

# MA6000 Series

## Silicon planer type

For stabilization of power supply

### ■ Features

- LLD is shaped to be a small and lightweight cylinder without directionality, enabling high-density mounting
- Low operation resistance
- High reliability because of the same glass seal configuration as conventional DHD.

### ■ Absolute Maximum Ratings (Ta= 25°C)

Parameter	Symbol	Rating	Unit
Average forward current	$I_{F(AV)}$	100	mA
Instantaneous forward current	$I_{FRM}$	250	mA
Total power dissipation	$P_{tot}^{*1}$	400	mW
Non-repetitive reverse surge power dissipation	$P_{ZSM}^{*2}$	30	W
Junction temperature	$T_j$	200	°C
Storage temperature	$T_{stg}$	- 65 to + 200	°C

\*1  $P_{tot}$ = 400W achieved with a printed-circuit board

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

### ■ Common Electrical Characteristics (Ta= 25°C)\*1

Parameter	Symbol	Condition	min	typ	max	Unit
Forward voltage	$V_F$	$I_F= 10mA$		0.8	0.9	V
Zener voltage	$V_Z^{*2}$	$I_Z$ ..... Specified value				V
Operating resistance	$R_{ZK}$	$I_Z$ ..... Specified value				$\Omega$
	$R_Z$	$I_Z$ ..... Specified value	Refer to the individual product specification			$\Omega$
Reverse current	$I_{R1}$	$V_R$ ..... Specified value				$\mu A$
	$I_{R2}$	$V_R$ ..... Specified value				$\mu A$
Temperature coefficient of zener voltage	$S_Z^{*3}$	$I_Z$ ..... Specified value				mV/°C

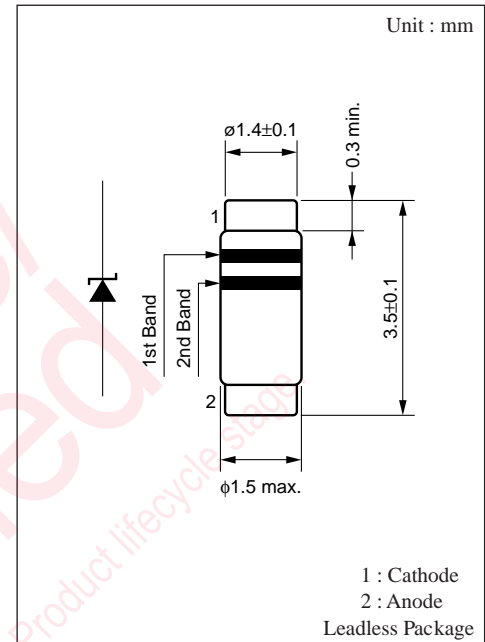
Note 1. Rated input/output frequency : 50MHz

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  $150^\circ C$

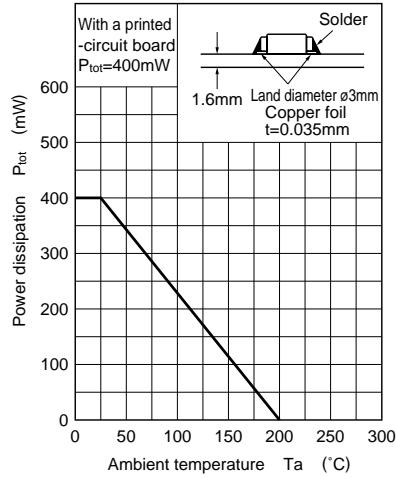
\*  $V_Z$  rank to be 4.7 to 24V to meet the demand.



