

Description

The DM-211 is a highly sensitive magnetoresistance element, composed of an evaporated ferromagnetic alloy on a silicon substrate.

This element can be used for the detection of rotational speed and direction of rotation.

Features

- Low magnetic field and high sensitivity
75mVp-p (Typ.) at Vcc = 5V
and H = 100 Oe

Absolute Maximum Ratings (Ta = 25°C)

- Supply voltage Vcc 10 V
- Operating temperature Topr -20 to +120 °C
- Storage temperature Tstg -50 to +150 °C

Recommended Operating Condition

- Supply voltage Vcc 5 V

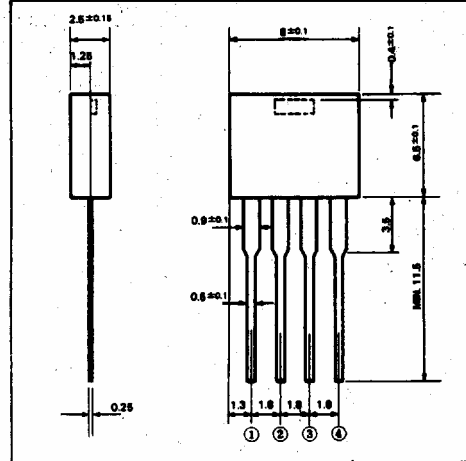
Electrical Characteristics

Ta = 25°C

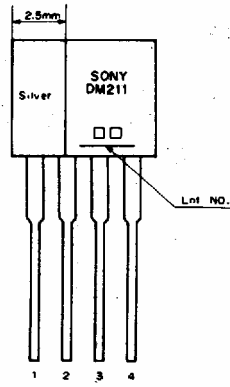
Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Total resistance	RT	H = 100 Oe θ = 45° Vcc = 5V	1.6		3.0	kΩ
Midpoint potential	VA, VB	Revolving magnetic field H = 100 Oe Vcc = 5V	2.475		2.525	V
Midpoint potential difference	VA - VB	Revolving magnetic field H = 100 Oe Vcc = 5V	-25		25	mV
Output voltage	VOUT	Revolving magnetic field H = 100 Oe Vcc = 5V	50	75		mVp-p
FG irregular of rotation		See the Electrical Characteristic Test Circuit (Page 208)		0.03		%

Package Outline

Unit: mm

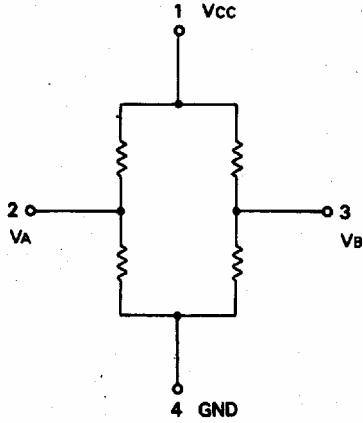


Mark

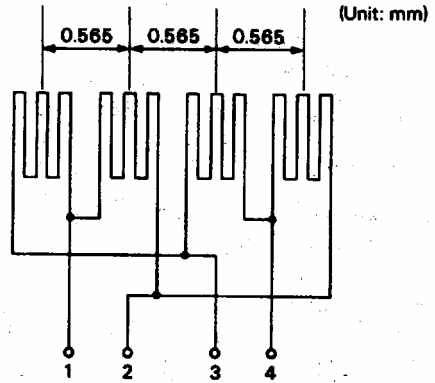


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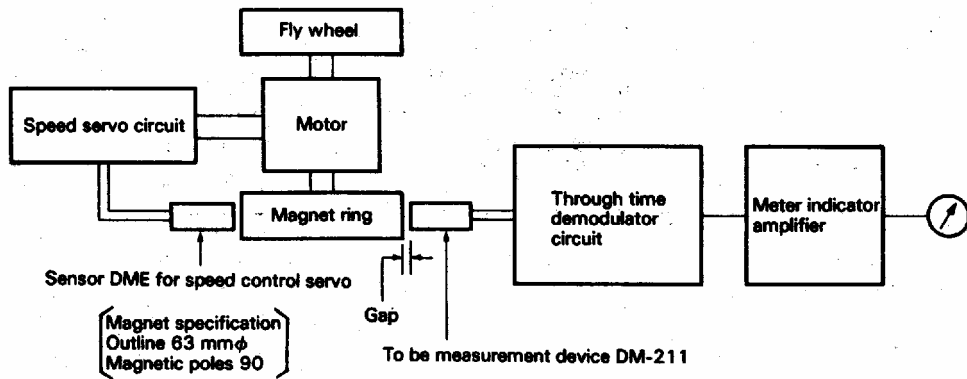
Equivalent Circuit



