

MA3091WK

Silicon planer type

Constant voltage, constant current, waveform clipper and surge absorption circuit

■ Features

- Mini type package (3-pin)
- Two cathode-common wiring of MA3091

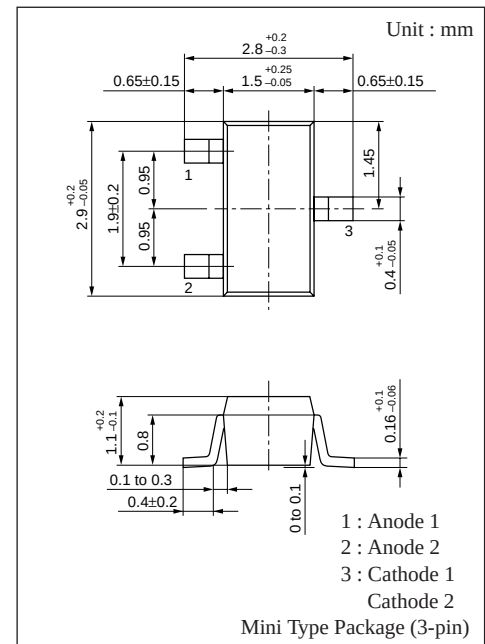
■ Absolute Maximum Ratings (Ta= 25°C)

Parameter	Symbol	Rating	Unit
Average forward current	$I_{F(AV)}$	100 ^{*1}	mA
Instantaneous forward current	I_{FRM}	200 ^{*1}	mA
Total power dissipation	P_{tot} ^{*2}	100 ^{*1}	mW
Non-repetitive reverse surge power dissipation	P_{ZSM} ^{*3}	15	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	- 55 to + 150	°C

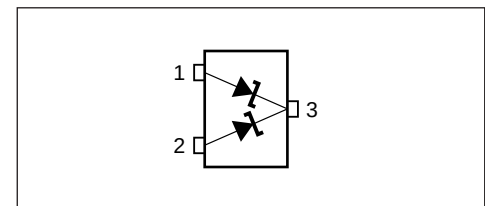
^{*1} Working value in a single piece

^{*2} With a printed-circuit board

^{*3} $t=100\mu s$, $T_j=150^\circ C$



■ Internal Connection



■ 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}	$I_Z=5mA$	8.5	9.1	9.6	V
Operating resistance	R_{ZK}	$I_Z=0.5mA$			130	Ω
	R_Z	$I_Z=5mA$		6	15	Ω
Reverse current	I_{R1}	$V_R=6V$			0.2	μA
	I_{R2}	$V_R=8V$			60	μA
Temperature coefficient of zener voltage	S_Z ^{*3}	$I_Z=5mA$	3.8	5.5	7	mV/°C

