

MALHxxxYG Series

Silicon planar type

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

■ Features

- Extremely low noise voltage caused from the diode
- Extremely good rising performance (in the low-current range)
- Independent wiring of two element

■ 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_T	150	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Note) *: $P_T = 150$ mW achieved with a printed circuit board.

■ Package

- Code
SMini4-F2
- Pin Name

1: Anode 1	3: Cathode 2
2: Anode 2	4: Cathode 1

■ Marking symbol

Refer to the list of the electrical characteristics within part numbers

■ Common Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	V_F	$I_F = 10$ mA		0.9	1.0	V
Zener voltage *1	V_Z	I_Z Specified value				V
Zener rise operating resistance	R_{ZK}	I_Z Specified value	Refer to the list of the electrical characteristics within part numbers			Ω
Zener operating resistance	R_Z	I_Z Specified value				Ω
Reverse current	I_R	V_R Specified value				μA
Temperature coefficient of zener voltage *2	S_Z	I_Z Specified value				mV/ $^\circ\text{C}$

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.

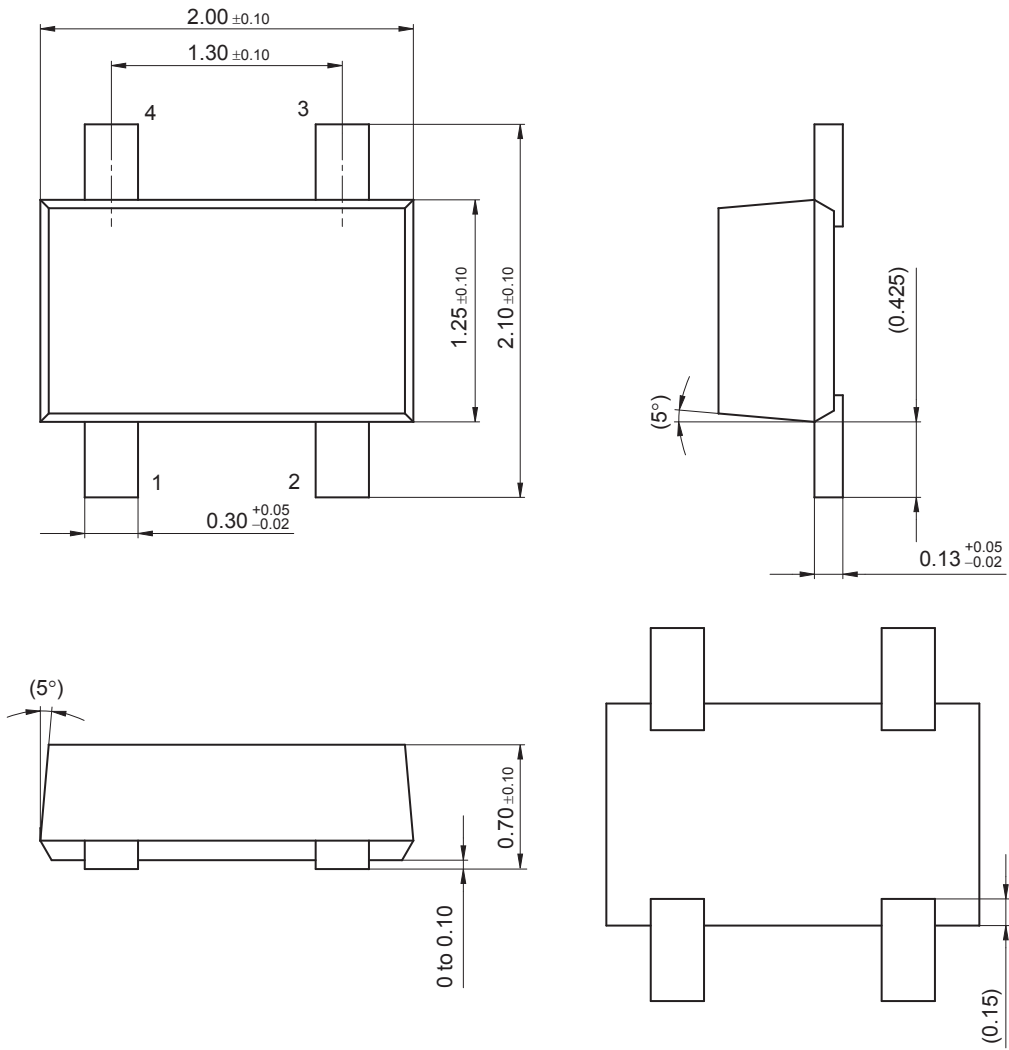
- Absolute frequency of input and output is 5 MHz.
- The temperature must be controlled 25°C for V_Z measurement.
 V_Z value measured at other temperature must be adjusted to V_Z (25°C)
- *1: V_Z guaranteed 20 ms after current flow.
- *2: $T_j = 25^\circ\text{C}$ to 150°C

