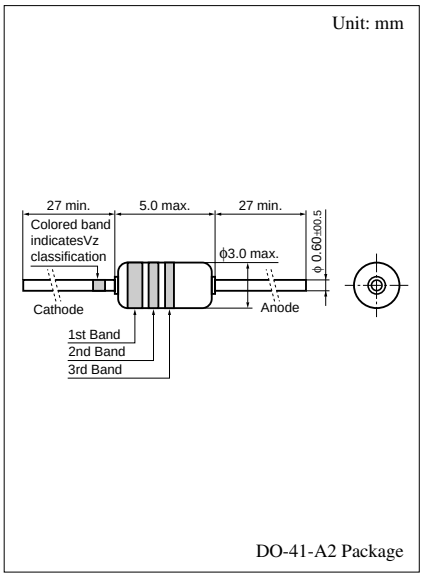
MAZ7000 Series (MA7000 Series)

Silicon planar type

For stabilization of power supply



■ Features

- Large power dissipation P_{tot} (800 mW)
- Allowing to supply with the radial taping

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Repetitive peak forward current	I_{FRM}	200	mA
Total power dissipation *1	P_{tot}	800	mW
Non-repetitive reverse surge power dissipation *2	P_{ZSM}	60	W
Junction temperature	T_j	200	°C
Storage temperature	T_{stg}	−55 to +200	°C

Note) *1: P_{tot} = 800 mW achieved with a printed circuit board
*2: t = 100 µs, T_j = 150°C

- Color indication of V_Z rank classification

Rank	A	B
Color	Blue	Red

■ Common Electrical Characteristics $T_a = 25°C$ *1

Parameter	Symbol	Conditions		Min	Typ	Max	Unit
Forward voltage	V_F	I_F = 200 mA				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 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
Terminal capacitance	C_t	V_R	Specified value				pF

Note) 1. Rated input/output frequency: 5 MHz
2. *1 : The V_Z value is for the temperature of 25°C. In other cases, carry out the temperature compensation.
*2 : Guaranteed at 20 ms after power application.
*3 : T_j = 25°C to 150°C

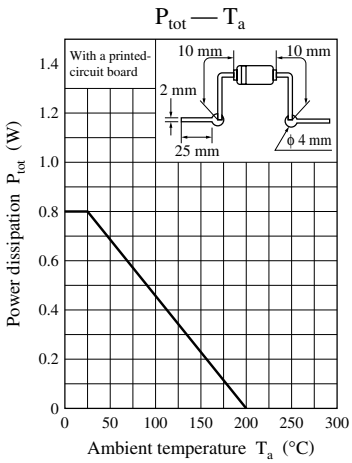
Note) The part number in the parenthesis shows conventional part number.

