

TOSHIBA BIPOLAR DIGITAL INTEGRATED CIRCUIT SILICON MONOLITHIC

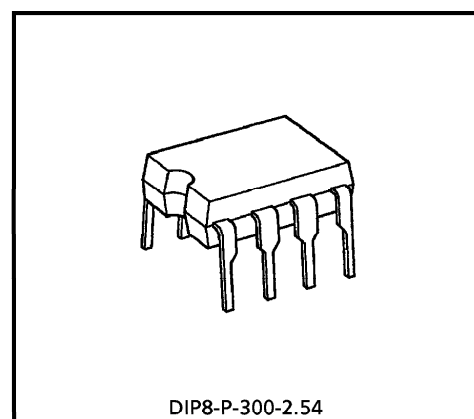
T D 6 1 2 7 B P

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.

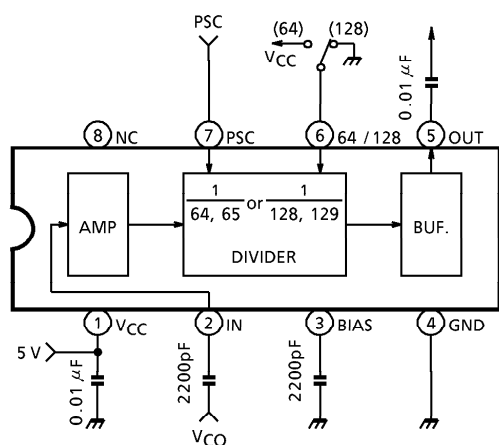
FEATURES

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

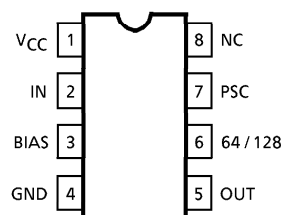


Weight : 0.5 g (Typ.)

BLOCK DIAGRAM



PIN CONNECTION (TOP VIEW)



980910EBA2

- TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.
- The products described in this document are subject to the foreign exchange and foreign trade laws.
- The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by TOSHIBA CORPORATION for any infringements of intellectual property or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any intellectual property or other rights of TOSHIBA CORPORATION or others.
- The information contained herein is subject to change without notice.

PIN FUNCTION

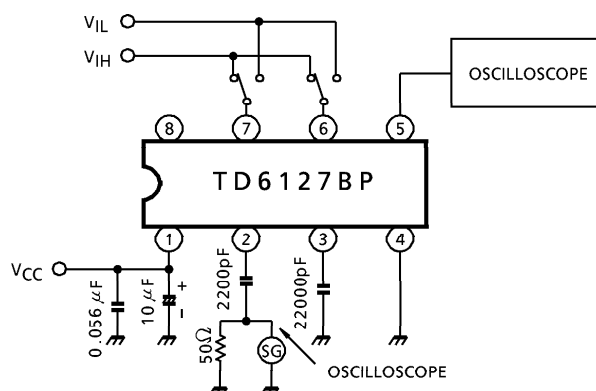
PIN No.	SYMBOL	FUNCTION	REMARKS
1	V _{CC}	Power supply terminal	—
2	IN	Input terminal of local oscillator	—
3	BIAS	Bias capacitance terminal	—
4	GND	Earth terminal	—
5	OUT	Output terminal	—
6	64 / 128	Dividing mode selection terminal "H" level : 64, 65 "L" level : 128, 129	—
7	PSC	2 modulus control terminal "H" level : N "L" level : N + 1	—
8	NC	Not connected	—

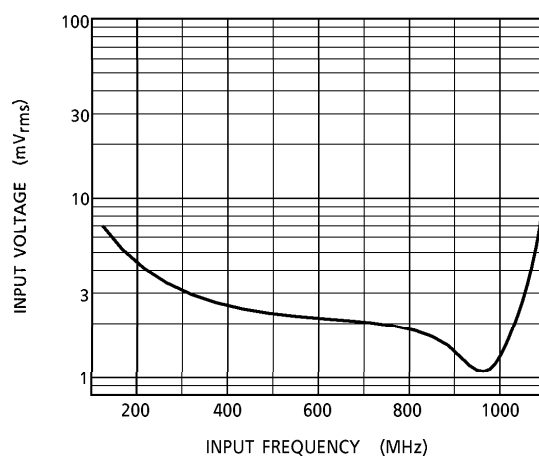
MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Power Supply Voltage	V_{CC}	6.5	V
Power Dissipation	P_D	450	mW
Input Voltage	V_{in}	$-0.3 \sim V_{CC} + 0.3$	V
Operating Temperature	T_{opr}	$-30 \sim 85$	$^\circ\text{C}$
Storage Temperature	T_{stg}	$-55 \sim 150$	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS(Unless otherwise specified, $V_{CC} = 4.5 \sim 5.5\text{ V}$, $T_a = -30 \sim 85^\circ\text{C}$, $f_{IN} = 400 \sim 1000\text{ MHz}$)

