

NEC[®]

1 GHz DIVIDE-BY-128/136 LOW POWER PRESCALER

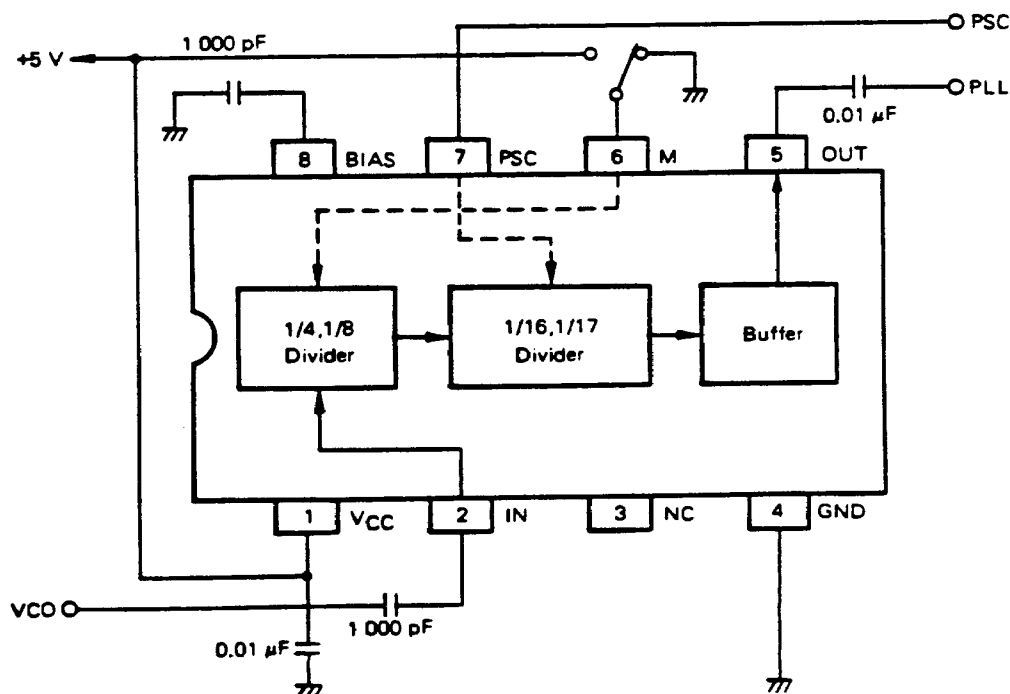
UPB562C

The μ PB562C is a ECL two-modulus prescaler for operation at input frequency up to 1 GHz. It is intended for use in TV PLL Digital Tuning Systems with the μ PD1700 series. This prescaler divides by either 128 or 136, as determined by the signal from the μ PD1700 series (EX. μ PD1703C-017) applied to the Pulse Swallow Control Input (PSC).

FEATURES

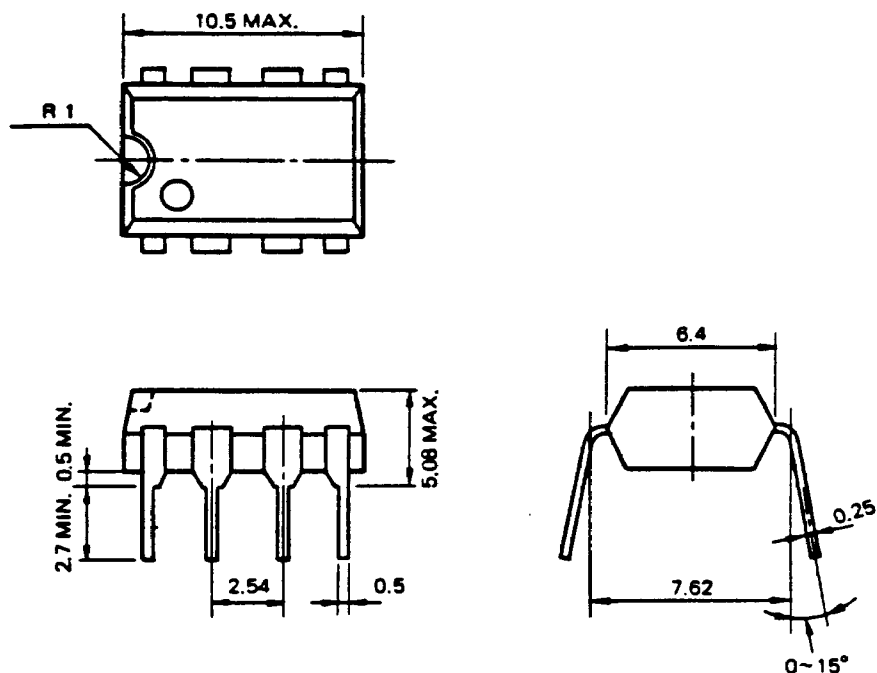
- High frequency operation : 1 GHz
- Dual mode operation with NEC's original pulse swallowing method
 128/136up to 1 GHz
 64/65up to 500 MHz
- Single supply voltage : $V_{CC} = 5.0 \text{ V} \pm 10 \%$
- Low supply current : $I_{CC} = 23.0 \text{ mA (TYP.)}$
- Incorporated buffer amplifier : $V_o = 1.2 \text{ Vp-p (TYP.)}$
- Small package : 8 pin plastic dual in-line package (DIP)

