

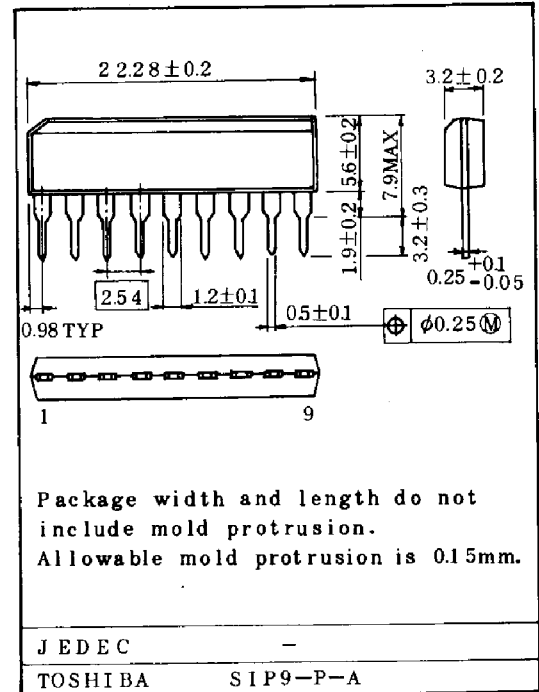
TC5081AP

TENTATIVE

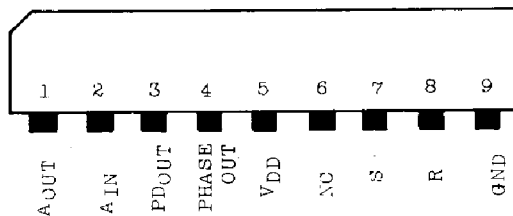
PHASE COMPARATOR

The TC5081AP consists of a digital phase comparator and an amplifier. Three state output connected to low pass filter (using an internal amplifier) will produce DC voltage to control a VCO.

Low state pulses appear on phase out as long as the loop is unlocked and these can be utilized as lock indicator.



PIN CONNECTION



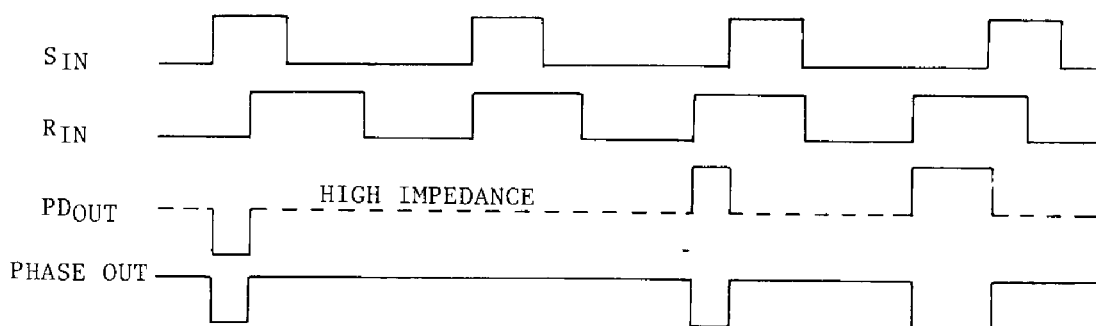
MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V _{DD}	10	V
Input Voltage	V _{IN}	-0.3~V _{DD} +0.3	V
Operating Temperature	T _{opr}	-30~75	°C
Storage Temperature	T _{stg}	-55~125	°C

