

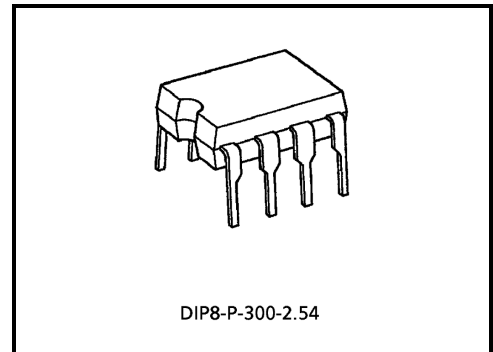
# TD6127BP

## ECL Prescaler For Communications Radio

TD6127BP is a 2 modulus prescaler developed for communications radio of PLL frequency synthesizer type. This is suitable for mobile radio telephone and personal communications radio etc.

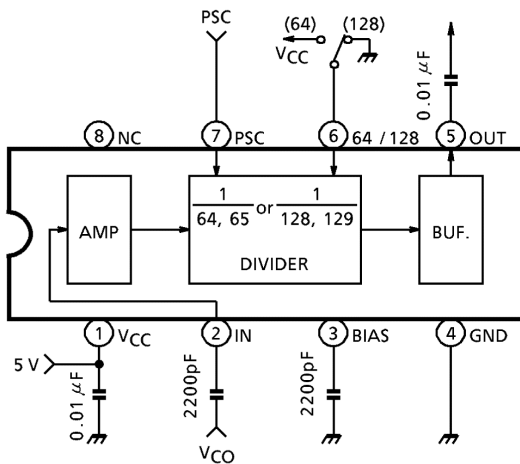
### Features

- Maximum operating frequency is 1 GHz.
- 2 modulus prescaler:  $N = 64 / 65$  or  $N = 128 / 129$
- Input voltage sensitivity is  $50\text{mV}_{\text{rms}}$ .
- The package is DIP 8 pins.

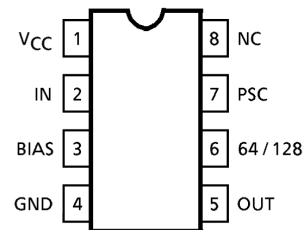


Weight: 0.5g (typ.)

### Block Diagram



### Pin Connection (top view)



## Pin Function

Pin No.	Symbol	Function	Remarks
1	V <sub>CC</sub>	Power supply terminal	—
2	In	Input terminal of local oscillator	—
3	Bias	Bias capacitance terminal	—
4	GND	Earth terminal	—
5	Out	Output terminal	—
6	64 / 128	Dividing mode selection terminal "H" level: 64, 65 "L" level: 128, 129	—
7	PSC	2 modulus control terminal "H" level: N "L" level: N + 1	—
8	NC	Not connected	—

## Maximum Ratings (Ta = 25°C)

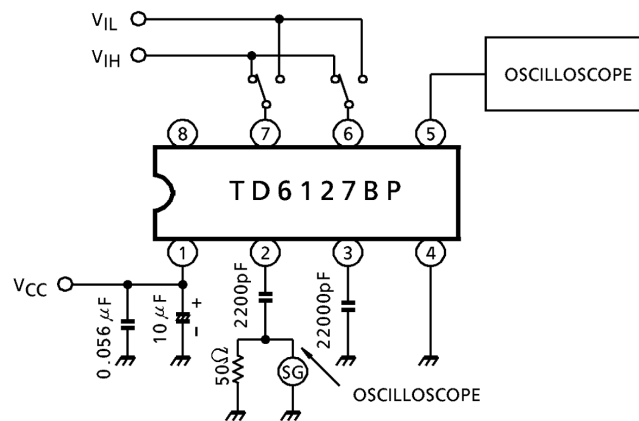
Characteristic	Symbol	Rating	Unit
Power supply voltage	V <sub>CC</sub>	6.5	V
Power dissipation	P <sub>D</sub>	450	mW
Input voltage	V <sub>in</sub>	-0.3~V <sub>CC</sub> + 0.3	V
Operating temperature	T <sub>opr</sub>	-30~85	°C
Storage temperature	T <sub>stg</sub>	-55~150	°C

## Electrical Characteristics

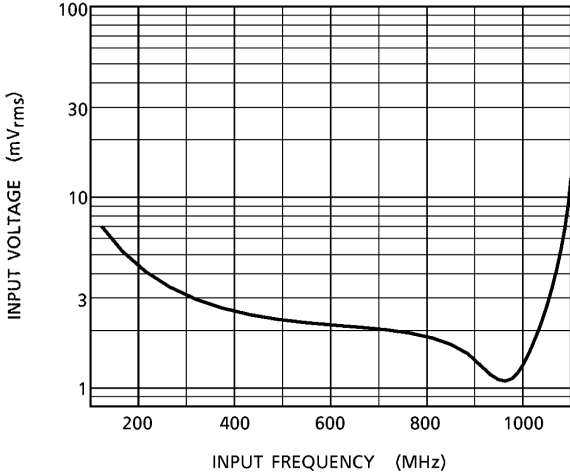
(unless otherwise specified, V<sub>CC</sub> = 4.5~5.5V, Ta = -30~85°C, f<sub>IN</sub> = 400~1000MHz)

