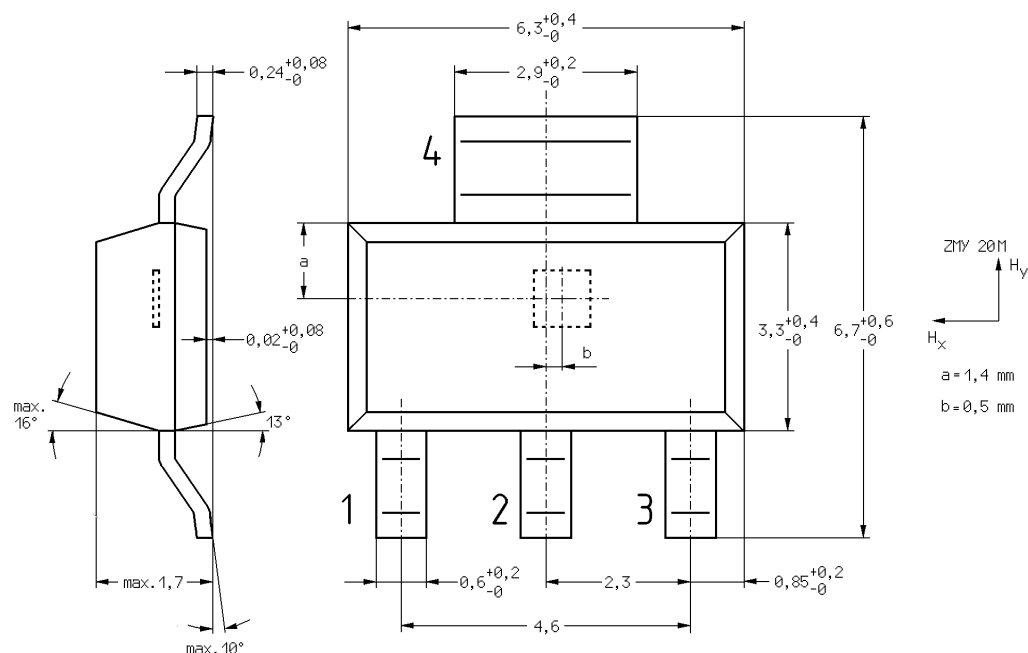


Magnetic field sensor with internal magnet

ZMY20M



package : SOT223S (4-Pin)
1: +V_O 2: -V_O 3: +V_B 4: -V_B
V_O - output voltage V_B - supply voltage

FEATURES

- ZMY20M (SOT-223-S) is an extremely sensitive magnetic sensor with internal magnet employing the magneto-resistive effect of thin film permalloy
- Package : SOT-223-S
- The ZMY20M is available on 12 mm tape - 7" reel 1.000 components/reel or 13" reel 4.000 components/reel
- 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 ZMY20M	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 $T_{amb} = 25\text{ }^{\circ}\text{C}$ 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	-	1.5	-	kA/m	
Disturbing field	H_d	-	-	30	kA/m	
Open circuit sensitivity	S	3.0	5.5	7.0	(mV/V)/(kA/m)	no disturbing field H_d allowed $V_B = \text{const.}$
Hysteresis of output voltage	V_{OH}/V_B	-	-	50	$\mu\text{V/V}$	$H_y \leq 2\text{ kA/m}$
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	($\mu\text{V/V}$)/K	$T_{amb} = -25...+125^{\circ}\text{C}$
Temperature coefficient of bridge resistance	TCR_{br}	-	0.3	-	%/K	$T_{amb} = -25...+125^{\circ}\text{C}$
Temperature coefficient of open circuit sensitivity $V_B = 5\text{ V}$	TCS_V	-	-0.25	-	%/K	$T_{amb} = -25...+125^{\circ}\text{C}$
Temperature coefficient of open circuit sensitivity $I_B = 3\text{ mA}$	TCS_I	-	0.05	-	%/K	$T_{amb} = -25...+125^{\circ}\text{C}$

Devices are identified by type on the body of the device

ZMY20M..... ZMY20M

Ordering information :

ZMY20MTA 7" reel 1,000 components per reel
ZMY20MTC 13" reel 4,000 components per reel