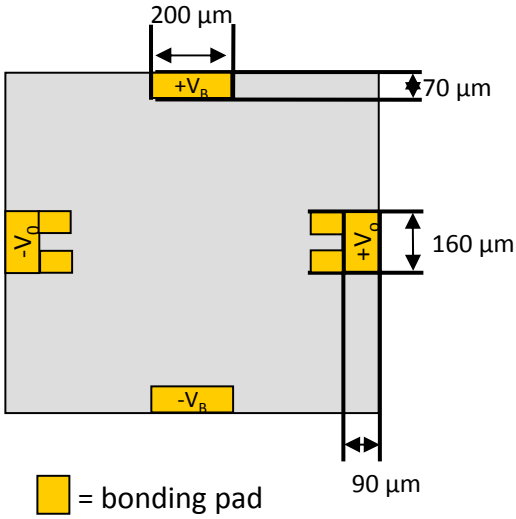
Sensing Direction

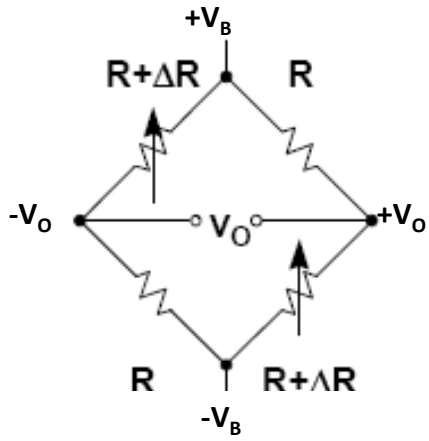
STJ-301 – Bare Die



= bonding pad

Die Dimensions – 1mm^2
Die Thickness - 0.3 mm

Equivalent Circuit



V_B = Bias Terminals
V_o = Output Terminal

STJ-301 Specifications

CHARACTERISTICS	Note	Min	Typical	Max	
Supply (V_B)	V Bridge ref to GND		5	12	V
Resistance[1]	V Bridge @ 5V	1000	2000	5000	Ω
Voltage sensitivity		2	3	4	mV/V/Oe
Dynamic Range	Linear response	-15		+15	Gauss
Bridge Offset	% V_B	0	5	10	%

This document is subject to change without notice. Any updated information required, please contact us.

STJ-301 – Notes and Handling Instructions

1. MTJ sensors will fail if subjected to a sufficiently large differential voltage. A good rule-of thumb is to **limit the voltage drop across the sensor element to 12 V** or less at all times.

2. Please store sensors as they were shipped and in a location which is away from sources of radiated electromagnetic fields (ESD/EMI).

3. Sensors are sensitive to electrostatic discharge (ESD). Be careful to ground tools and your hands when handling the sensors. If possible, be sure to wear grounding straps when handling the sensors.

4. To directly measure MTJ sensor resistance, connect to a constant current source, and measure the voltage drop directly across the two active leads. In order to limit the voltage drop across the MTJ sensor, initial applied current values should NOT exceed 50 μA. If this amount of current is not sufficient to measure the device resistance, the current may be increased gradually until the sensor voltage is sufficient to make an accurate reading.