■ Electrical Characteristics within Part Numbers $T_a = 25^{\circ}\text{C} \pm 3^{\circ}\text{C}$

Part number	Zener voltage V_Z (V)				Reverse current I_R (μA)		Zener operating resistance R_Z (Ω)		Zener rise operating resistance R_{ZK} (Ω)		Temperature coefficient of zener voltage S_Z (mV/ $^{\circ}\text{C}$)		Marking symbol
	Min	Typ	Max	I_Z (mA)	Max	V_R (V)	Max	I_Z (mA)	Max	I_Z (mA)	Typ	I_Z (mA)	
MALH024YGL	2.28	2.40	2.60	5	120	1.0	100	5			-1.6	5	2.4
MALH027YGL	2.50	2.70	2.90	5	120	1.0	110	5			-2.0	5	2.7
MALH030YGL	2.80	3.00	3.20	5	50	1.0	120	5			-2.1	5	3.0
MALH033YGL	3.10	3.30	3.50	5	20	1.0	130	5			-2.4	5	3.3
MALH036YGL	3.40	3.60	3.80	5	10	1.0	130	5			-2.4	5	3.6
MALH039YGL	3.70	3.90	4.10	5	10	1.0	130	5			-2.5	5	3.9
MALH043YGL	4.00	4.30	4.60	5	10	1.0	130	5			-2.5	5	4.3
MALH047YGL	4.40	4.70	5.00	5	2	1.0	80	5	800	1	-1.4	5	4.7
MALH051YGL	4.80	5.10	5.40	5	1	2.0	60	5	500	1	-0.8	5	5.1
MALH056YGL	5.30	5.60	6.00	5	0.5	2.5	40	5	200	0.5	1.2	5	5.6
MALH062YGL	5.80	6.20	6.60	5	0.2	4.0	30	5	100	0.5	2.3	5	6.2
MALH068YGL	6.40	6.80	7.20	5	0.1	4.0	20	5	60	0.5	3	5	6.8
MALH075YGL	7.00	7.50	7.90	5	0.1	5.0	20	5	60	0.5	4	5	7.5
MALH082YGL	7.70	8.20	8.70	5	0.1	5.0	20	5	60	0.5	4.6	5	8.2
MALH091YGL	8.50	9.10	9.60	5	0.1	6.0	20	5	60	0.5	5.5	5	9.1
MALH100YGL	9.40	10.00	10.60	5	0.05	7.0	30	5	60	0.5	6.4	5	10
MALH110YGL	10.40	11.00	11.60	5	0.05	8.0	30	5	60	0.5	7.4	5	11
MALH120YGL	11.40	12.00	12.70	5	0.05	9.0	30	5	80	0.5	8.4	5	12
MALH130YGL	12.40	13.00	14.10	5	0.05	10.0	35	5	80	0.5	9.4	5	13
MALH150YGL	13.90	15.00	15.60	5	0.05	11.0	40	5	80	0.5	11.4	5	15
MALH160YGL	15.30	16.00	17.10	5	0.05	12.0	50	5	80	0.5	12.4	5	16
MALH180YGL	16.90	18.00	19.10	5	0.05	13.0	60	5	80	0.5	14.4	5	18
MALH200YGL	18.80	20.00	21.20	5	0.05	15.0	80	5	100	0.5	16.4	5	20
MALH220YGL	20.80	22.00	23.30	5	0.05	17.0	80	5	100	0.5	18.4	5	22
MALH240YGL	22.80	24.00	25.60	5	0.05	19.0	100	5	120	0.5	20.4	5	24
MALH270YGL	25.10	27.00	28.90	2	0.05	21.0	120	2	120	0.5	23.4	2	27
MALH300YGL	28.00	30.00	32.00	2	0.05	23.0	160	2	160	0.5	26.6	2	30
MALH330YGL	31.00	33.00	35.00	2	0.05	25.0	200	2	200	0.5	29.7	2	33
MALH360YGL	34.00	36.00	38.00	2	0.05	27.0	250	2	250	0.5	33	2	36
MALH390YGL	37.00	39.00	41.00	2	0.05	30.0	300	2	300	0.5	35.6	2	39

SMini4-F2

Unit: mm



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