Characteristic		Symbol	Test Circuit	Test Condition	Min.	Typ.	Max.	Unit	
Supply voltage		V <sub>CC</sub>	—	—	4.5	5.0	5.5	V	
Supply current		I <sub>CC</sub>	—	V <sub>CC</sub> = 5.0V	—	40	70	mA	
Operating frequency range		f <sub>IN</sub>	—	—	400	—	1000	MHz	
Input voltage range		V <sub>IN</sub>	—	—	50	—	250	mV <sub>rms</sub>	
Output amplitude		V <sub>OUT</sub>	—	—	1.0	1.2	—	V <sub>p-p</sub>	
Input voltage	"L" level	V <sub>IL</sub>	—	PSC	0	—	V <sub>CC</sub> × 0.3	V	
Input current	"H" level	V <sub>IH</sub>	—	PSC	V <sub>CC</sub> × 0.3	—	V <sub>CC</sub>	V	
		"L" level	I <sub>IL</sub>	—	PSC V <sub>CC</sub> = 5.0V, V <sub>IL</sub> = 1.0V	-700	—	-200	μA
		"H" level	I <sub>IH</sub>	—	PSC V <sub>CC</sub> = 5.0V, V <sub>IH</sub> = 4.0V	-200	—	-50	μA

## Test Circuit (input voltage sensitivity)



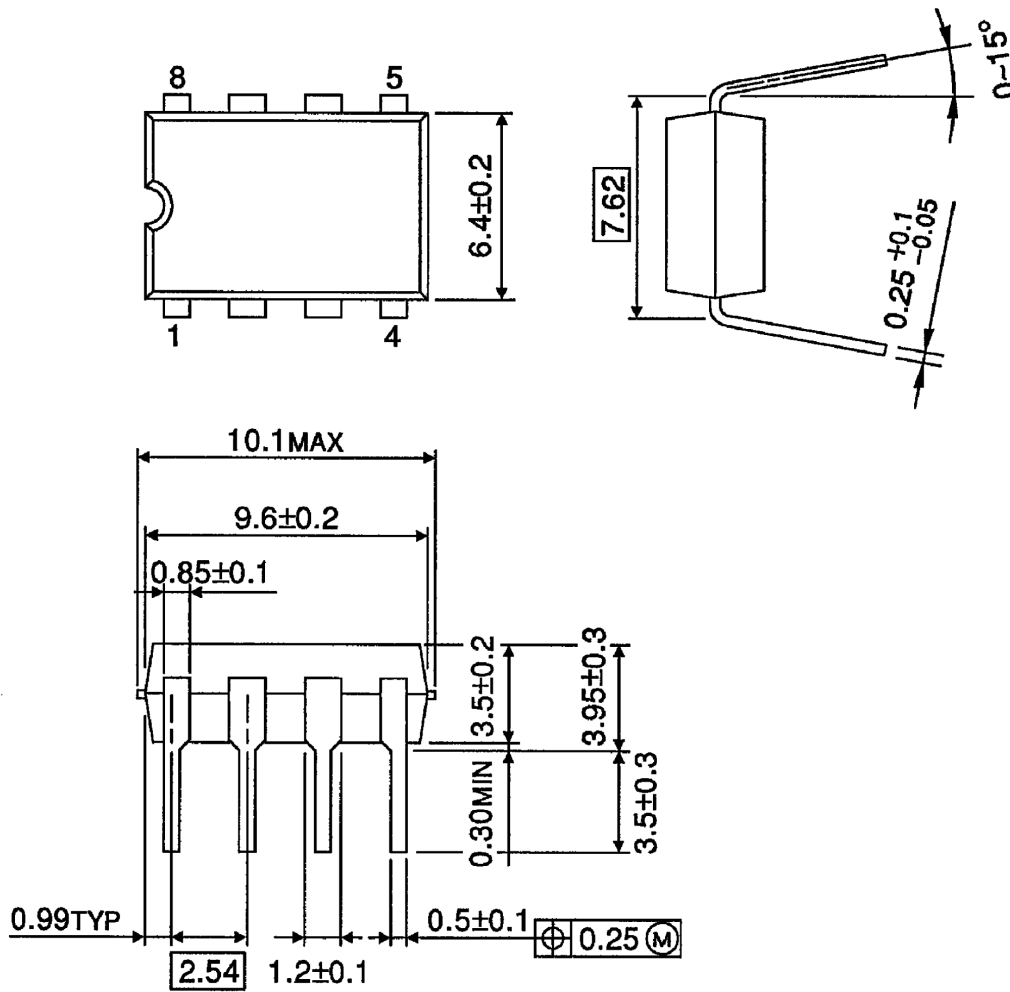
Input Voltage Sensitivity  
( $V_{CC} = 5.0V$ ,  $T_a = 25^\circ C$ )



**Package Dimensions**

DIP8-P-300-2.54

Unit : mm



Weight: 0.5g (typ.)

**RESTRICTIONS ON PRODUCT USE**

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