VF526DT

Table 1. Absolute Maximum Ratings[1]

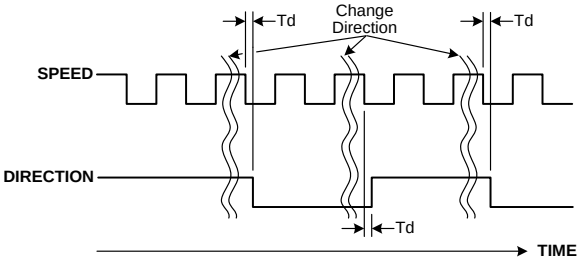
Characteristic	Sym.	Min.	Max.	Unit
Supply voltage	Vcc	-0.5	30	V
Output voltage (OFF)	Vout	-0.5	30	V
Output ON current	Iout	–	10	mA
Storage temperature	Ts	-65 [-85]	160 [320]	°C [°F]
Operating temperature	T	-40 [-40]	150 [302]	°C [°F]
ESD: IEC 801-2, Lev 1 MIL-STD-883, Method 3015.7	ESD	 2 4	 – –	KV
Magnetic flux		no limit		–

Note 1: Absolute maximum ratings are the extreme limits that the device will withstand without damage to the device. However, the electrical and mechanical characteristics are not guaranteed as the maximum limits (above recommended operating conditions) are approached, nor will the device necessarily operate at absolute maximum ratings.

Table 2. Specifications

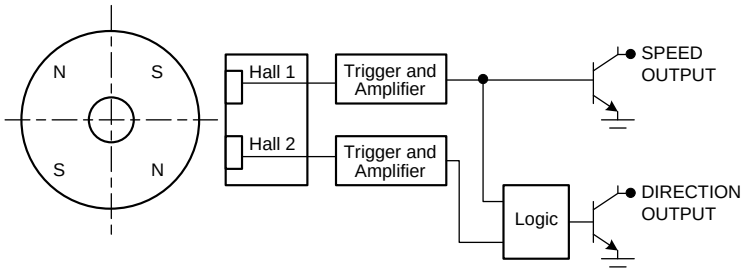
Characteristic	Sym.	Condition	Min.	Typ.	Max.	Unit
Magnetic actuation type	bipolar latch					
Output type	dual open collector, sinking (speed and direction)					
Supply voltage	Vcc	–	3.4	–	24	Vdc
Operating temperature	Temp	Vcc = 3.4 V to 24 V	-40 [-40]	–	125 [257]	°C [°F]
Supply current (OFF)	Ioff	Vcc = 24 V, -40 °C < T < 125 °C, Vout = 24 V, B<MIN REL	–	–	12	mA
Supply current (ON)	Ion	Vcc = 24 V, -40 °C < T < 125 °C, Isink = 5 mA, B<MAX OP	–	–	14	mA
Load current	Isink	Vcc = 24 V, -40 °C < T < 125 °C, Isink = 5 mA, B<MAX OP	–	–	5	mA
Output saturation	Vsat	Vcc = 24 V, -40 °C < T < 125 °C, Isink = 5 mA, B<MAX OP	–	–	0.4	V
Circuit speed to direct delay	Td	Vcc = 12 V, RL = 1.6 kOhm, CL = 20 pF	–	–	5	µs
Rise time	Tr	Vcc = 12 V, RL = 1.6 kOhm, CL = 20 pF	–	–	1.5	µs
Fall time	Tf	Vcc = 12 V, RL = 1.6 kOhm, CL = 20 pF	–	–	1.5	µs
Frequency	Top	Vcc = 12 V, RL = 1.6 kOhm, CL = 20 pF	<1	–	>1000	Hz
Operate point	Bop	T = 25 °C -40 °C < T < 125 °C	– 60	130 –	– 200	Gauss
Release point	Brel	T = 25 °C -40 °C < T < 125 °C	– -60	-130 –	– -200	Gauss
Differential (OP-REL)	Diff	T = 25 °C -40 °C < T < 125 °C	– 200	260 –	– 320	Gauss
Symmetry ([OP +REL]/2)	Sym	T = 25 °C -40 °C < T < 125 °C	– -65	0 –	– 65	Gauss
Package style	SOT-89B					
Moisture sensitivity test	similar to JEDEC J-STD-020B, MSL Level 1					
Package quantity	available in 1000/tape and reel					

