

TOSHIBA BIPOLAR DIGITAL INTEGRATED CIRCUIT SILICON MONOLITHIC

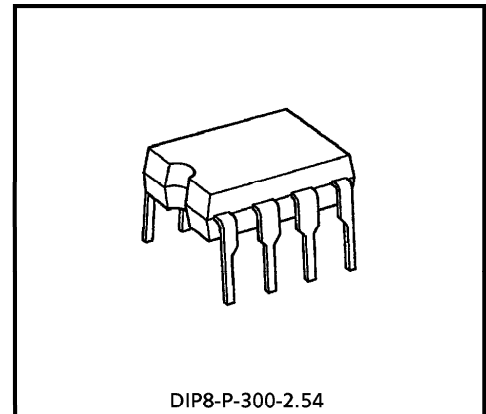
TD6127BP

ECL PRESCALLER 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.

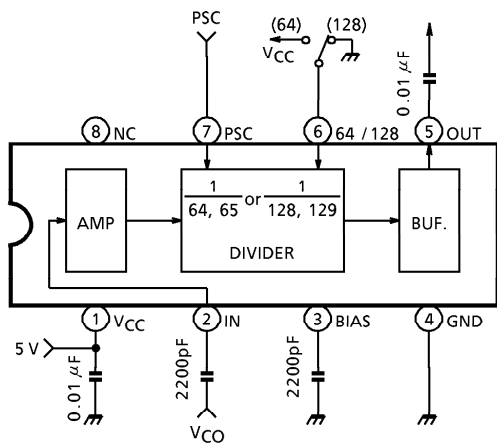
FEATURES

- 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.

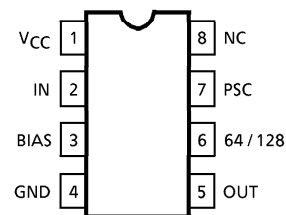


Weight : 0.5 g (Typ.)

BLOCK DIAGRAM



PIN CONNECTION (TOP VIEW)



980910EBA2

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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)

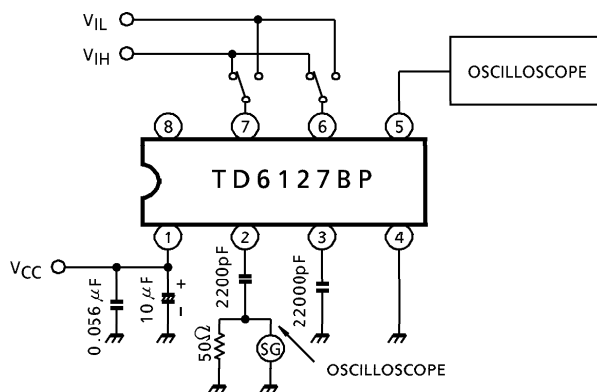
CHARACTERISTIC	SYMBOL	RATING	UNIT
Power Supply Voltage	V _{CC}	6.5	V
Power Dissipation	P _D	450	mW
Input Voltage	V _{in}	-0.3~V _{CC} + 0.3	V
Operating Temperature	T _{opr}	-30~85	°C
Storage Temperature	T _{stg}	-55~150	°C

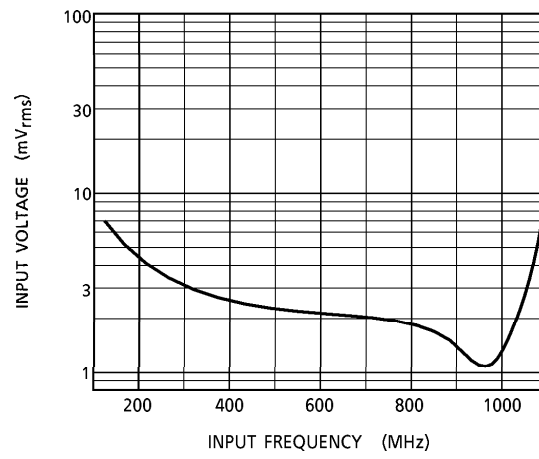
ELECTRICAL CHARACTERISTICS

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

CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Voltage	V _{CC}	—	—	4.5	5.0	5.5	V
Supply Current	I _{CC}	—	V _{CC} = 5.0 V	—	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} = 5.0 V, V _{IL} = 1.0 V	-700	—	-200	μA
	"H" Level	I _{IH}	PSC V _{CC} = 5.0 V, V _{IH} = 4.0 V	-200	—	-50	μA

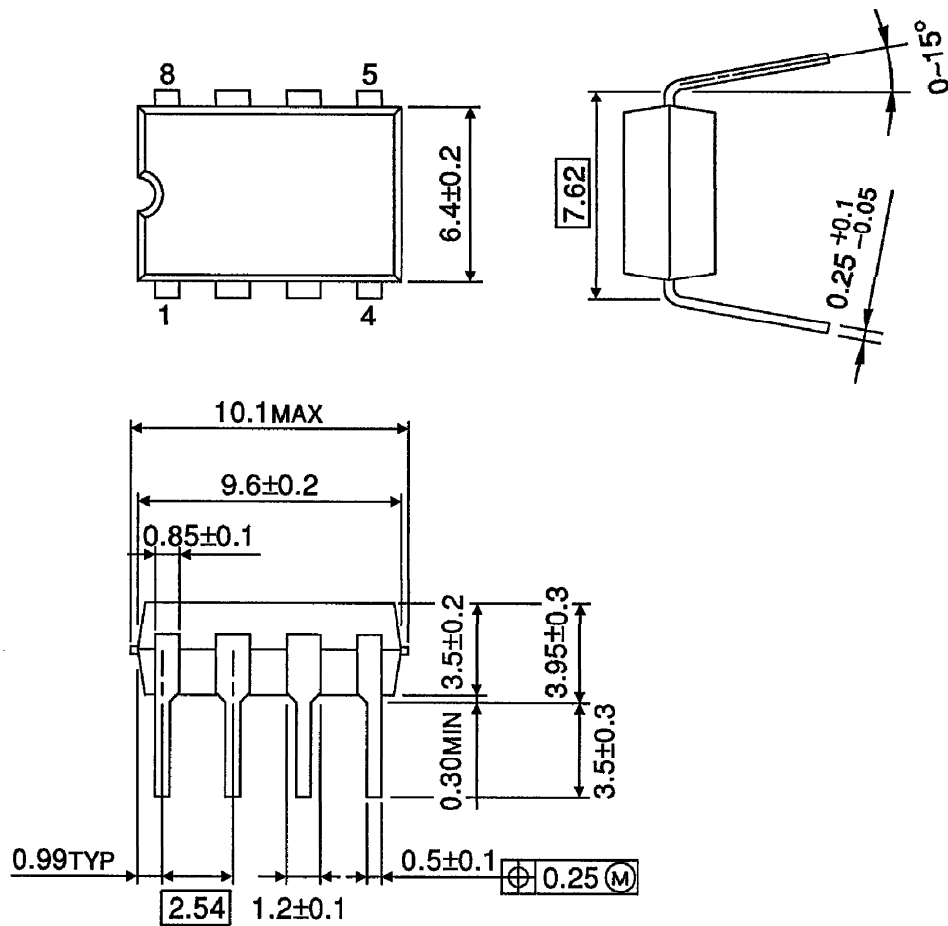
TEST CIRCUIT (Input voltage sensitivity)



INPUT VOLTAGE SENSITIVITY $(V_{CC} = 5.0\text{ V}, T_a = 25^\circ\text{C})$ 

OUTLINE DRAWING
DIP8-P-300-2.54

Unit : mm



Weight : 0.5 g (Typ.)