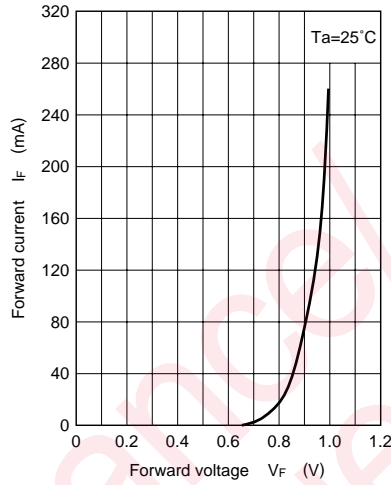
### ● Color indication of $V_Z$ rank classification

1st band	2nd band
Brown	Black

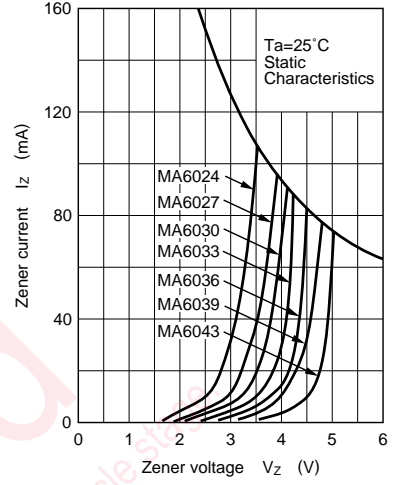
$P_{tot} - T_a$



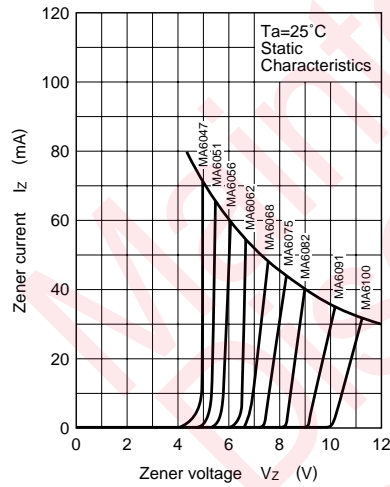
$I_F - V_F$



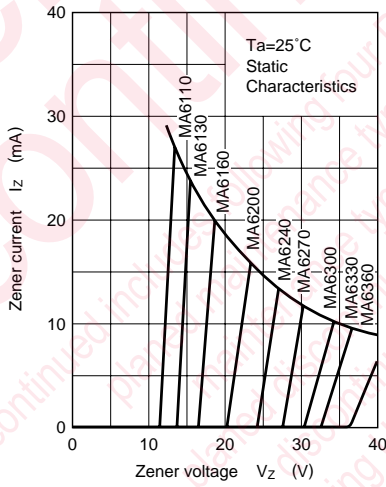
$I_Z - V_Z$



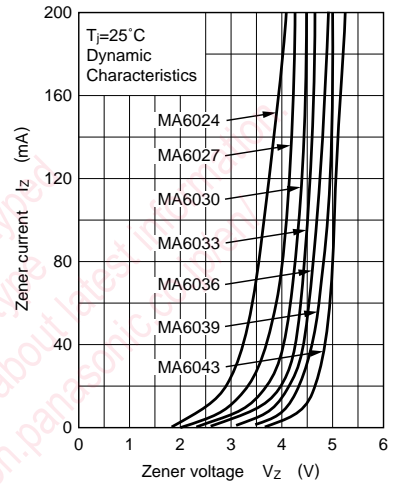
$I_Z - V_Z$



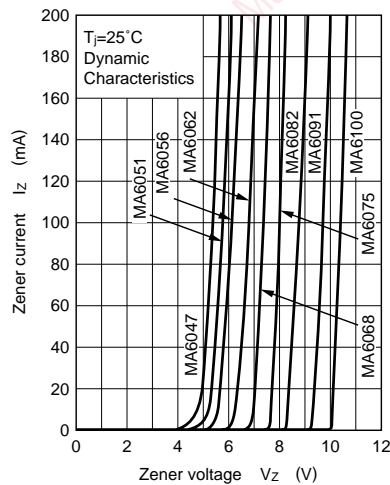