Figure 1. Output Timing Diagram



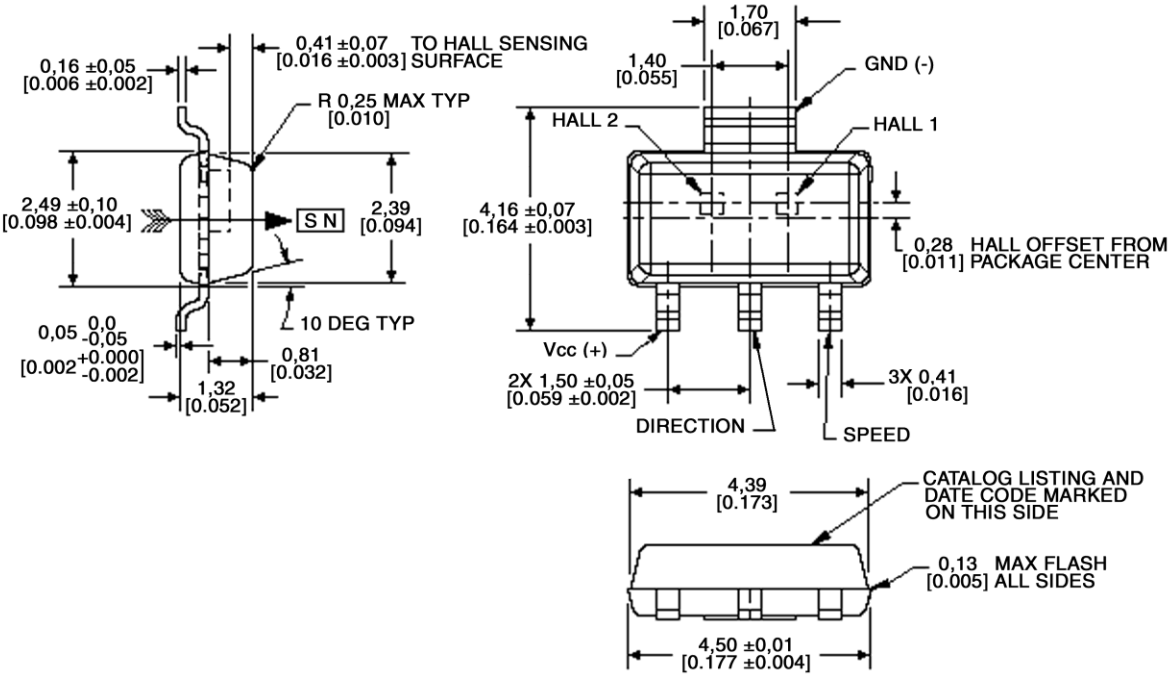
Bipolar Latch, Dual Hall-effect Digital Position Sensor with Speed and Direction Outputs

Figure 2. Sensor Function Diagram with Customer-Supplied Magnet

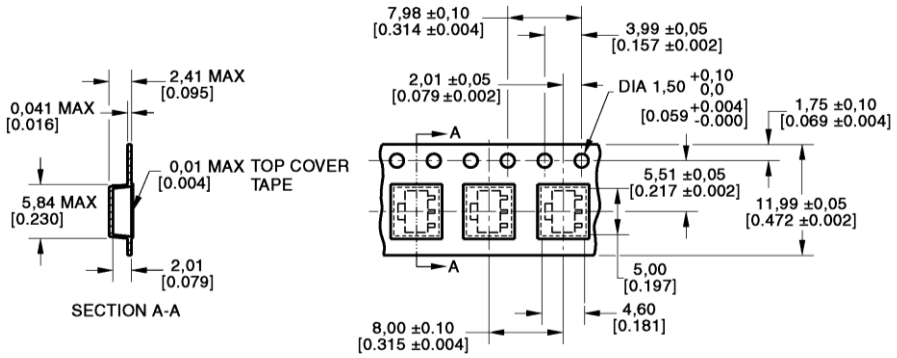


When the change in magnetic flux at Hall 1 leads the change at Hall 2, the direction output is HIGH; when it follows Hall 2, the direction output is LOW.

Figure 3. Mounting Dimensions (For reference only. mm/[in].)



Tape



Solder Pad

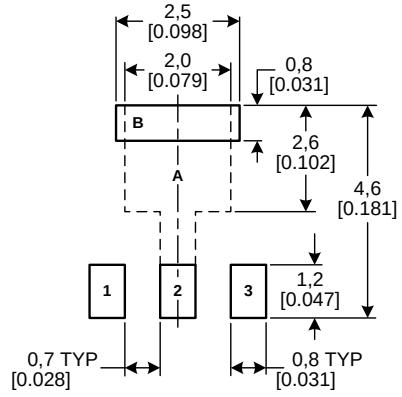
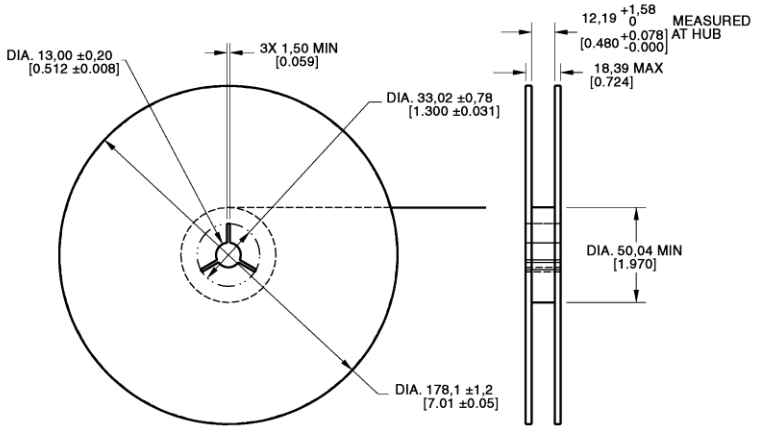


Figure 3. Mounting Dimensions (continued)

Reel



Order Guide

Catalog Listing	Description
VF526DT	Bipolar latch, dual hall-effect digital position sensor with speed and direction outputs, on tape and reel (1000 pcs per reel)

⚠ WARNING

MISUSE OF DOCUMENTATION

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
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005870-2-EN IL50 GLO Printed in USA
December 2009

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