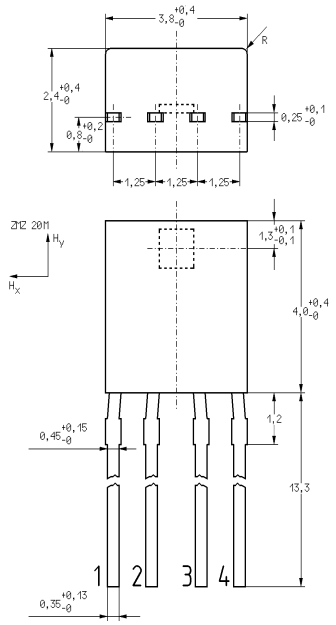
Magnetic Field Sensor with Internal Magnet

ZMZ20M



package : E-Line (4-Pin)
1: $+V_O$ 2: $-V_B$ 3: $-V_O$ 4: $+V_B$
V_O - output voltage V_B - 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 H_X
- Magnetic fields vertical to the chip level are not effective

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol		Unit
Supply voltage ZMZ20M	V_B	12	V
Total power dissipation	P_{tot}	120	mW
Operating temperature range	T_{amb}	-25 to +125	°C
Storage temperature range	T_{stg}	-25 to +125	°C

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25 °C unless otherwise stated)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test conditions
Bridge resistance	R_{br}	1.2	1.7	2.2	kΩ	
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 = const.
Hysteresis of output voltage	V_{OH}/V_B	-	-	50	μV/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	(μV/V)/K	T_{amb} = -25...+125°C
Temperature coefficient of bridge resistance	TCR_{br}	-	0.3	-	%/K	T_{amb} = -25...+125°C
Temperature coefficient of open circuit sensitivity V_B = 5 V	TCS_V	-	-0.25	-	%/K	T_{amb} = -25...+125°C
Temperature coefficient of open circuit sensitivity I_B = 3 mA	TCS_I	-	0.05	-	%/K	Tamb = -25...+125°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)