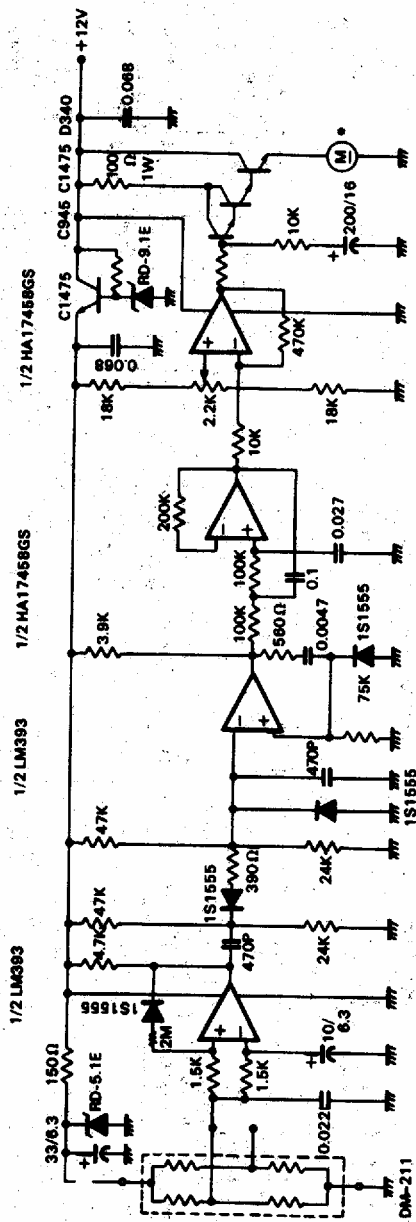
Pattern Layout



FG Irregular of Rotation Test Circuit

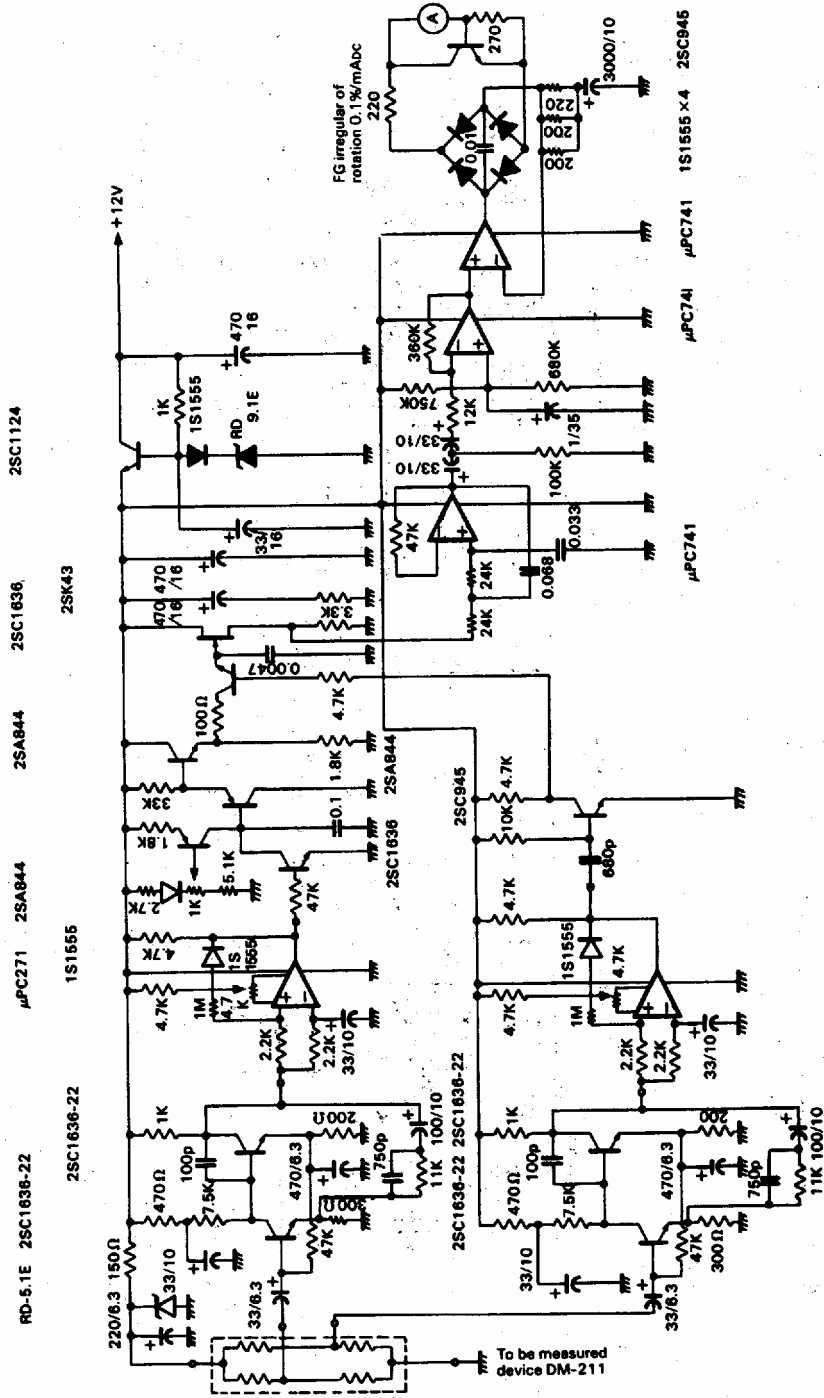


Electrical Characteristic Test Circuit
(Speed servo circuit)

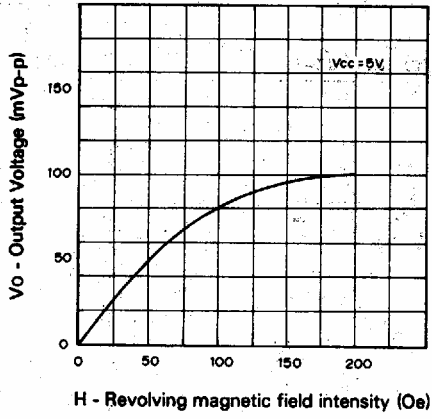


* Motor must be used with fly wheel (I = 12g Cm S9)

(Through the Time Demodulator Circuit and Meter Indicator Amplifier Circuit)



Output voltage vs. Magnetic field intensity



Total resistance vs. Ambient temperature

