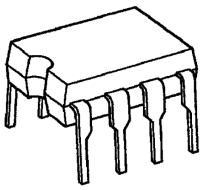
TOSHIBA Bipolar Digital Integrated Circuit Silicon Monolithic

TD6127BP

ECL Prescaller For Communications Radio

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



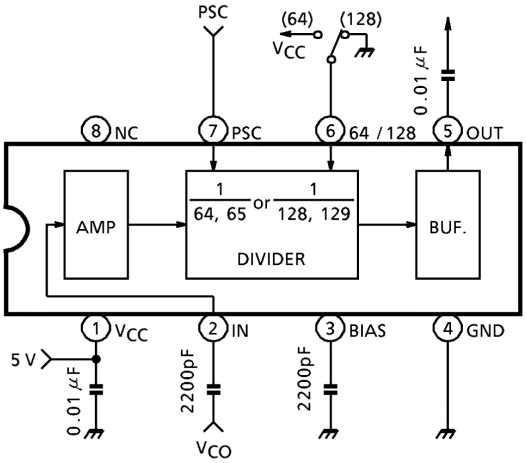
DIP8-P-300-2.54

Weight: 0.5g (typ.)

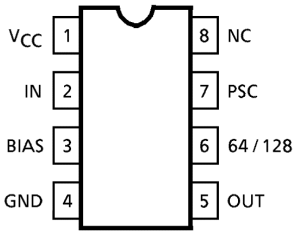
Features

- Maximum operating frequency is 1 GHz.
- 2 modulus prescaller: N = 64 / 65 or N = 128 / 129
- Input voltage sensitivity is 50mV_{rms}.
- The package is DIP 8 pins.

Block Diagram



Pin Connection (top view)



Pin Function

Pin No.	Symbol	Function	Remarks
1	V_{CC}	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	—

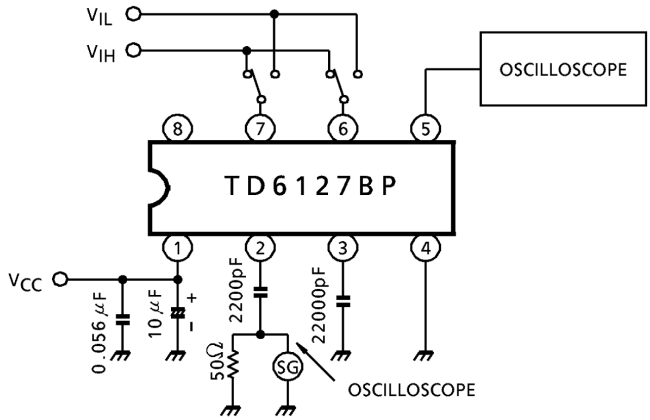
Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit
Power supply voltage	V_{CC}	6.5	V
Power dissipation	P_D	450	mW
Input voltage	V_{in}	−0.3~V_{CC} + 0.3	V
Operating temperature	T_{opr}	−30~85	°C
Storage temperature	T_{stg}	−55~150	°C

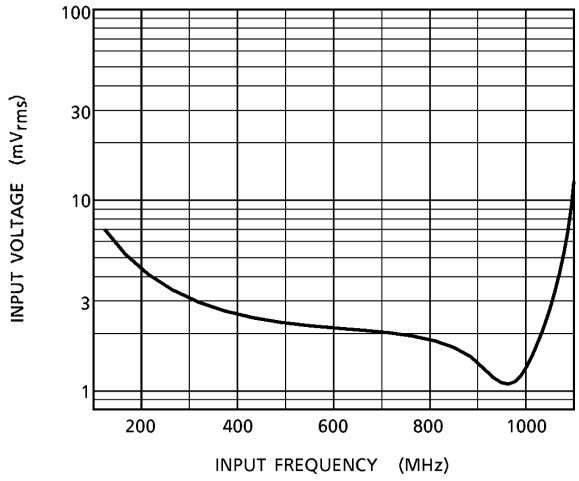
Electrical Characteristics
(unless otherwise specified, V_{CC} = 4.5~5.5V, Ta = –30~85°C, f_{IN} = 400~1000MHz)