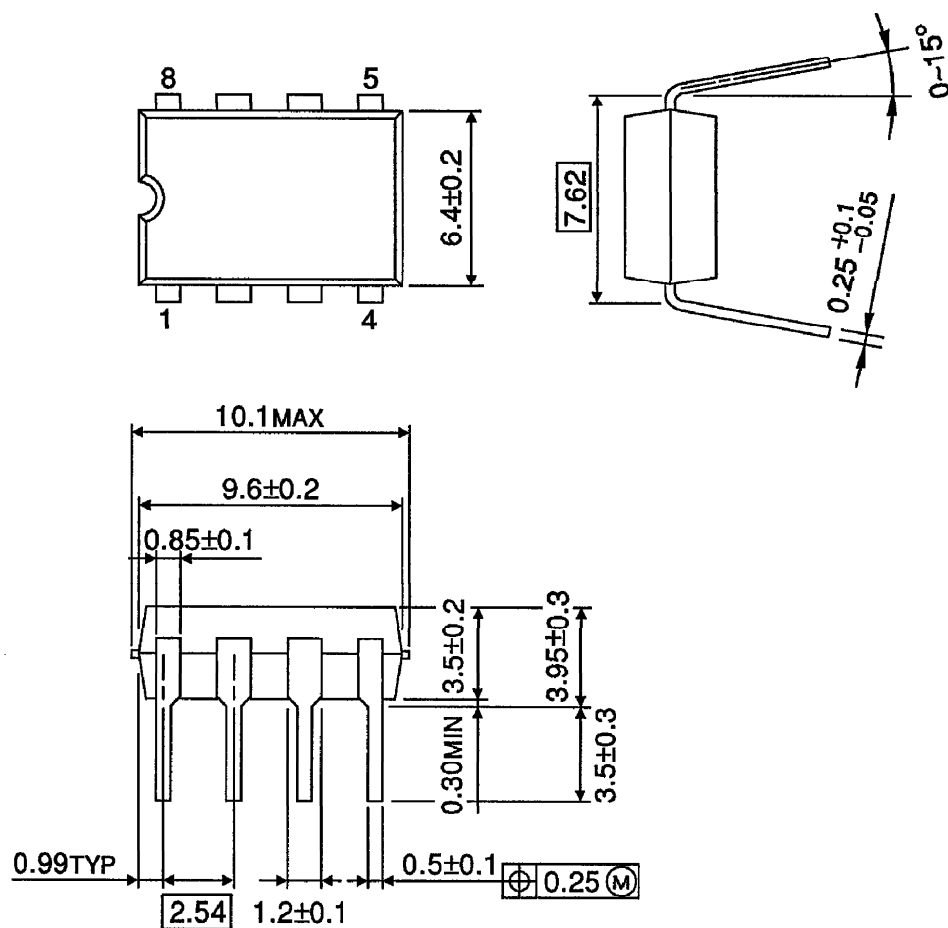
CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Voltage	V_{CC}	—	—	4.5	5.0	5.5	V
Supply Current	I_{CC}	—	$V_{CC} = 5.0\text{ V}$	—	40	70	mA
Operating Frequency Range	f_{IN}	—	—	400	—	1000	MHz
Input Voltage Range	V_{IN}	—	—	50	—	250	mV _{rms}
Output Amplitude	V_{OUT}	—	—	1.0	1.2	—	V _{p-p}
Input Voltage	"L" Level	V_{IL}	PSC	0	—	$V_{CC} \times 0.3$	V
Input Current	"H" Level	V_{IH}	PSC	$V_{CC} \times 0.3$	—	V_{CC}	V
	"L" Level	I_{IL}	PSC $V_{CC} = 5.0\text{ V}$, $V_{IL} = 1.0\text{ V}$	-700	—	-200	μA
	"H" Level	I_{IH}	PSC $V_{CC} = 5.0\text{ V}$, $V_{IH} = 4.0\text{ V}$	-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.)