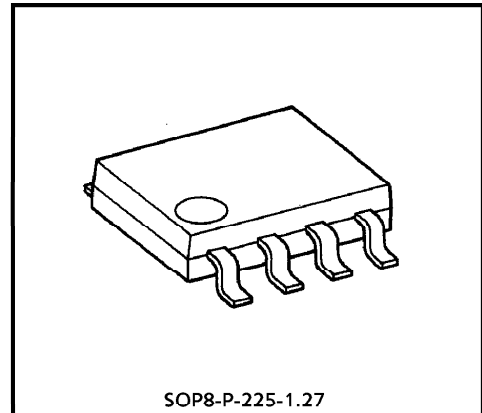


TA8025F

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.

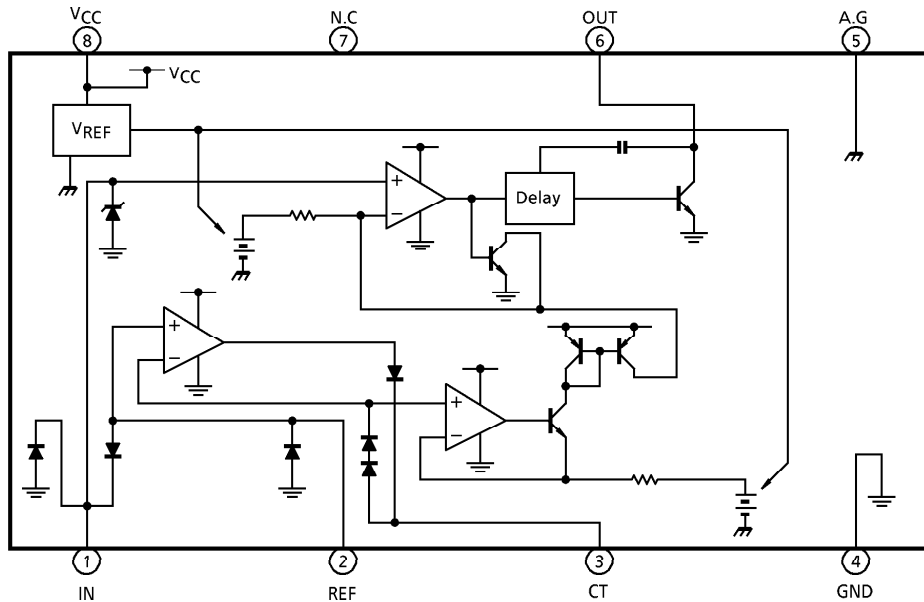


Weight : 0.08g (Typ.)

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



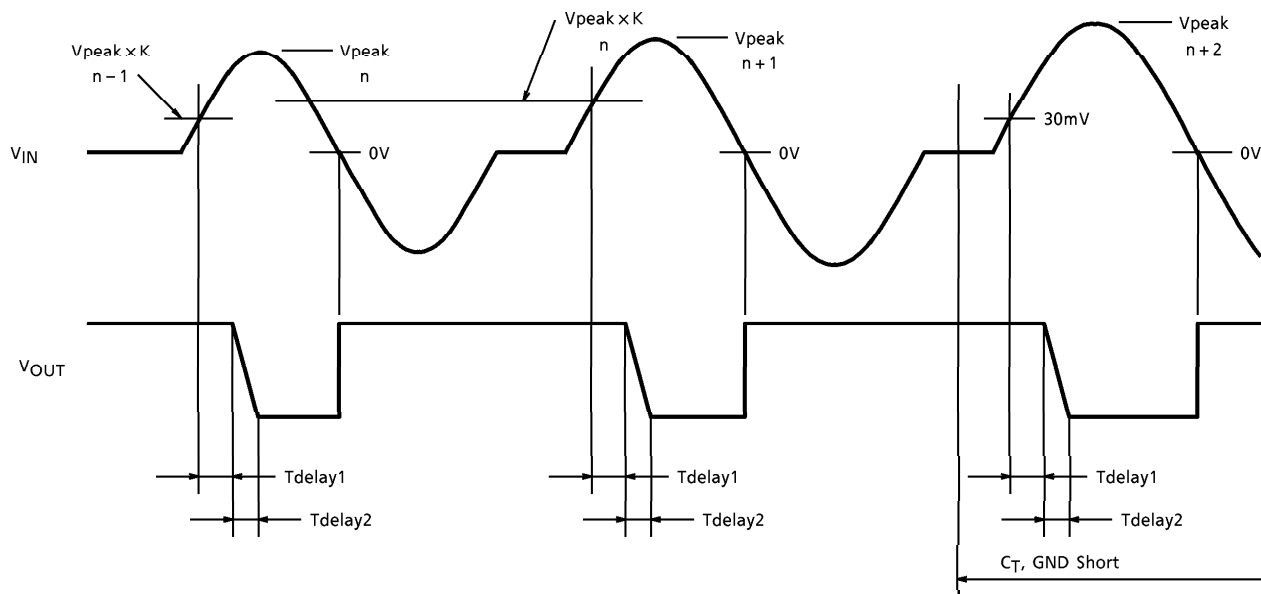
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PIN DESCRIPTION