Characteristic		Symbol	Test Cir−cuit	Test Condition	Min.	Typ.	Max.	Unit
Supply voltage		V_{CC}	—	—	4.5	5.0	5.5	V
Supply current		I_{CC}	—	V_{CC} = 5.0V	—	40	70	mA
Operating frequency range		f_{IN}	—	—	400	—	1000	MHz
Input voltage range		V_{IN}	—	—	50	—	250	mV_{rms}
Output amplitude		V_{OUT}	—	—	1.0	1.2	—	V_{p-p}
Input voltage	"L" level	V_{IL}	—	PSC	0	—	V_{CC} × 0.3	V
Input current	"H" level	V_{IH}	—	PSC	V_{CC} × 0.3	—	V_{CC}	V
	"L" level	I_{IL}	—	PSC V_{CC} = 5.0V, V_{IL} = 1.0V	−700	—	−200	μA
	"H" level	I_{IH}	—	PSC V_{CC} = 5.0V, V_{IH} = 4.0V	−200	—	−50	μA

Test Circuit (input voltage sensitivity)

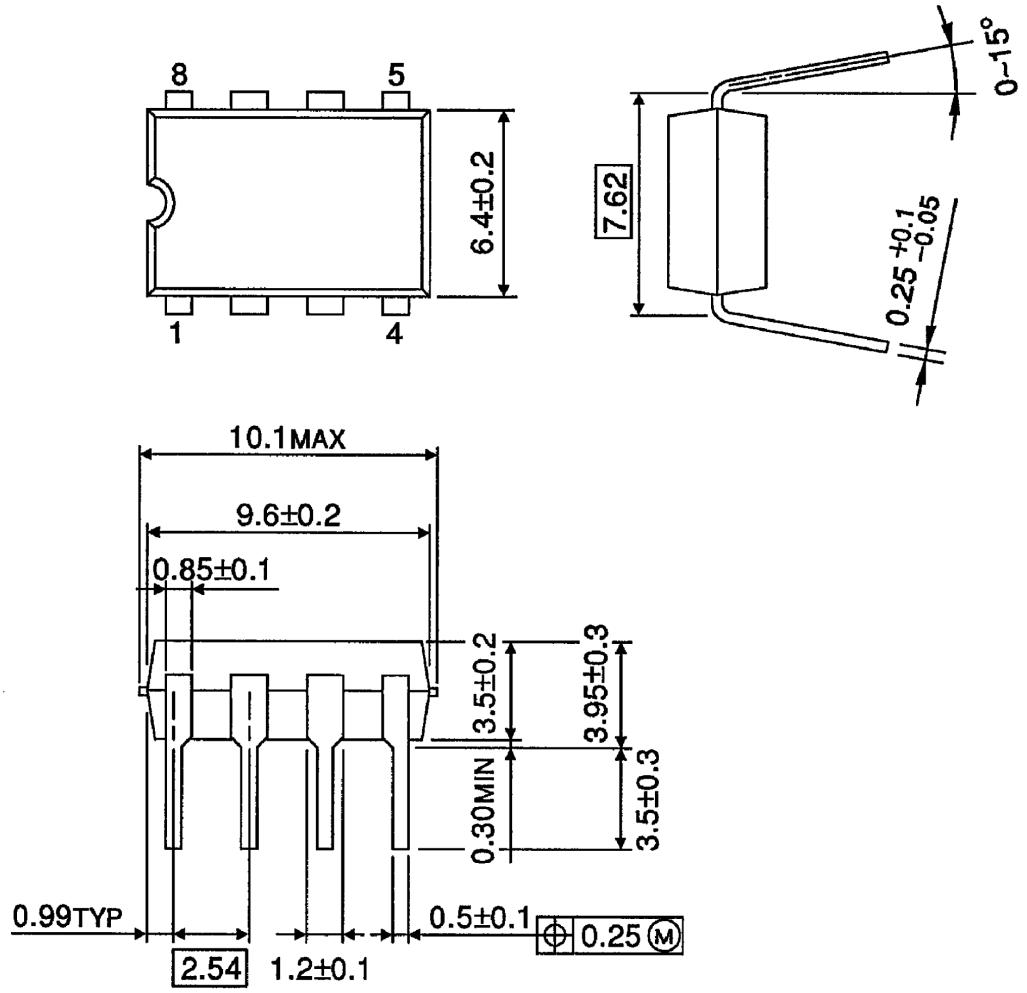


Input Voltage Sensitivity
(V_{CC} = 5.0V, Ta = 25°C)



Package Dimensions

DIP8-P-300-2.54 Unit : mm



Weight: 0.5g (typ.)

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