

NEC[®]**1.3 GHZ PRESCALER****UPB564C**

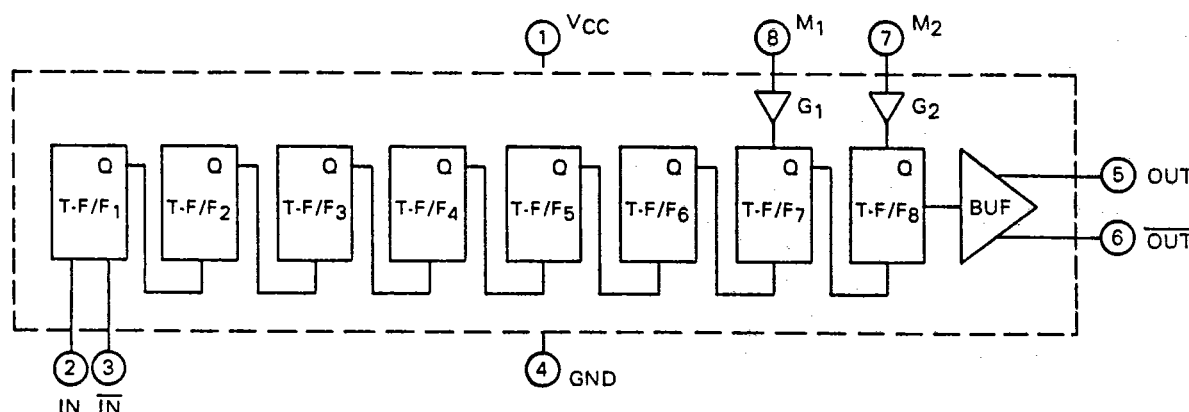
The μ PB564C is a general purpose prescaler intended for use in PLL Digital Tuning System. This is operated until 1.3 GHz by utilizing advanced bipolar process technology. This prescaler provides $\div 256$, $\div 128$ and $\div 64$ division ratio, and can be used for CATV.

FEATURES

- High frequency operation : 1.3 GHz MAX.
- Wide band operation : 300 MHz to 1 300 MHz
- Variable division ratio : $\div 256$, $\div 128$, $\div 64$
- Operation is guaranteed : -35 to $+75$ °C

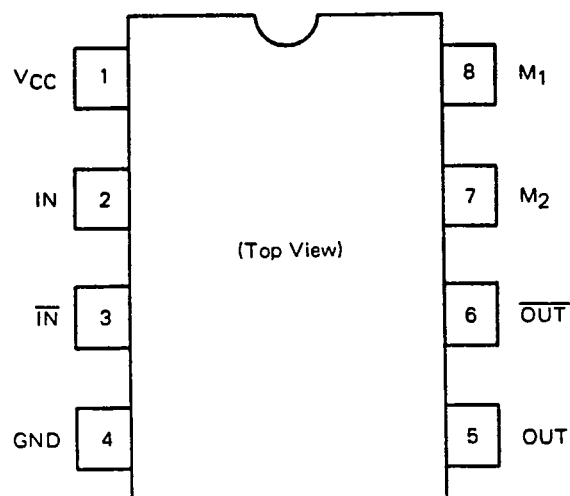
ORDERING INFORMATION

Order Code	Package
μ PB564C	8 pin plastic DIP (300 mil)

BLOCK DIAGRAM**DIVISION RATIO CONTROL**

M ₁	M ₂	Division Ratio
H	H	64
H	L	128
L	H	128
L	L	256

H : V_{CC} to 0.8 V_{CC}
L : GND to 0.2 V_{CC}



1. V_{CC} : Power Supply Pin
2. IN : Signal Input Pin (Positive Logic)
3. $\overline{IN}$: Signal Input Pin (Negative Logic)
4. GND : GND Pin
5. OUT : Output Pin (Positive Logic)
6. $\overline{OUT}$: Output Pin (Negative Logic)
7. M_2 : Division Ratio Control
8. M_1 : Division Ratio Control

ABSOLUTE MAXIMUM RATINGS

Supply Voltage	V_{CC}	-0.5 to +6.0	V
Input Voltage	V_I	-0.5 to $V_{CC} + 0.5$	V
Storage Temperature	T_{stg}	-55 to +125	°C

