

# MAZ7000 Series (MA7000 Series)

## Silicon planar type

For stabilization of power supply

### ■ Features

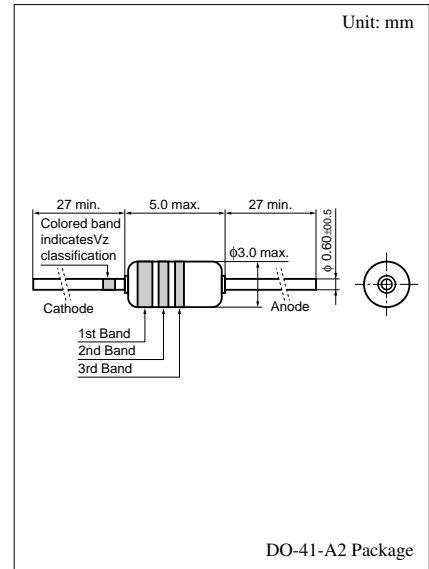
- Large power dissipation  $P_{tot}$  (800 mW)
- Allowing to supply with the radial taping

### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

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	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +200	$^\circ\text{C}$

Note) \*1:  $P_{tot} = 800$  mW achieved with a printed circuit board

\*2:  $t = 100 \mu\text{s}$ ,  $T_j = 150^\circ\text{C}$



- Color indication of  $V_Z$  rank classification

Rank	A	B
Color	Blue	Red

### ■ Common Electrical Characteristics $T_a = 25^\circ\text{C}$ \*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				V
Zener operating resistance	$R_Z$	$I_Z$ Specified value				$\Omega$
Reverse current	$I_R$	$V_R$ Specified value				$\mu\text{A}$
Temperature coefficient of zener voltage*3	$S_Z$	$I_Z$ Specified value				mV/ $^\circ\text{C}$
Terminal capacitance	$C_t$	$V_R$ Specified value				pF

Refer to the list of the electrical characteristics within part numbers

Note) 1. Rated input/output frequency: 5 MHz

2. \*1: The  $V_Z$  value is for the temperature of  $25^\circ\text{C}$ . In other cases, carry out the temperature compensation.

\*2: Guaranteed at 20 ms after power application.

\*3:  $T_j = 25^\circ\text{C}$  to  $150^\circ\text{C}$

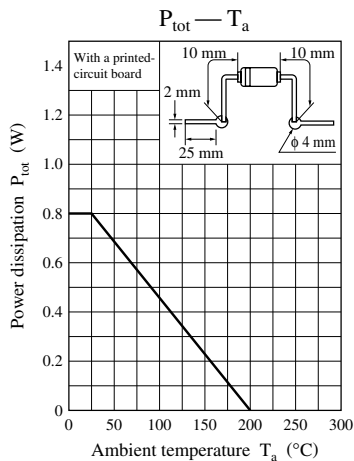
Note) The part number in the parenthesis shows conventional part number.

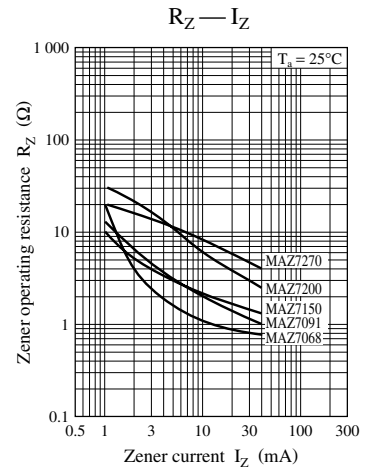
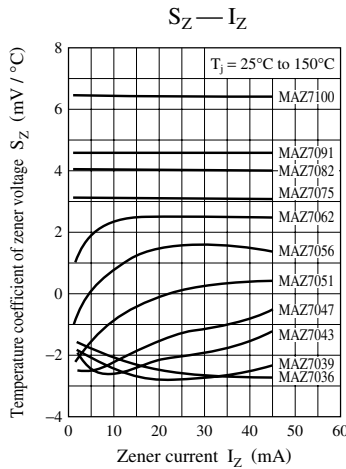
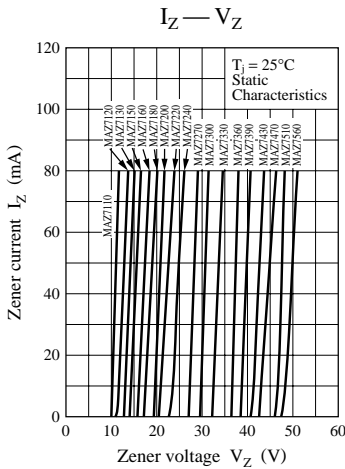
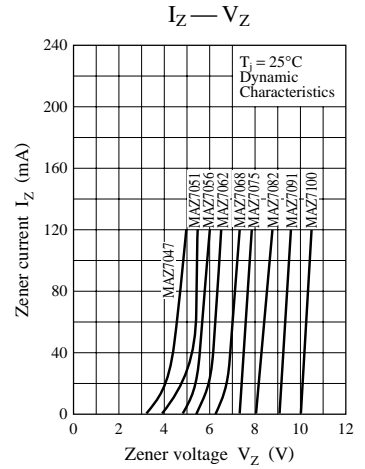
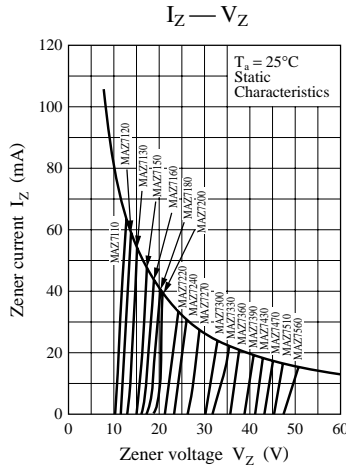
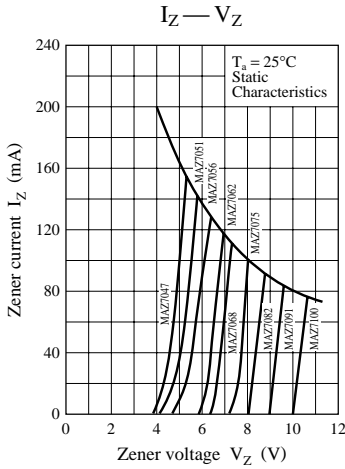
■ Electrical characteristics within part numbers  $T_a = 25^\circ\text{C}$

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

■ Electrical characteristics within part numbers (continued)  $T_a = 25^\circ\text{C}$

Part number	Zener voltage			Reverse current		Zener operating resistance		Temperature coefficient of zener voltage		Terminal capacitance	Marking symbol (Color indication)		
	$V_Z$ (V)			$I_R$ ( $\mu\text{A}$ )		$R_Z$ ( $\Omega$ )		$S_Z$ (mV/ $^\circ\text{C}$ )		$C_t$ (pF)			
	Min	Max	$I_Z$ (mA)	Max	$V_R$ (V)	Max	$I_Z$ (mA)	Typ	$I_Z$ (mA)	$(V_R = 0\text{ V})$ $f = 1\text{ MHz}$ Typ			
												1st.	2nd.
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	—





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