BLOCK DIAGRAM

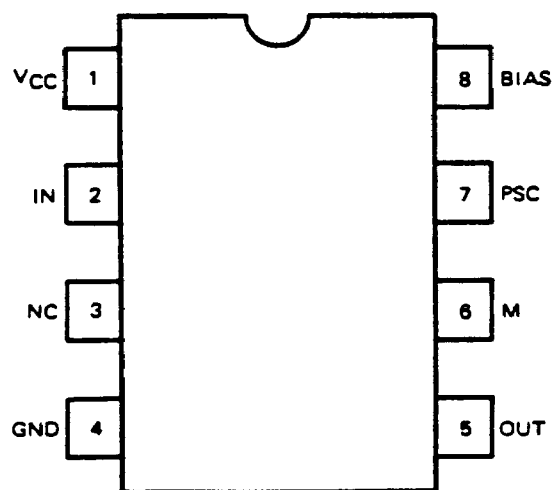


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PACKAGE DIMENSIONS (Unit: mm)



CONNECTION DIAGRAM (Top View)



- | | | |
|---|------|---|
| 1 | VCC | Power Supply (+5 V) |
| 2 | IN | Signal Input |
| 3 | NC | |
| 4 | GND | Ground |
| 5 | OUT | Signal Output |
| 6 | M | Division Ratio Control (VCC: 64/68, GND: 128/136) |
| 7 | PSC | Pulse Swallow Control |
| 8 | BIAS | Bias |

ABSOLUTE MAXIMUM RATINGS

Supply Voltage	V_{CC}	-0.5 to 6.0	V
Input Voltage	V_{in}	-0.5 to $V_{CC} + 0.5$	V
Output Current	I_o	-10.0	mA
Storage Temperature	T_{stg}	-55 to +125	°C

