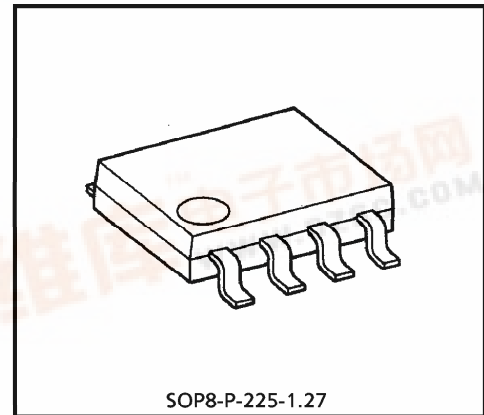


TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

TA8025F

PICK UP SENSOR INTERFACE IC

The TA8025F is an IC designed for making the output signal from electromagnetic pick up sensor and etc..., waveform-shaping. The V_{TH} of input has hysteresis that is division value between peak voltage of input signal and 0V.

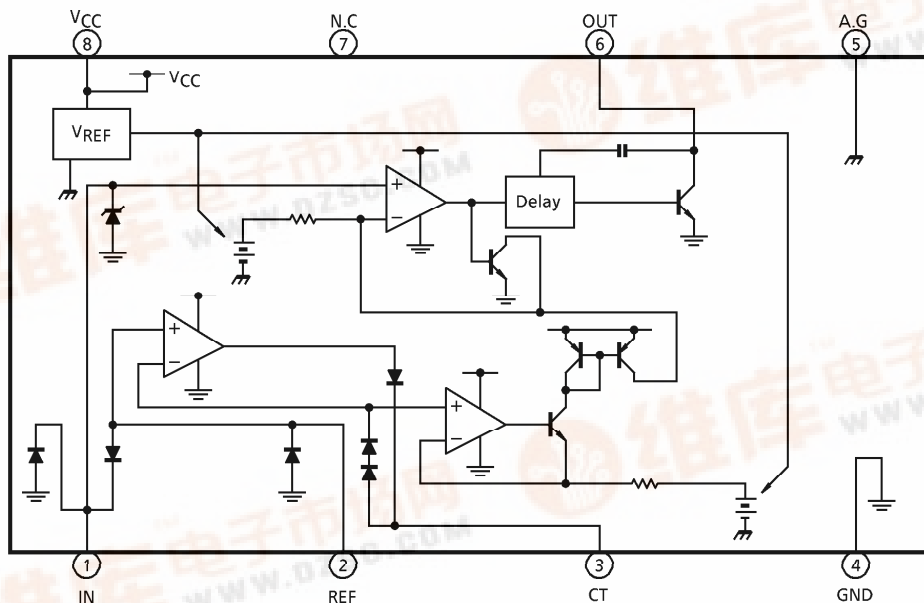


Weight : 0.08g (Typ.)

FEATURES

- Input frequency : DC~50kHz
- Input voltage V_{TH} : $0V \leq V_{peak} \times K$
- Small package : SOP 8pin
- Separate GND line for output and logic control sections

BLOCK DIAGRAM AND PIN LAYOUT



961001EBA2

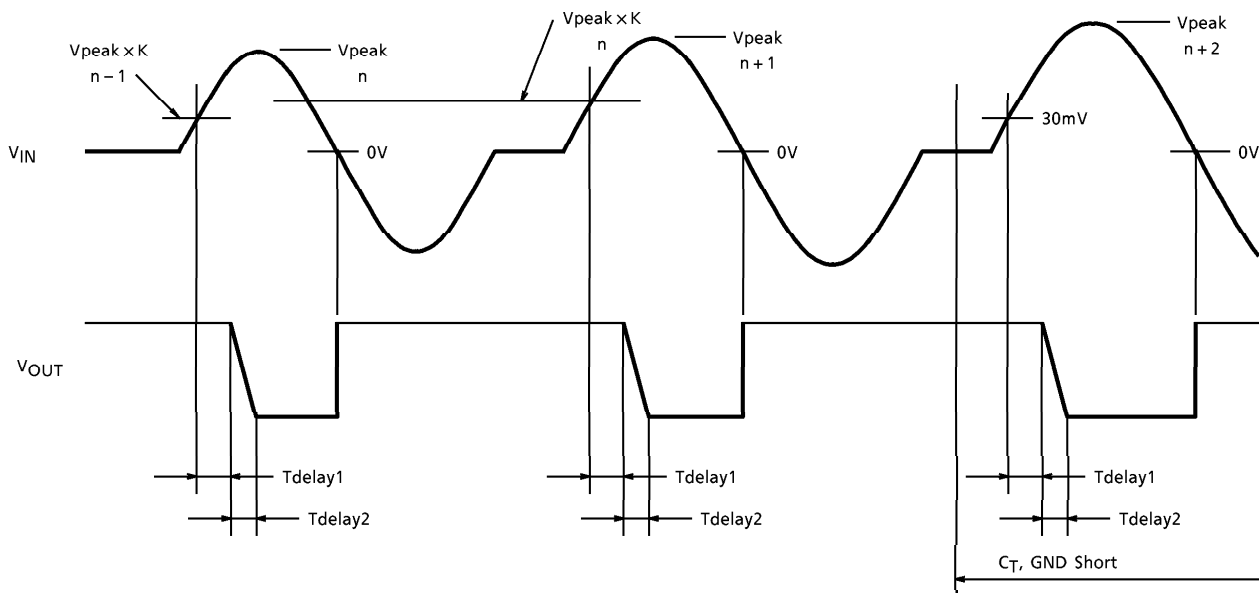
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PIN DESCRIPTION

