MA950

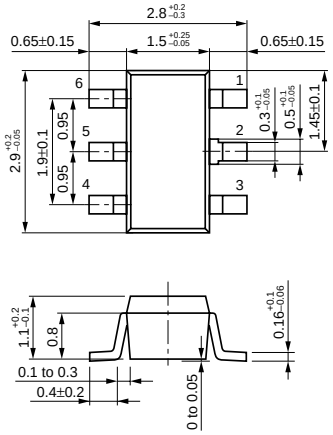
Silicon planer type

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

■ Features

- Mini type package (6-pin)
- Three dissimilar zener diodes wired in parallel (V_Z= 7.5V, 43V and 280V)

Unit : mm



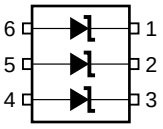
1 : Cathode 1 4 : Anode 3
2 : Cathode 2 5 : Anode 2
3 : Cathode 3 6 : Anode 1
Mini Type Package (6-pin)

■ Absolute Maximum Ratings (Ta= 25˚C)

Parameter	Symbol	Rating	Unit
Instanious forward current	I_{FRM}	200	mA
Total power dissipation	P_{tot}*	150	mW
Junction temperature	T_j	150	˚C
Storage temperature	T_{stg}	– 55 to + 150	˚C

* With a printed-circuit board

■ Internal Connection



■ Marking

■ Electrical Characteristics (Ta= 25˚C)*1

● Unit-1 (MA8075-M)

Parameter	Symbol	Condition	min	typ	max	Unit
Forward voltage	V_F	I_F=10mA		0.9	1.0	V
Zener voltage	V_Z*2	I_Z= 5mA	7.29	7.50	7.67	V
Operating resistance	R_{ZK}	I_Z= 0.5mA			60	Ω
	R_Z	I_Z= 5mA			20	Ω
Reverse current	I_R	V_R= 5V			0.1	µA
Temperature coefficient of zener voltage	S_Z*3	I_Z= 5mA		4.0		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 : Guaranteeed at 20ms after power application
* 3 : T_j= 25 to 150˚C

● Unit-2 (MA8430)

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= 2mA	40.0		46.0	V
Operating resistance	R_{ZK}	I_Z= 0.5mA			250	Ω
	R_Z	I_Z= 2mA			130	Ω
Reverse current	I_{R1}	V_R= 34V			50	µA
	I_{R2}	V_R= 39V			60	µA
Temperature coefficient of zener voltage	S_Z*3	I_Z= 5mA		36.0		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 : Guaranteeed at 20ms after power application
* 3 : T_j= 25 to 150˚C

● Unit-3 (MA5Z270-M)

Parameter	Symbol	Condition	min	typ	max	Unit
Forward voltage	V_F	I_F=10mA			1.2	V
Zener voltage	V_Z*2	I_Z= 0.1mA	270	280	290	V
Reverse current	I_R	V_R= 216V			1	µA
Temperature coefficient of zener voltage	S_Z*3	I_Z= 0.1mA		0.31		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 : Guaranteeed at 20ms after power application
* 3 : T_j= 25 to 150˚C