

# ZMC05

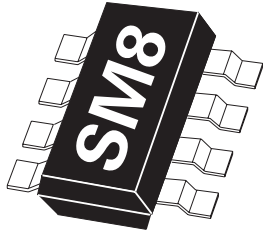
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## CURRENT SENSOR

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### DESCRIPTION

The ZMC05 allows the measurement direct or alternating current up to 5A. It consists of a magnetic sensor chip (employing the magneto resistive effect of thin Permalloy), which measures the magnetic field generated by an internal-carrying conductor.



### FEATURES

- Package : SM-8
- Supply voltage 12 V
- No Auxiliary Field Required
- Measurable current  $I_M$  up to 5A
- Available on 12mm tape

### APPLICATION

- Contactless and free from losses current measurement
- Automotive
- Battery Power Equipment
- Power Supplies
- Electric Motor Control
- Power Management

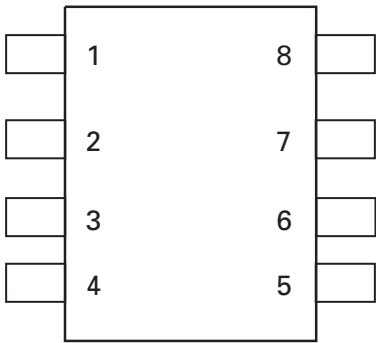
### ORDERING INFORMATION

DEVICE	REEL SIZE	TAPE WIDTH	QUANTITY PER REEL
ZMC05TA	7	12mm	1000
ZMC05TC	13	12mm	4000

### DEVICE MARKING

ZMC05

### PINOUT DIAGRAM



### PIN CONNECTION

- |                    |                      |
|--------------------|----------------------|
| 1) Do not connect  | 5) -V <sub>O</sub>   |
| 2) +V <sub>O</sub> | 6) Current input     |
| 3) Current output  | 7) +V <sub>B</sub>   |
| 4) -V <sub>B</sub> | 8) Do not connection |

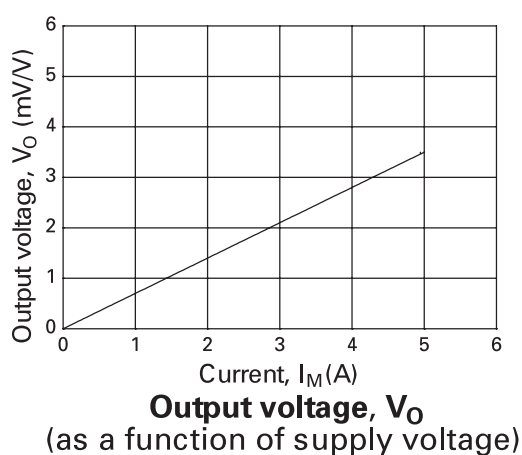
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## ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	LIMIT	UNIT
Supply Voltage	$V_B$	12	V
Measurable current at DC: absolute value at AC: peak value	$I_M$	5	A
Operating temperature range	$T_{amb}$	-25 to +125	°C
Storage temperature range	$T_{stg}$	-25 to +125	°C

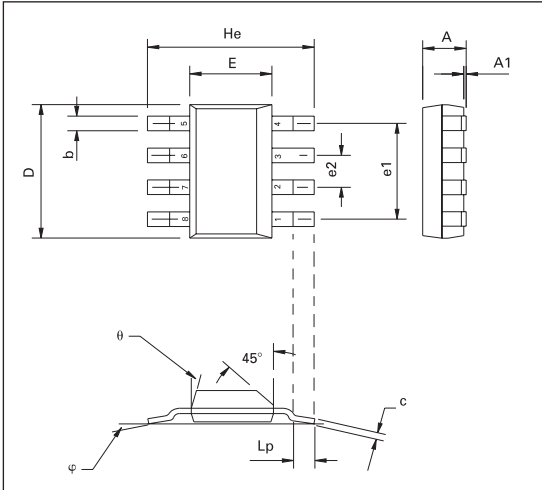
## ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^\circ\text{C}$ unless otherwise stated)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Input - Output - Insulation (between pin 3 and pin 1)	$I_{I-O}$			100	nA	test voltage: 200V DC test time: 50ms
Bridge resistance	$R_{br}$	1.2	1.7	2.2	$k\Omega$	
Offset voltage	$V_{Off}$			$\pm 2$	mV/V	
Open circuit sensitivity	S	0.5	0.7	0.9	(mV/V)/A	
Resistance of the conductor	R		0.7		$m\Omega$	
Operating frequency	$f_{max}$			100	kHz	
Temperature coefficient of the open circuit sensitivity	$T_C$			-0.3	%/K	



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## PACKAGE OUTLINE



## PACKAGE DIMENSIONS

DIM	MILLIMETRES	
	MIN	MAX
A	—	1.7
A1	0.02	0.1
b	0.7 TYP	
c	0.24	0.32
D	6.3	6.7
E	3.3	3.7
e1	4.59 TYP	
e2	1.53 TYP	
He	6.7	7.3
Lp	0.9	—
∅	—	15°
ϕ	10° TYP	

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