
MAZ8110	10.40	11.00	11.60	5	0.05	8.0	30	5	60	0.5	7.4	5	11_or11−or11^	MAZ3110
MAZ8120	11.40	12.00	12.70	5	0.05	9.0	30	5	80	0.5	8.4	5	12_or12−or12^	MAZ3120
MAZ8130	12.40	13.00	14.10	5	0.05	10.0	35	5	80	0.5	9.4	5	13_or13−or13^	MAZ3130
MAZ8140	13.65	14.00	14.35	5	0.05	10.0	40	5	80	0.5	10.0	5	14-	MAZ31400M
MAZ8150	13.90	15.00	15.60	5	0.05	11.0	40	5	80	0.5	11.4	5	15_or15−or15^	MAZ3150
MAZ8160	15.30	16.00	17.10	5	0.05	12.0	50	5	80	0.5	12.4	5	16_or16−or16^	MAZ3160
MAZ8180	16.90	18.00	19.10	5	0.05	13.0	60	5	80	0.5	14.4	5	18_or18−or18^	MAZ3180
MAZ8200	18.80	20.00	21.20	5	0.05	15.0	80	5	100	0.5	16.4	5	20_or20-or20^	MAZ3200
MAZ8220	20.80	22.00	23.30	5	0.05	17.0	80	5	100	0.5	18.4	5	22_or22−or22^	MAZ3220
MAZ8240	22.80	24.00	25.60	5	0.05	19.0	100	5	120	0.5	20.4	5	24_or24−or24^	MAZ3240
MAZ8270	25.10	27.00	28.90	2	0.05	21.0	120	2	120	0.5	23.4	2	27_or27−or27^	MAZ3270
MAZ8300	28.00	30.00	32.00	2	0.05	23.0	160	2	160	0.5	26.6	2	30_or30−or30^	MAZ3300
MAZ8330	31.00	33.00	35.00	2	0.05	25.0	200	2	200	0.5	29.7	2	33_or33−or33^	MAZ3330
MAZ8360	34.00	36.00	38.00	2	0.05	27.0	250	2	250	0.5	33.0	2	36_or36−or36^	MAZ3360
MAZ8390	37.00	39.00	41.00	2	0.05	30.0	300	2	300	0.5	35.6	2	39_or39−or39^	—

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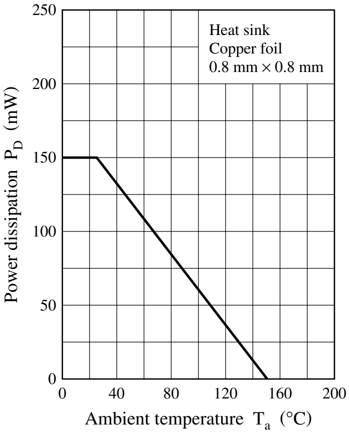
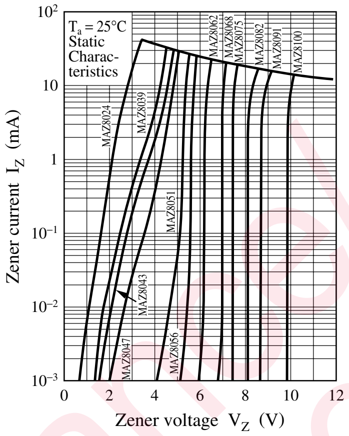
P_D — T_a



I_Z — V_Z



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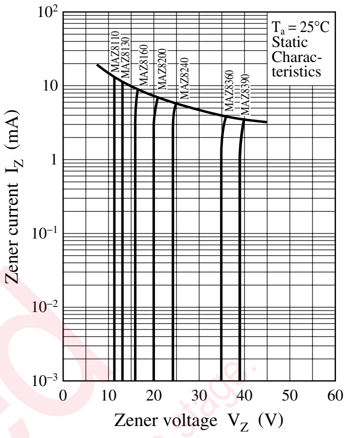