RECOMMENDED OPERATING CONDITIONS

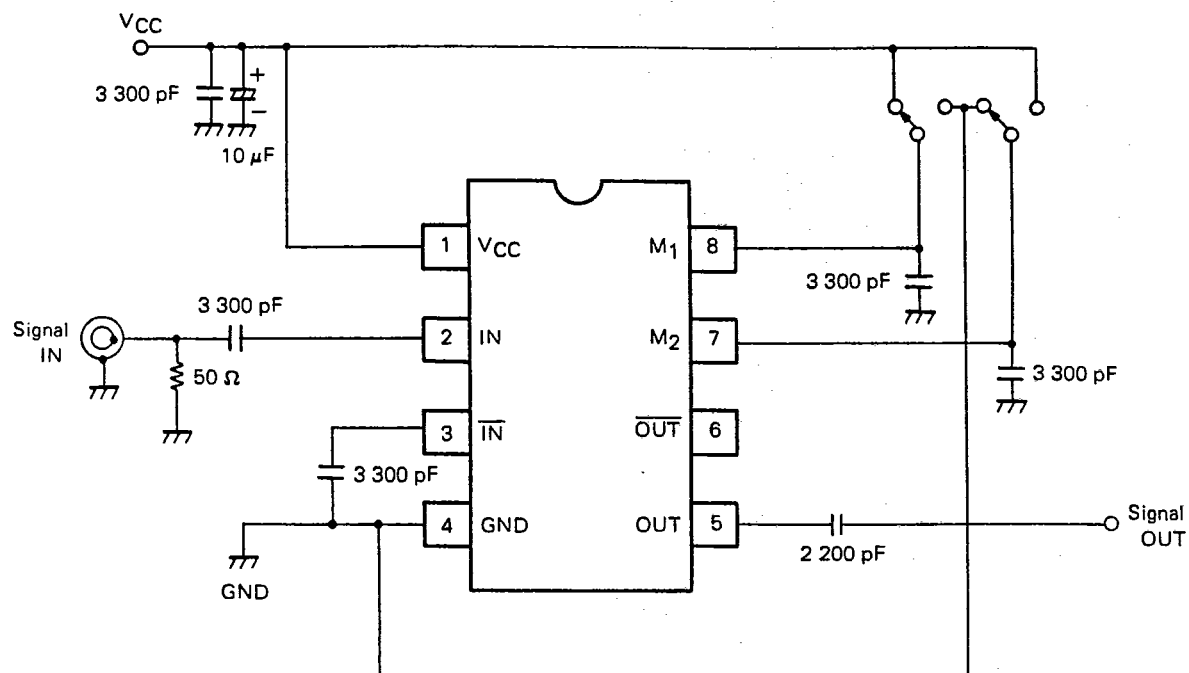
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITION
Supply Voltage	V_{CC}	4.5	5.0	5.5	V	
Ambient Temperature	T_a	-30		+75	°C	
Output Load Capacitance	C_L			30	pF	

ELECTRIC CHARACTERISTICS ($V_{CC}=4.5$ to 5.5 V, $T_a=-30$ to $+75$ °C)

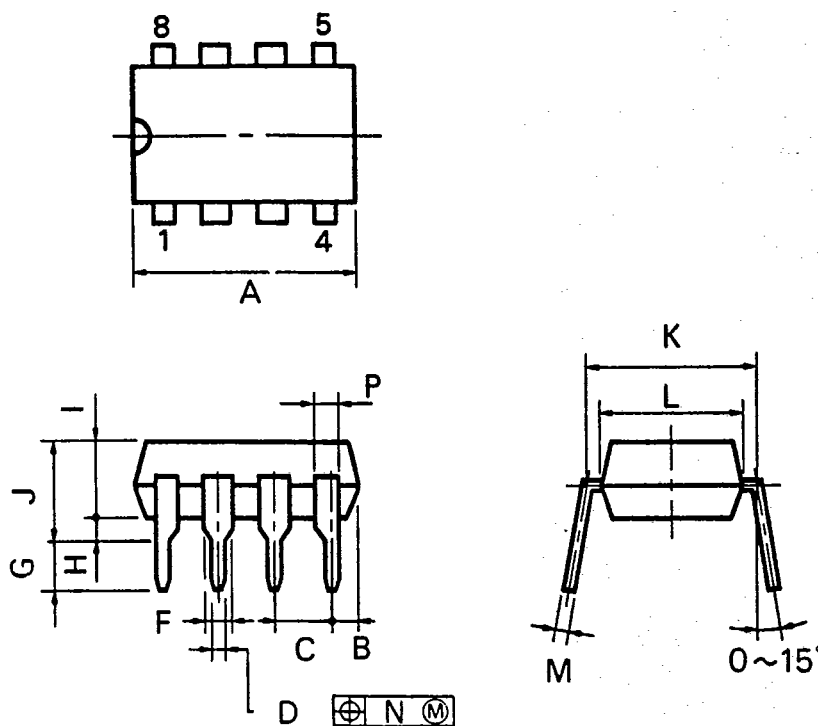
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Frequency Response	f_{in}	300		1 300	MHz	$v_i=400$ mV _{p-p} , ÷64, ÷128, ÷256
Input Voltage	v_i	0.4		1.2	V _{p-p}	
Output Voltage	v_o	0.86	1.15	1.44	V _{p-p}	$f=1.3$ GHz, ÷64, $C=5$ pF
High Level Input Voltage	V_{IH}	0.8 V_{CC}			V	M_1, M_2
Low Level Input Voltage	V_{IL}			0.2 V_{CC}	V	M_1, M_2
High Level Input Current	I_{IH}			15	μA	$M_1, M_2=V_{CC}$
Low Level Input Current	I_{IL}	-160			μA	$M_1, M_2=GND$
Power Supply Current	I_{CC}		28	48	mA	

T-45-19-13

TEST CIRCUIT



8 PIN PLASTIC DIP (300 mil)



P8C-100-300A

NOTES

- 1) Each lead centerline is located within 0.25 mm (0.01 inch) of its true position (T.P.) at maximum material condition.
- 2) Item "K" to center of leads when formed parallel.

ITEM	MILLIMETERS	INCHES
A	10.16 MAX.	0.400 MAX.
B	1.27 MAX.	0.050 MAX.
C	2.54 (T.P.)	0.100 (T.P.)
D	0.50 ± 0.10	0.020 ± 0.004
F	1.4 MIN.	0.055 MIN.
G	2.9 ± 0.3	0.114
H	0.51 MIN.	0.020 MIN.
I	4.31 MAX.	0.170 MAX.
J	5.08 MAX.	0.200 MAX.
K	7.62 (T.P.)	0.300 (T.P.)
L	6.4	0.252
M	0.25 ± 0.10	0.010 ± 0.004
N	0.25	0.01
P	0.9 MIN.	0.035 MIN.

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