

MA950

Silicon planer type

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

■ Features

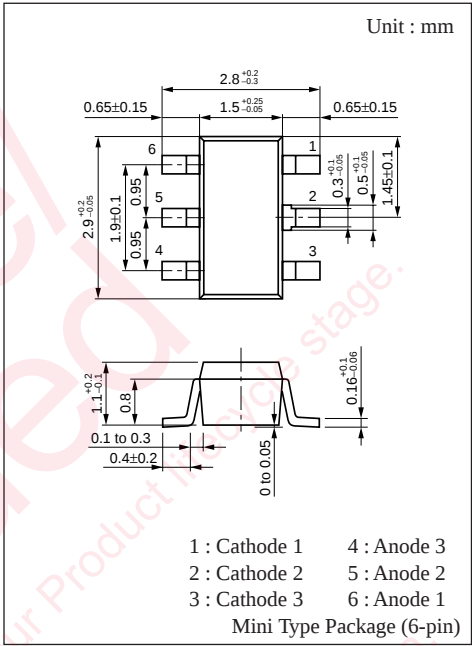
- Mini type package (6-pin)
- Three dissimilar zener diodes wired in parallel
($V_Z = 7.5V, 43V$ and $280V$)

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

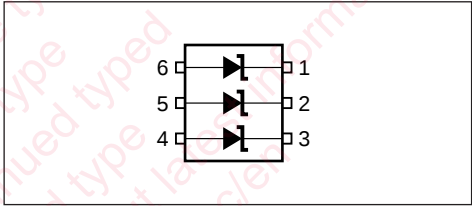
Parameter	Symbol	Rating	Unit
Instantious forward current	I_{FRM}	200	mA
Total power dissipation	P_{tot}^*	150	mW
Junction temperature	T_j	150	$^{\circ}C$
Storage temperature	T_{stg}	- 55 to + 150	$^{\circ}C$

* With a printed-circuit board

■ Marking



■ Internal Connection



■ 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 : Guaranteed 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 : Guaranteed 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 : Guaranteed at 20ms after power application

*³ : T_j= 25 to 150°C

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