■ Electrical characteristics within part numbers $T_a = 25°C$

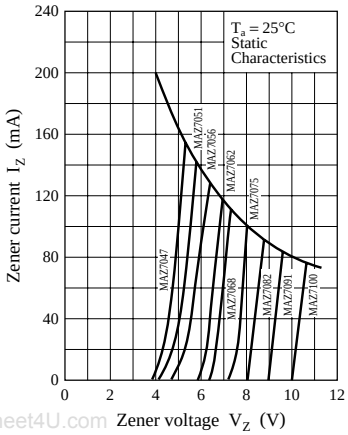
Part number	Zener voltage			Reverse current		Zener operating resistance		Temperature coefficient of zener voltage		Terminal capacitance	Marking symbol (Color indication)		
	V_Z			I_R (μA)		R_Z (Ω)		S_Z (mV/°C)		C_t (pF) (V_R = 0 V) f = 1 MHz			
	Min	Max	I_Z (mA)	Max	V_R (V)	Max	I_Z (mA)	Typ	I_Z (mA)	Typ	1st.	2nd.	3rd.
MAZ7051	4.8	5.4											
MAZ70510A	4.8	5.15	40	20	1	10	40	0	40	200	Green	Brown	Brown
MAZ70510B	5.05	5.4											
MAZ7056	5.2	6.0											
MAZ70560A	5.3	5.7	40	20	2	8	40	1.5	40	180	Green	Blue	Blue
MAZ70560B	5.6	6.0											
MAZ7062	5.8	6.6											
MAZ70620A	5.8	6.2	40	20	3	6	40	2.4	40	330	Blue	Red	Red
MAZ70620B	6.1	6.5											
MAZ7068	6.4	7.2											
MAZ70680A	6.4	6.8	40	10	3	6	40	3.1	40	280	Blue	Gray	Gray
MAZ70680B	6.7	7.1											
MAZ7075	7.0	7.9											
MAZ70750A	7.0	7.45	40	10	3	5	40	3.8	40	250	Purple	Green	Green
MAZ70750B	7.35	7.8											
MAZ7082	7.7	8.7											
MAZ70820A	7.7	8.2	40	10	4	5	40	4.5	40	230	Gray	Red	Red
MAZ70820B	8.1	8.6											
MAZ7091	8.5	9.6											
MAZ70910A	8.5	9.05	40	10	5	6	40	5.4	40	220	White	Brown	Brown
MAZ70910B	8.95	9.5											
MAZ7100	9.4	10.6											
MAZ71000A	9.4	10.0	40	10	7	6	40	6.3	40	220	Brown	Black	—
MAZ71000B	9.9	10.5											
MAZ7110	10.4	11.6											
MAZ71100A	10.4	11.05	20	5	7	8	20	7.4	20	160	Brown	Brown	—
MAZ71100B	10.85	11.5											
MAZ7120	11.4	12.7											
MAZ71200A	11.4	12.1	20	5	8	8	20	8.4	20	160	Brown	Red	—
MAZ71200B	11.9	12.6											
MAZ7130	12.4	14.1											
MAZ71300A	12.4	13.25	20	5	9	10	20	9.4	20	155	Brown	Orange	—
MAZ71300B	13.15	14.0											
MAZ7150	13.8	15.6											
MAZ71500A	13.8	14.7	20	5	10	12	20	11.4	20	150	Brown	Green	—
MAZ71500B	14.5	15.4											
MAZ7160	15.3	17.1											
MAZ71600A	15.3	16.3	20	5	11	12	20	12.5	20	135	Brown	Blue	—
MAZ71600B	16.1	17.1											
MAZ7180	16.8	19.1											
MAZ71800A	16.8	18.0	20	5	12	15	20	14.5	20	110	Brown	Gray	—
MAZ71800B	17.8	19.0											
MAZ7200	18.8	21.2											
MAZ72000A	18.8	20.0	20	5	14	15	20	16.6	20	100	Red	Black	—
MAZ72000B	19.8	21.0											