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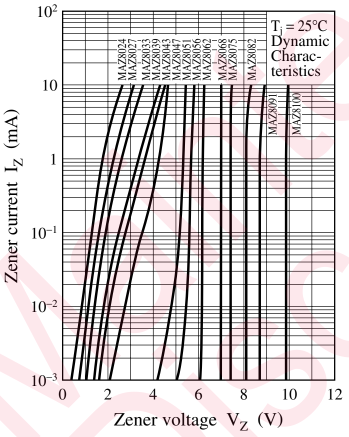
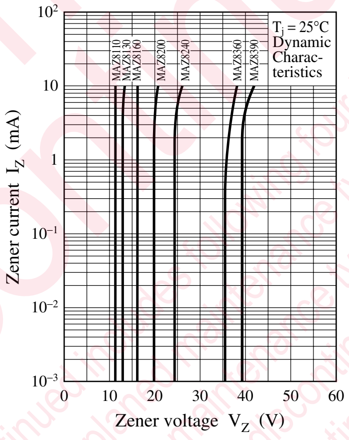
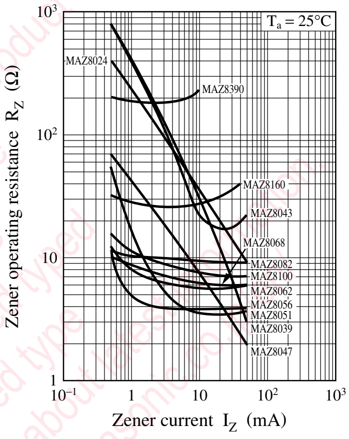


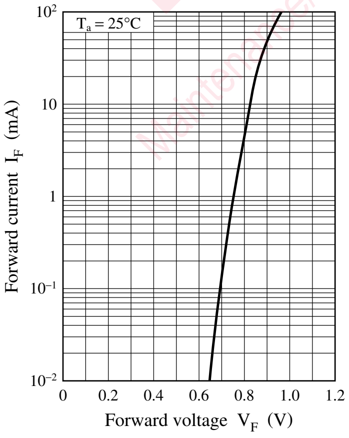
I_Z — V_Z



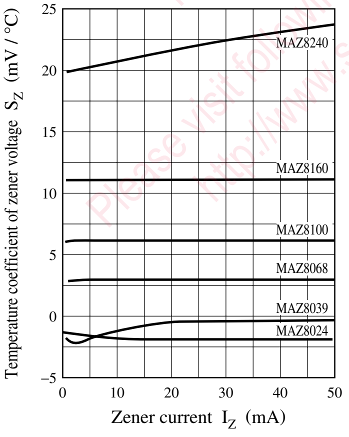
R_Z — I_Z



I_F — V_F



S_Z — I_Z



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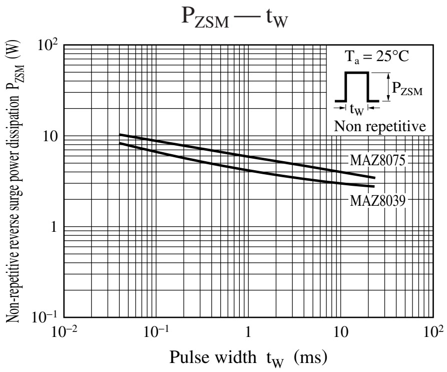

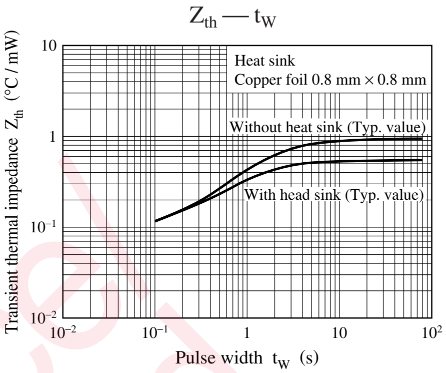

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