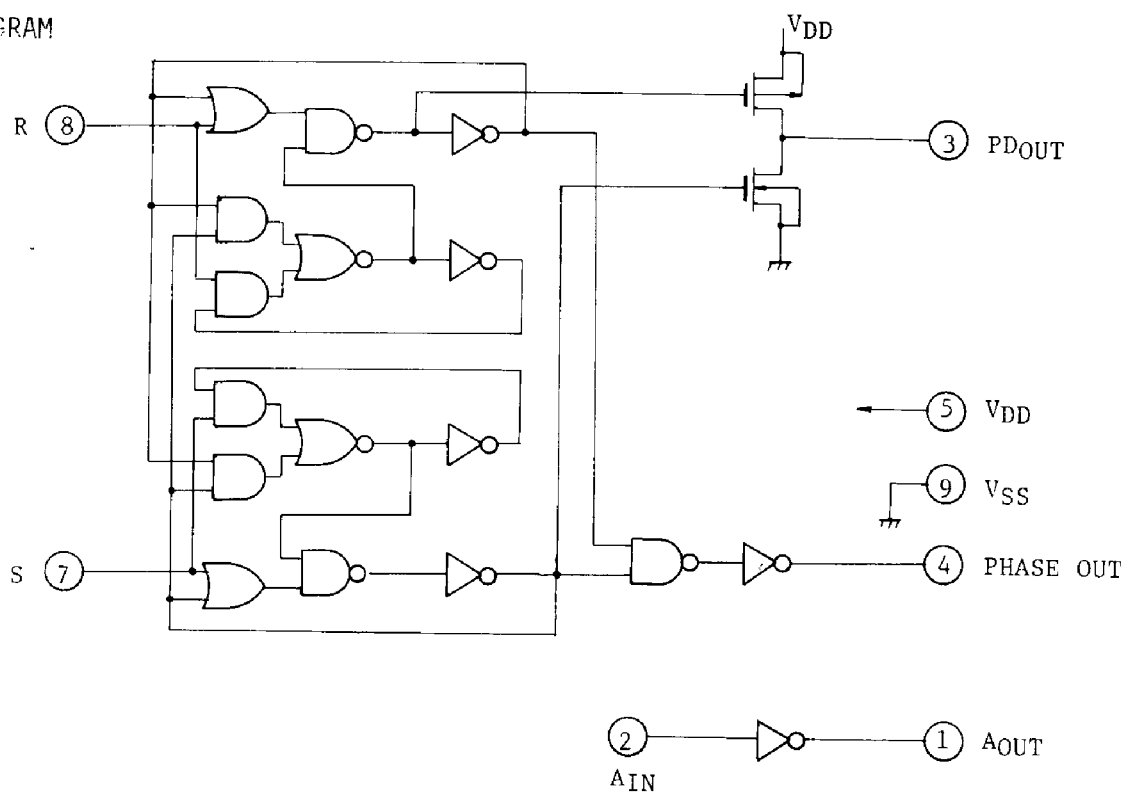
TOSHIBA CORPORATION

TC5081AP

PHASE COMPARATOR TIMING CHART



LOGIC DIAGRAM

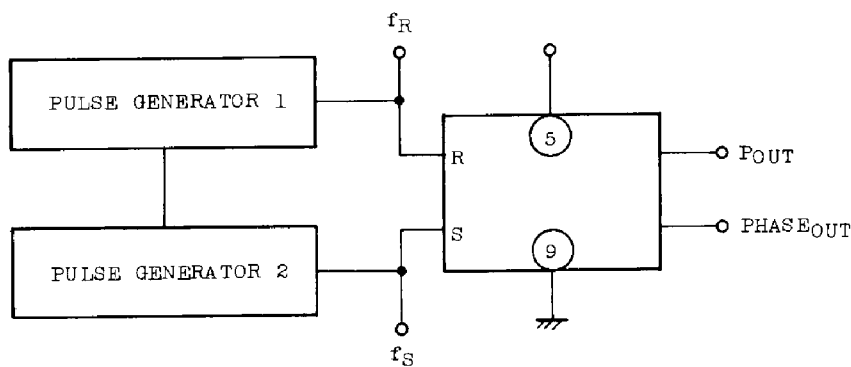


ELECTRICAL CHARACTERISTICS (Ta=-35 ~ 75°C)

CHARACTERISTIC		SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Supply Voltage		V _{DD}		-	4.5	-	8.0	V
Output Voltage	"H" Level	V _{OH}		V _{DD} =7.5V, V _{IL} =1.6V V _{IH} =6.6V, I _{OH} =-50μA	7.3	-	-	V
	"L" Level	V _{OL}		V _{DD} =7.5V, V _{IL} =1.6V V _{IH} =6.6V, I _{OL} =50μA	-	-	0.2	V
Quiescent Current		I _{DD}		V _{DD} =7.5V, V _{IH} =7.5V V _{IL} =0V	-	-	200	μA
3 State Leak Current		I _{TLH}		V _{DD} =7.5V	-	-	500	nA
		I _{TLL}		V _{DD} =7.5V	-	-	-500	nA
Filter Amp. Voltage Gain		A _v		V _{DD} =7.5V, R ₁₋₂ =1MΩ, f _{IN} =1kHz R _g =600Ω	-	30	-	dB

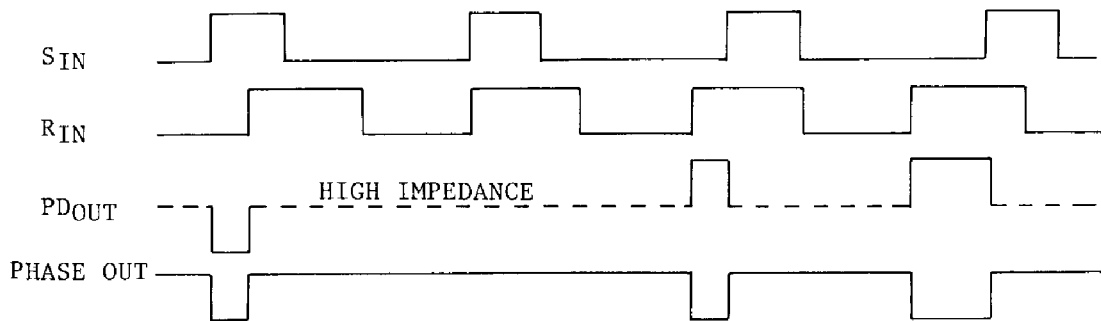
TEST CIRCUIT

V_{DD} VS T_w MIN



TC5081AP

PHASE COMPARATOR TIMING CHART



LOGIC DIAGRAM