■ Electrical characteristics within part numbers (continued) $T_a = 25°C$

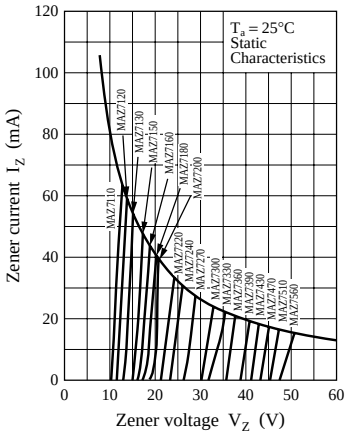
Part number	Zener voltage			Reverse current		Zener operating resistance		Temperature coefficient of zener voltage		Terminal capacitance	Marking symbol (Color indication)		
	V_Z (V)			I_R (μA)		R_Z (Ω)		S_Z (mV/°C)		C_t (pF) (V_R = 0 V, f = 1 MHz			
	Min	Max	I_Z (mA)	Max	V_R (V)	Max	I_Z (mA)	Typ	I_Z (mA)	Typ	1st.	2nd.	3rd.
MAZ7220	20.8	23.3	10	5	15	20	10	18.6	10	95	Red	Red	—
MAZ72200A	20.8	22.15											
MAZ72200B	21.85	23.2											
MAZ7240	22.8	25.6	10	5	16	20	10	20.7	10	90	Red	Yellow	—
MAZ72400A	22.8	24.35											
MAZ72400B	24.15	25.6											
MAZ7270	25.1	28.9	10	2	18	25	10	23.8	10	85	Red	Purple	—
MAZ72700A	25.1	27.0											
MAZ72700B	26.9	28.9											
MAZ7300	28.0	32.0	10	2	20	25	10	26.9	10	80	Orange	Black	—
MAZ73000A	28.0	30.1											
MAZ73000B	29.9	32.0											
MAZ7330	31.0	35.0	10	2	22	30	10	30.0	10	75	Orange	Orange	—
MAZ73300A	31.0	33.14											
MAZ73300B	32.86	35.0											
MAZ7360	34.0	38.0	10	2	24	30	10	33.4	10	70	Orange	Blue	—
MAZ73600A	34.0	36.16											
MAZ73600B	35.84	38.0											
MAZ7390	37.0	41.0	10	5	26	50	10	36.3	10	65	Orange	White	—
MAZ7430	40.0	46.0	10	5	29	50	10	41.1	10	60	Yellow	Orange	—
MAZ7470	44.0	50.0	10	5	31	50	10	44.9	10	55	Yellow	Purple	—
MAZ7510	48.0	54.0	10	5	33	50	10	48.6	10	50	Green	Brown	—
MAZ7560	52.0	60.0	10	5	35	50	10	54.9	10	45	Green	Blue	—



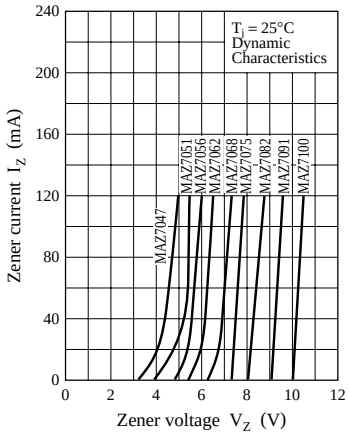
I_Z — V_Z



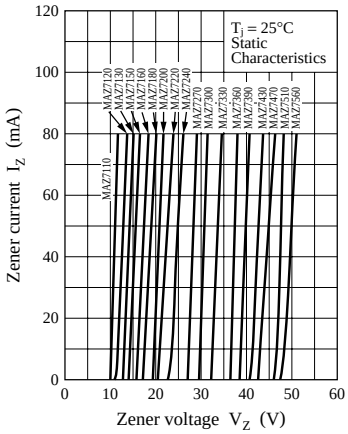
I_Z — V_Z



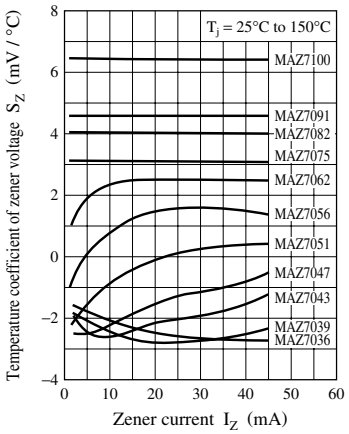
I_Z — V_Z



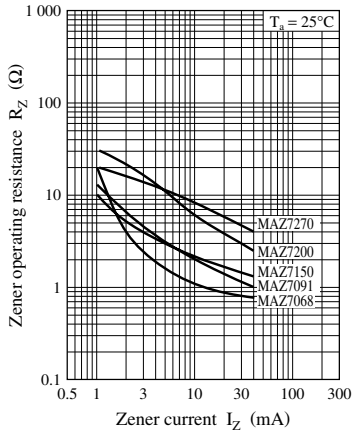
I_Z — V_Z



S_Z — I_Z



R_Z — I_Z



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