$I_Z - V_Z$



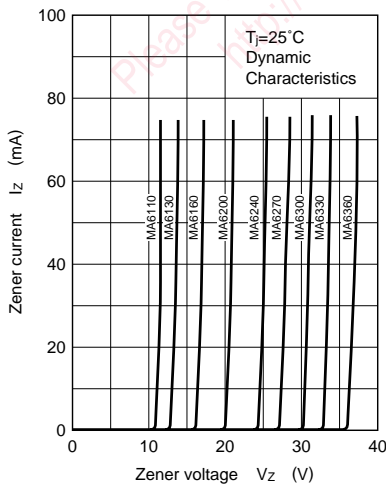
$I_Z - V_Z$



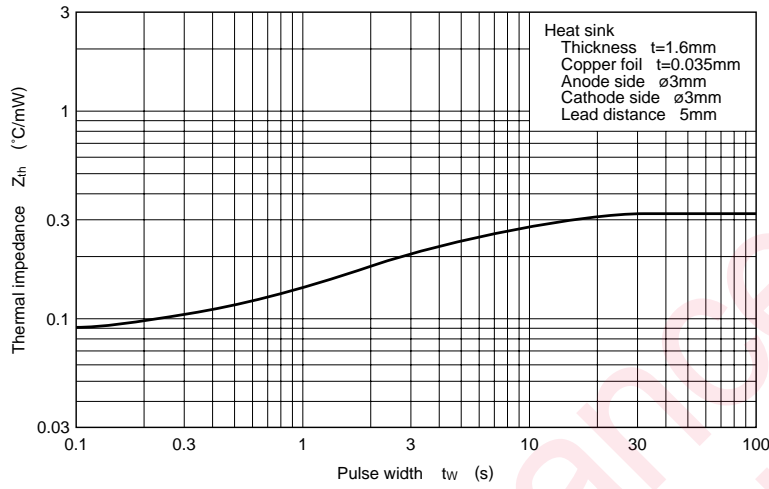
$I_Z - V_Z$



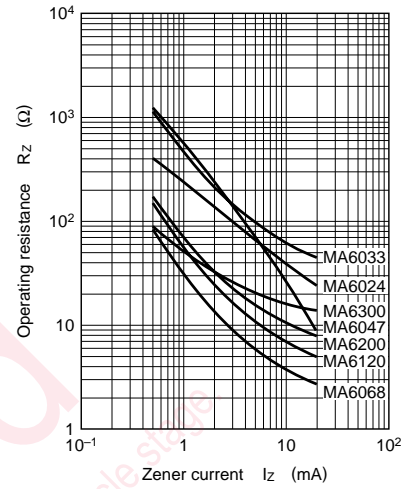
$I_Z - V_Z$



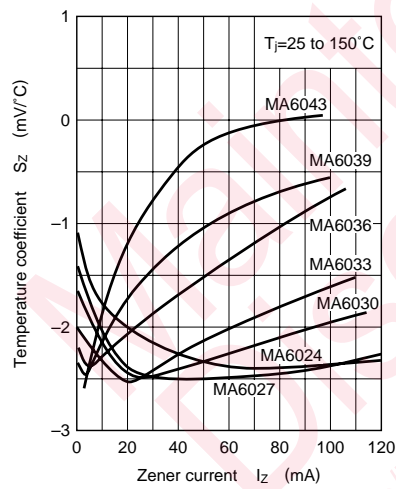
$Z_{th} - t_w$



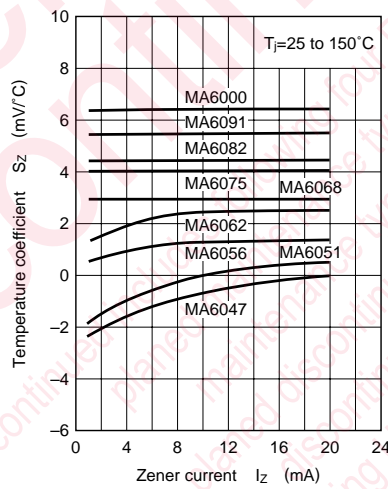
$R_Z - I_Z$



$S_Z - I_Z$



$S_Z - I_Z$



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