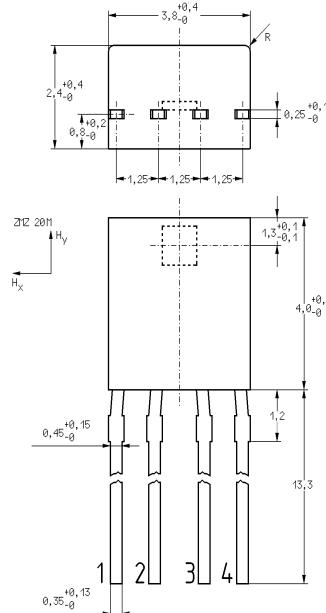


# Magnetic Field Sensor with Internal Magnet

**ZMZ20M**



**package : E-Line (4-Pin)**  
 1: +VO 2: -VB 3: -VO 4: +VB  
 VO - output voltage VB - supply voltage

## FEATURES

- ZMZ20M (E-LINE 4-Pin) is an extremely sensitive magnetic sensor with internal magnet employing the magneto-resistive effect of thin film permalloy
- Package : E-LINE 4-Pin
- The ZMZ20M is available as bulk in box
- Disturbing fields up to 30 kA/m are allowed
- Internal magnet for creating of the auxiliary field Hx
- Magnetic fields vertical to the chip level are not effective

## ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Unit
Supply voltage ZMZ20M	VB	V
Total power dissipation	P <sub>tot</sub>	mW
Operating temperature range	T <sub>amb</sub>	°C
Storage temperature range	T <sub>stg</sub>	°C

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test conditions
Bridge resistance	$R_{br}$	1.2	1.7	2.2	$k\Omega$	
Output voltage range	$V_O/V_B$	12	18	22	$mV/V$	
Auxiliary field	$H_X$	-	2.5	-	$kA/m$	
Disturbing field	$H_d$	-	-	30	$kA/m$	
Open circuit sensitivity	$S$	3.0	5.0	7.0	$(mV/V)/(kA/m)$	no disturbing field $H_d$ allowed $V_B = \text{const.}$
Hysteresis of output voltage	$V_{OH}/V_B$	-	-	50	$\mu V/V$	$H_y \leq 2 kA/m$
Offset voltage	$V_{off}/V_B$	-1.5	-	+1.5	$mV/V$	
Operating frequency	$f_{max}$	0	-	1	MHz	
Temperature coefficient of offset voltage	$TCV_{off}$	-3	-	+3	$(\mu V/V)/K$	$T_{amb} = -25...+125^{\circ}C$
Temperature coefficient of bridge resistance	$TCR_{br}$	-	0.3	-	$%/K$	$T_{amb} = -25...+125^{\circ}C$
Temperature coefficient of open circuit sensitivity $V_B = 5 V$	$TCS_V$	-	-0.25	-	$%/K$	$T_{amb} = -25...+125^{\circ}C$
Temperature coefficient of open circuit sensitivity $I_B = 3 mA$	$TCS_I$	-	0.05	-	$%/K$	$T_{amb} = -25...+125^{\circ}C$

Devices are identified by a code on the body of the device

ZMZ20M..... M2M

Ordering information:

ZMZ20M ..... bulk in box (2,000 components per box)

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