Note 1. Rated input/output frequency : 5MHz

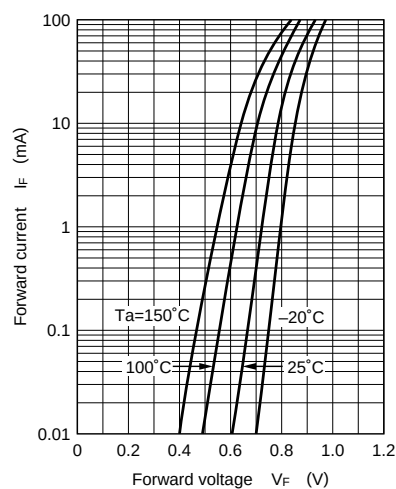
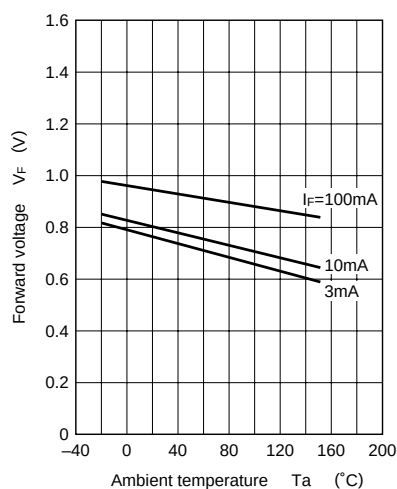
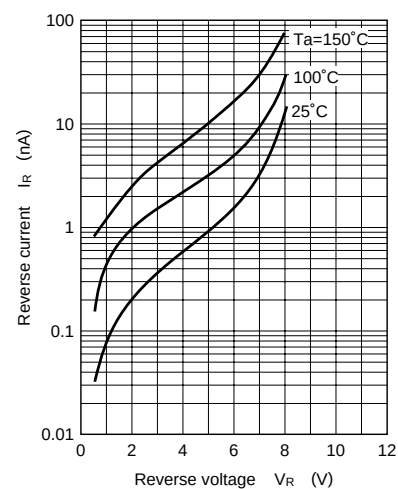
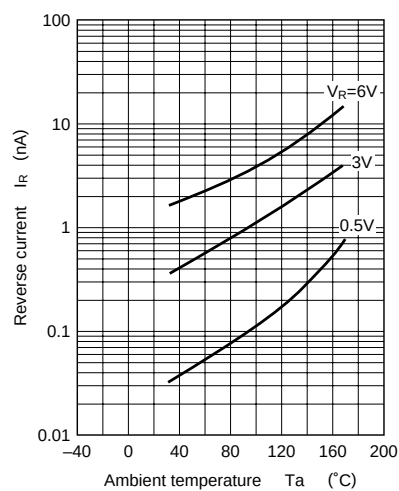
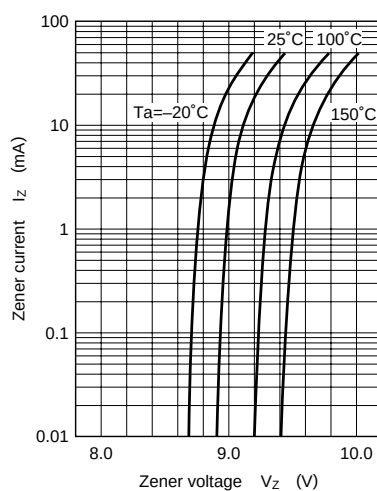
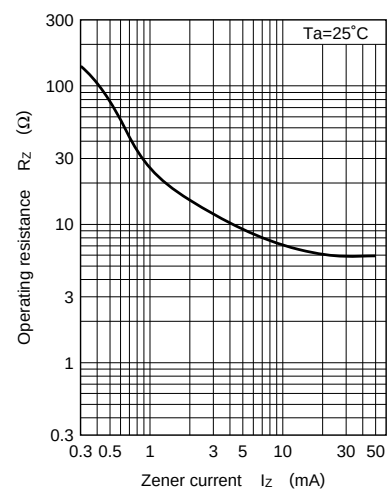
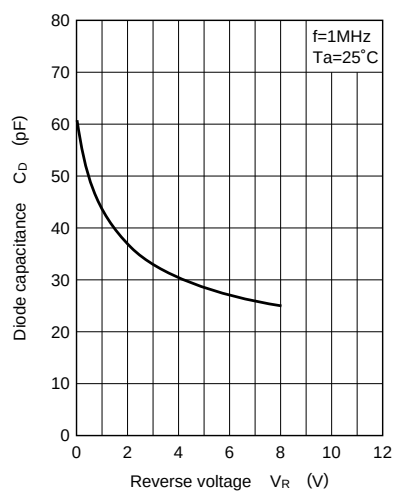
2. ^{*1} : The V_Z value is for the temperature of 25°C. In other cases, carry out the temperature compensation.

^{*2} : Guaranteed at 20ms after power application

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

■ Marking



$I_F - V_F$  $V_F - T_a$  $I_R - V_R$  $I_R - T_a$  $I_Z - V_Z$  $R_Z - I_Z$  $C_t - V_R$  $P_{ZSM} - t_W$ 