PIN No.	SYMBOL	DESCRIPTION
1	IN	Input pin for a signal from sensor.
2	REF	V_{TH} setting pin. The V_{TH} value can be set according to divide the input signal with resistors.
3	CT	This pin hold the peak value of input signal of REF pin.
4	GND	Grounded.
5	A.G	Grounded pin for REF.
6	OUT	The output is an NPN open-collector output and the input signal which is made waveform-shaping is gone out. When the output goes down, it has a slope of $1V / \mu s$ in order to lose the influence for the input signal.
7	N.C	Not connected.
8	VCC	Power supply pin.

TIMING CHART



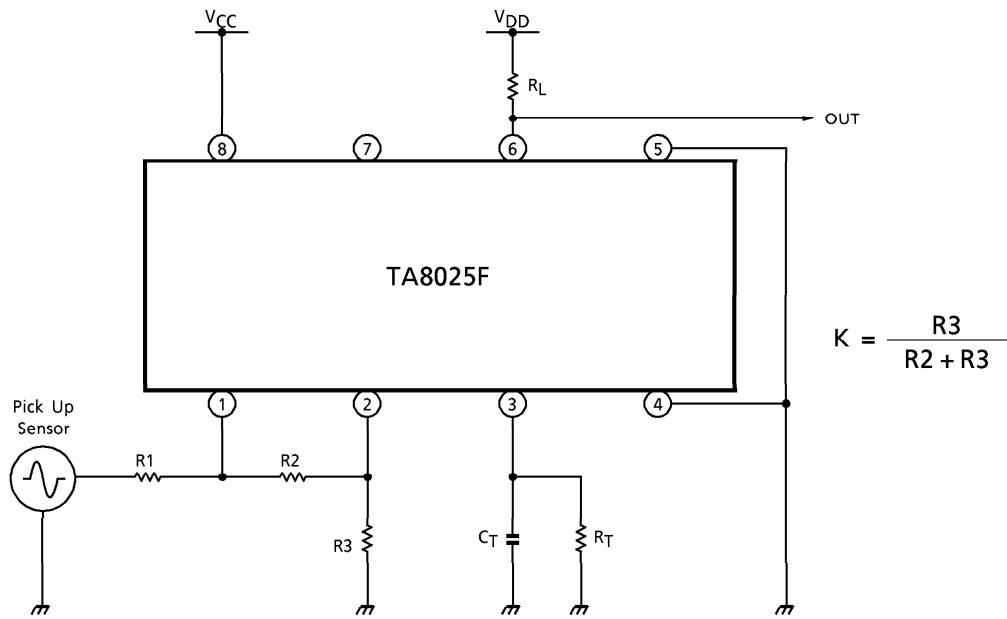
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V _{CC}	36	V
Input Voltage	V _{IN}	36	V
Input Current	I _{IN}	± 20	mA
Output Current	I _{OUT}	10	mA
Power Dissipation	P _D	280	mW
Operating Voltage	V _{opr}	4.5~30	V
Operating Temperature	T _{opr}	- 40~105	°C
Storage Temperature	T _{stg}	- 55~150	°C
Lead Temperature · Time	T _{sol}	260 (10s)	°C

ELECTRICAL CHARACTERISTICS (V_{CC} = 4.5~16V, T_c = - 40~105°C)

