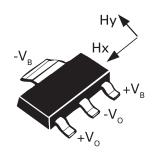
MAGNETIC FIELD SENSOR WITH INTERNAL MAGNET

DESCRIPTION

The ZMY20M is an extremely sensitive magnetic sensor employing the magneto-resistive effect of thin film permalloy. It allows the measurement of magnetic fields or the detection of magnetic parts. The highly sensitive and small size magnetoresistive sensors consist of chip covered with thin film permalloy stripes. These stripes form a Wheatstone bridge, whose output voltage is proportional to the magnetic field component Hy. The required perpendicular field Hx which is necessary to stabilize sensor operation, is created by an internal permanent magnet.



FEATURES

- Package: SOT223
- Supply voltage 12V
- Internal magnet for creation of auxiliary field Hx
- Available on 12mm tape

APPLICATIONS

- Linear position measurement
- · Angular position measurement
- Navigation (electronic compass)
- Revolution measurement

ORDERING INFORMATION

DEVICE	REEL SIZE	TAPE WIDTH	QUANTITY PER REEL
ZMY20MTA	7″	12mm	1,000
ZMY20MTC	13"	12mm	4,000

DEVICE MARKING

ZMY20M



ZMY20M

ABSOLUTE MAXIMUM RATINGS

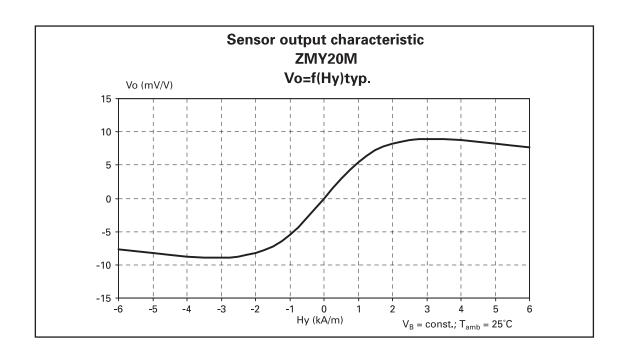
PARAMETER	SYMBOL	LIMIT	UNIT
Supply voltage	V _B	12	V
Total power dissipation	P _{TOT}	120	mW
Operating temperature range	T _{amb}	-25 to +125	°C
Storage temperature range	T _{stg}	-25 to +125	°C

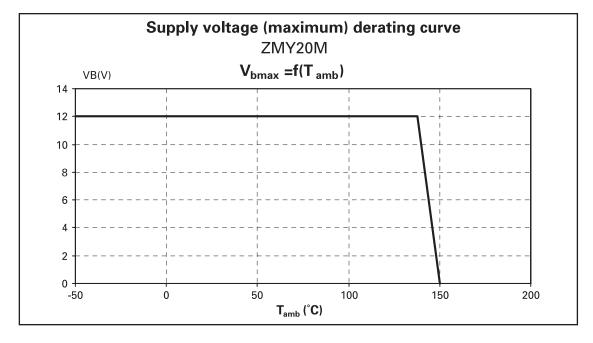
ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS
Bridge resistance	R _{br}	1.2	1.7	2.2	kΩ	
Output voltage range	V _O /V _B	12	18	24	mV/V	
Auxiliary field	Нх	-	2	-	kA/m	
Disturbing field	Hd	-	-	30	kA/m	
Open circuit sensitivity	S	3.0	5.5	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	Hy ≤ 2kA/m
Offset voltage	V _{off} /V _B	-1.5	-	+1.5	mV/V	
Operating frequency	f _{max}	0	-	1	MHz	
Temperature coefficient of offset voltages	TCV _{off}	-3	-	+3	(μV/V)/K	T _{amb} = -25 to +125°C
Temperature coefficient of bridge resistance	TCR _{br}	0.25	0.3	0.35	%/K	T _{amb} = -25 to +125°C
Temperature coefficient of open circuit sensitivity V _B = 5V	TCS _V	-0.25	-0.3	-0.35	%/K	T _{amb} = -25 to +125°C
Temperature coefficient of open circuit sensitivity I _B = 3mA	TCS _I	-	0.05	-	%/K	T _{amb} = -25 to +125°C



ZMY20M

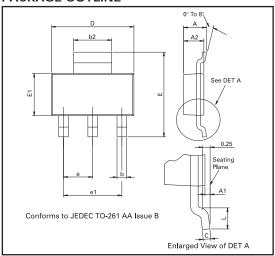






ZMY20M

PACKAGE OUTLINE



Controlling dimensions are in millimeters. Approximate conversions are given in inches

PACKAGE DIMENSIONS

DIM	Millin	neters	Incl	hes	DIM -	Millimeters		Inches	
DIIVI	Min	Max	Min	Max	DIIVI	Min	Max	Min	Max
Α	-	1.80	-	0.071	е	2.30	BSC	0.090	5 BSC
A1	0.02	0.10	0.0008	0.004	e1	4.60	BSC	0.181	BSC
b	0.66	0.84	0.026	0.033	Е	6.70	7.30	0.264	0.287
b2	2.90	3.10	0.114	0.122	E1	3.30	3.70	0.130	0.146
С	0.23	0.33	0.009	0.013	L	0.90	-	0.355	-
D	6.30	6.70	0.248	0.264	-	-	-	-	-

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