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



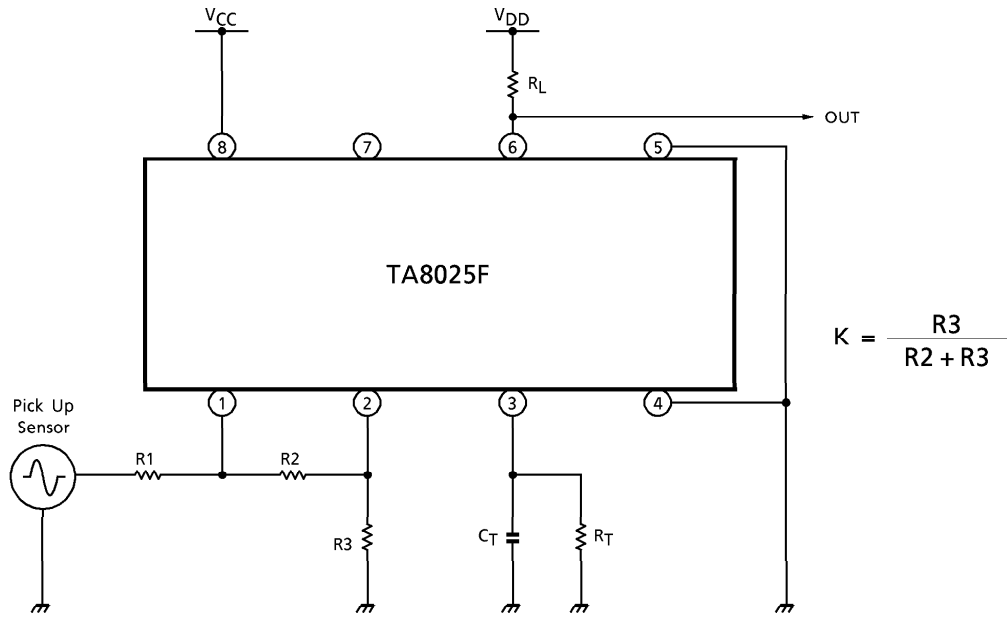
MAXIMUM RATINGS (Ta = 25°C)

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)

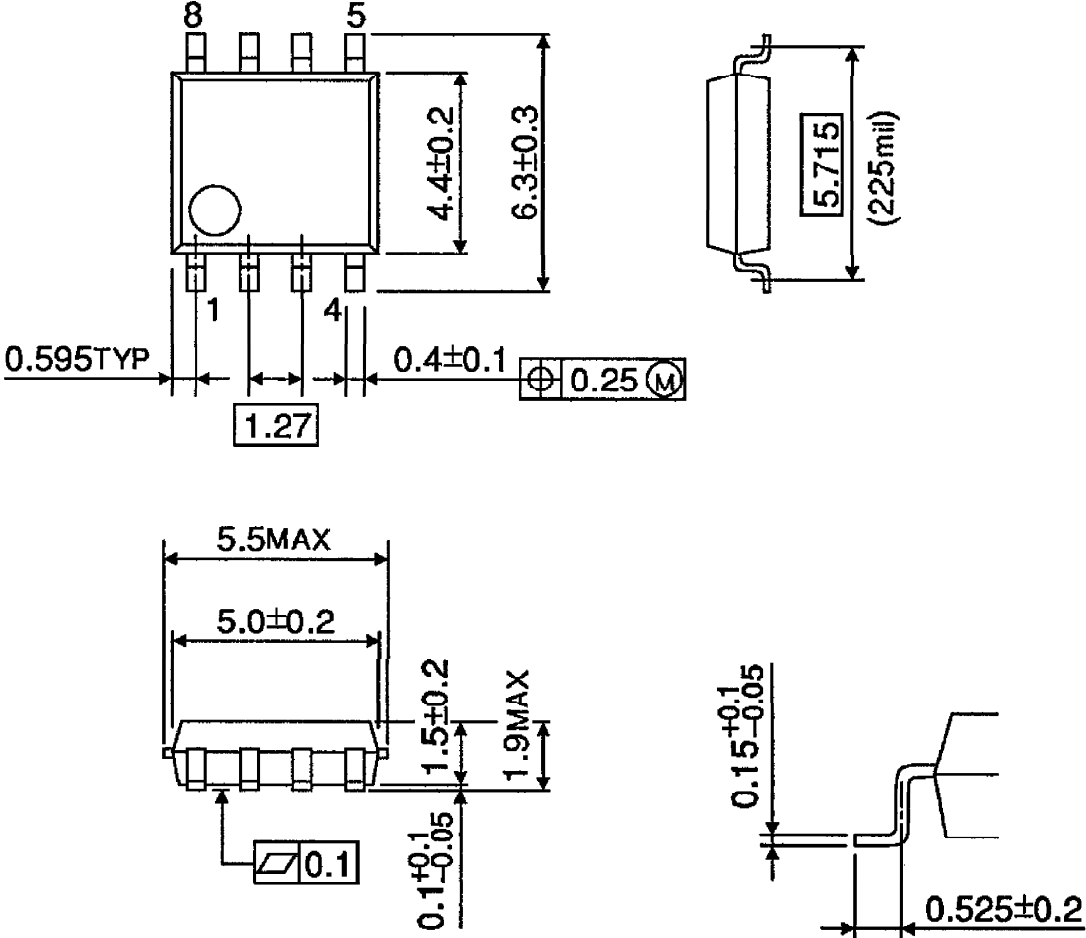
CHARACTERISTIC	SYMBOL	PIN	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Supply Current	I _{CC}	V _{CC}	—	Output : OFF	—	3.0	5.0	mA	
				Output : ON	—	4.5	8.0		
Input Current	I _{IN}	I _N	—	V _{IN} = 0V	- 0.2	—	0.1	μA	
				V _{IN} = V _{CC}	- 0.1	—	0.1		
High-Side Minimum Threshold Voltage	V _{TH1}		—	—	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}		REF	—	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.)