

MA7000 Series

Silicon planer type

For stabilization of power supply

■ Features

- Large power dissipation P_{tot} (800mW)
- Radial tapering possible

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

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

* ¹ $P_{tot} = 800\text{W}$ achieved with a printed-circuit board

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

■ Common Electrical Characteristics ($T_a = 25^\circ\text{C}$)^{*1}

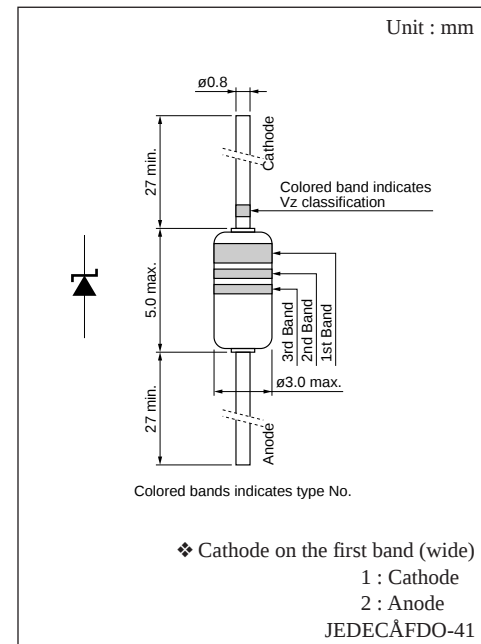
Parameter	Symbol	Condition	min	typ	max	Unit
Forward voltage	V_F	$I_F = 200\text{mA}$			1.0	V
Zener voltage	V_Z^{*2}	I_Z Specified value				V
Operating resistance	R_Z	I_Z Specified value				Ω
Reverse current	I_R	V_R Specified value				μA
Temperature coefficient of zener voltage	S_Z^{*3}	I_Z Specified value				$\text{mV}/^\circ\text{C}$
Terminal capacitance	C_t	V_R Specified value				pF

Note 1. Rated input/output frequency : 5MHz

2. * ¹ : The V_Z value is for the temperature of 25°C . In other cases, carry out the temperature compensation.

* ² : Guaranteed at 20ms after power application

* ³ : $T_j = 25$ to 150°C



● Color indication of V_Z rank classification

A rank	B rank
Blue	Red

■ Electrical Characteristics (Ta= 25°C)

Part Number	Zener voltage			Reverse current		Operating resistance		Temperature coefficient of zener voltage		Terminal capacitance	Marking (Color indication)		
	V _Z			I _R		R _Z		S _Z		C _t (pF) (V _R = 0V) f=1MHz typ			
	min (V)	max (V)	I _Z (mA)	max (μA)	V _R (V)	max (Ω)	I _Z (mA)	typ (mV/°C)	I _Z (mA)				
	1st.	2nd.	3rd.										
MA7051	4.8	5.4	40	20	1	10	40	0	40	200	Green	Brown	Brown
MA7051-A	4.8	5.15											
MA7051-B	5.05	5.4											
MA7056	5.2	6.0	40	20	2	8	40	1.5	40	180	Green	Blue	Blue
MA7056-A	5.3	5.7											
MA7056-B	5.6	6.0											
MA7062	5.8	6.6	40	20	3	6	40	2.4	40	330	Blue	Red	Red
MA7062-A	5.8	6.2											
MA7062-B	6.1	6.5											
MA7068	6.4	7.2	40	10	3	6	40	3.1	40	280	Blue	Gray	Gray
MA7068-A	6.4	6.8											
MA7068-B	6.7	7.1											
MA7075	7.0	7.9	40	10	3	5	40	3.8	40	250	Purple	Green	Green
MA7075-A	7.0	7.45											
MA7075-B	7.35	7.8											
MA7082	7.7	8.7	40	10	4	5	40	4.5	40	230	Gray	Red	Red
MA7082-A	7.7	8.2											
MA7082-B	8.1	8.6											
MA7091	8.5	9.6	40	10	5	6	40	5.4	40	220	White	Brown	Brown
MA7091-A	8.5	9.05											
MA7091-B	8.95	9.5											
MA7100	9.4	10.6	40	10	7	6	40	6.3	40	200	Brown	Black	—
MA7100-A	9.4	10.0											
MA7100-B	9.9	10.5											
MA7110	10.4	11.6	20	5	7	8	20	7.4	20	160	Brown	Brown	—
MA7110-A	10.4	11.05											
MA7110-B	10.85	11.5											
MA7120	11.4	12.7	20	5	8	8	20	8.4	20	160	Brown	Red	—
MA7120-A	11.4	12.1											
MA7120-B	11.9	12.6											
MA7130	12.4	14.1	20	5	9	10	20	9.4	20	155	Brown	Orange	—
MA7130-A	12.4	13.25											
MA7130-B	13.15	14.0											
MA7150	13.8	15.6	20	5	10	12	20	11.4	20	150	Brown	Green	—
MA7150-A	13.8	14.7											
MA7150-B	14.5	15.4											
MA7160	15.3	17.1	20	5	11	12	20	12.5	20	135	Brown	Blue	—
MA7160-A	15.3	16.3											
MA7160-B	16.1	17.1											
MA7180	16.8	19.1	20	5	12	15	20	14.5	20	110	Brown	Gray	—
MA7180-A	16.8	18.0											
MA7180-B	17.8	19.0											
MA7200	18.8	21.2	20	5	14	15	20	16.6	20	100	Red	Black	—
MA7200-A	18.8	20.0											
MA7200-B	19.8	21.0											

■ Electrical Characteristics(continued)(Ta= 25°C)

Part Number	Zener voltage			Reverse current		Operating resistance		Temperature coefficient of zener voltage		Terminal capacitance	Marking (Color indication)		
	V _Z			I _R		R _Z		S _Z		C _t (pF) (V _R = 0V) f=1MHz typ			
	min (V)	max (V)	I _Z (mA)	max (μA)	V _R (V)	max (Ω)	I _Z (mA)	typ (mV/°C)	I _Z (mA)	1st.	2nd.	3rd.	
MA7220	20.8	23.3	10	5	15	20	10	18.6	10	95	Red	Red	—
MA7220-A	20.8	22.15											
MA7220-B	21.85	23.2											
MA7240	22.8	25.6	10	5	16	20	10	20.7	10	90	Red	Yellow	—
MA7240-A	22.8	24.35											
MA7240-B	24.15	25.6											
MA7270	25.1	28.9	10	2	18	25	10	23.8	10	85	Red	Purple	—
MA7270-A	25.1	27.0											
MA7270-B	26.9	28.9											
MA7300	28.0	32.0	10	2	20	25	10	26.9	10	80	Orange	Black	—
MA7300-A	28.0	30.1											
MA7300-B	29.9	32.0											
MA7330	31.0	35.0	10	2	22	30	10	30.0	10	75	Orange	Orange	—
MA7330-A	31.0	33.14											
MA7330-B	32.86	35.0											
MA7360	34.0	38.0	10	2	24	30	10	33.4	10	70	Orange	Blue	—
MA7360-A	34.0	36.16											
MA7360-B	35.84	38.0											
MA7390	37.0	41.0	10	5	26	50	10	36.3	10	65	Orange	White	—
MA7430	40.0	46.0	10	5	29	50	10	41.1	10	60	Yellow	Orange	—
MA7470	44.0	50.0	10	5	31	50	10	44.9	10	55	Yellow	Purple	—
MA7510	48.0	54.0	10	5	33	50	10	48.6	10	50	Green	Brown	—
MA7560	52.0	60.0	10	5	35	50	10	54.9	10	45	Green	Blue	—