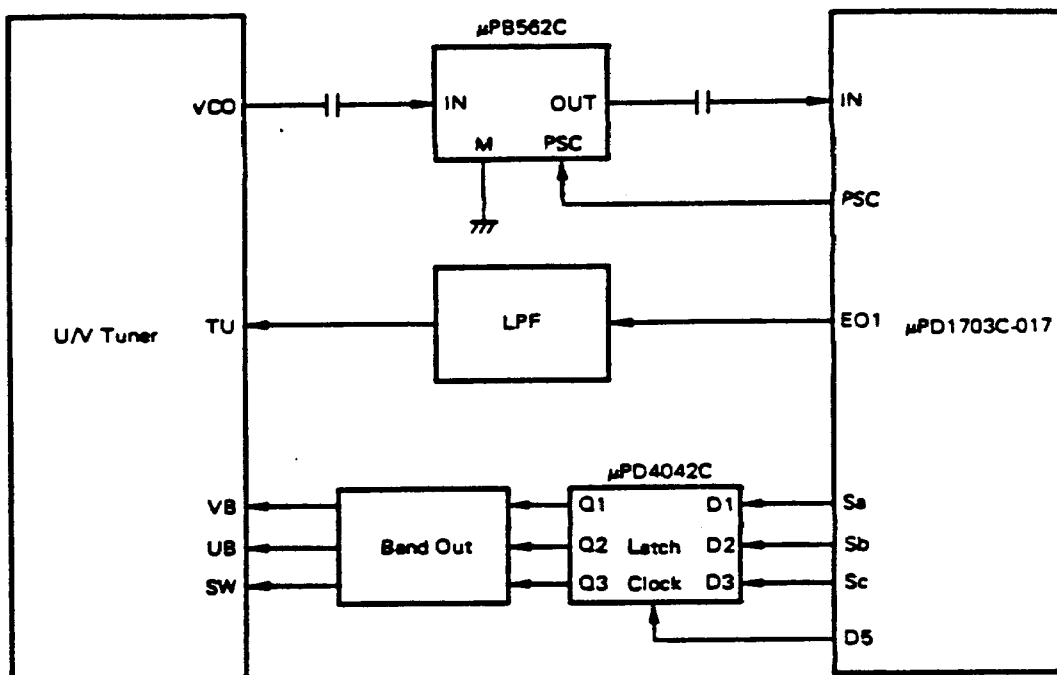
RECOMMENDED OPERATING CONDITIONS

Supply Voltage Range		4.5 to 5.5	V
Ambient Temperature	T_a	-35 to +75	°C
Output Load Capacitance	CL	Less than 30 pF	

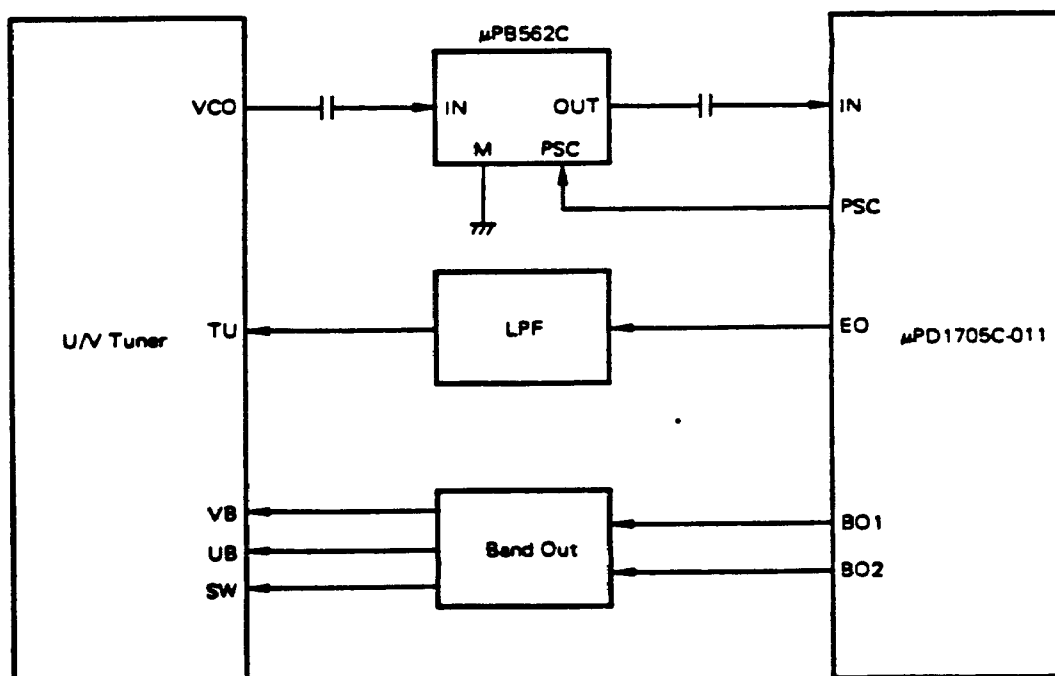
ELECTRICAL CHARACTERISTICS ($V_{CC} = 5\text{ V} \pm 10\%$, $T_a = -35$ to $+75\text{ }^{\circ}\text{C}$)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Power Supply Current	I_{CC}		23.0	30.0	mA	$V_{CC}=5.0\text{ V}$, $T_a=25\text{ }^{\circ}\text{C}$
Output Voltage	V_o	1.0	1.2		Vp-p	OUT terminal
Input Voltage	V_{in}	0.4		1.5	Vp-p	IN terminal
High Level Input Voltage	V_{IH}	$0.7V_{CC}$			V	PSC terminal
Low Level Input Voltage	V_{IL}			$0.3V_{CC}$	V	PSC terminal
High Level Input Current 1	I_{IH1}			10.0	μA	PSC terminal
High Level Input Current 2	I_{IH2}			40.0	μA	M terminal
Frequency Response 1	f_{in1}	100		1000	MHz	$V_{in} \geq 0.4\text{ Vp-p}$, $M=\text{GND}$
Frequency Response 2	f_{in2}	100		500	MHz	$V_{in} \geq 0.4\text{ Vp-p}$, $M=V_{CC}$

APPLICATION 1



APPLICATION 2



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