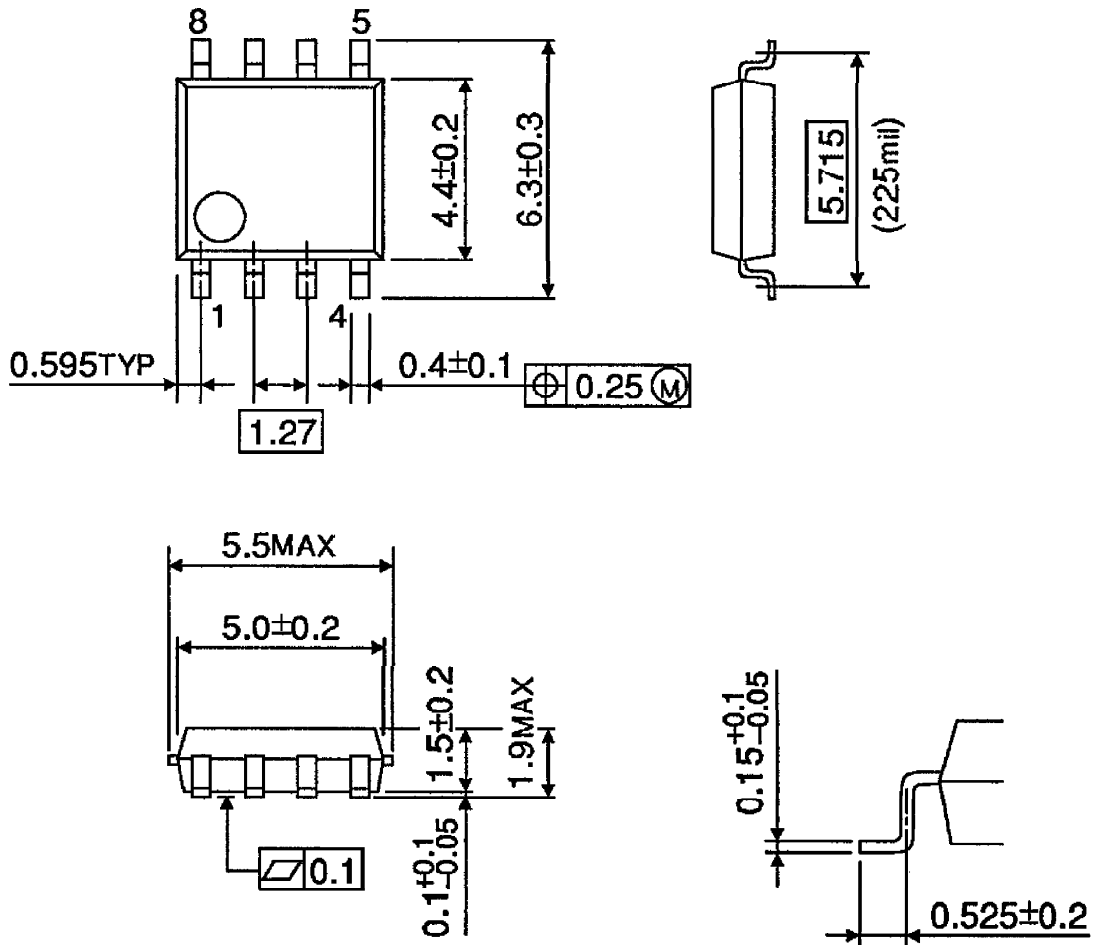
CHARACTERISTIC	SYMBOL	PIN	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Supply Current	I _{CC}	V _{CC}	—	Output : OFF	—	3.0	5.0	mA	
				Output : ON	—	4.5	8.0		
Input Current	I _{IN}	I _N	—	V _{IN} = 0V	- 0.2	—	0.1	μA	
				V _{IN} = V _{CC}	- 0.1	—	0.1		
High-Side Minimum Threshold Voltage	V _{TH1}		—	—	V _{REF} = 0V	24	30	36	mA
Zero-Cross Threshold Voltage	V _{TH2}					- 20	—	20	
Zener Voltage	V _Z	—	—	I _{IN} = 1mA	24	30	36	V	
Input Current	I _{IN}	R _{EF}	—	V _{IN} = 0V	- 0.2	—	0.1	μA	
				V _{IN} = V _{CC}	- 0.1	—	0.1		
Output Voltage	V _{OL}	OUT	—	I _{OL} = 5mA	—	—	0.5	V	
Output Leakage Current	I _{LEAK}		—	—	V _{OH} = 5V	- 5.0	—	5.0	μA
Output Delay Time	T _{delay1}	OUT	—	V _{CC} = 16V	—	7.5	20.0	μs	
	T _{delay2}		—	V _{DD} = 5V	—	5.0	10.0		

EXAMPLE OF APPLICATION CIRCUIT



OUTLINE DRAWING
SOP8-P-225-1.27

Unit : mm



Weight : 0.08g (Typ.)