

TOSHIBA Bipolar Digital Integrated Circuit Silicon Monolithic

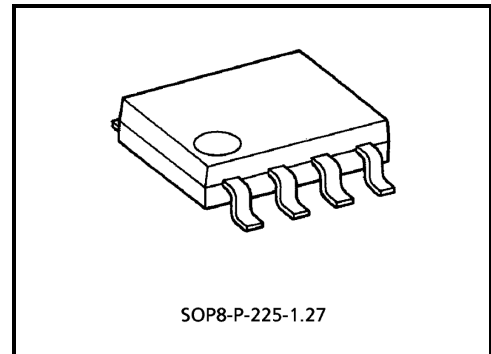
TD6134AF

ECL Prescaler For Digital Synthesized Tuner

TD6134AF is a 2 modulus prescaler developed for low operating voltage digital synthesized tuner, and can operate up to 250MHz.

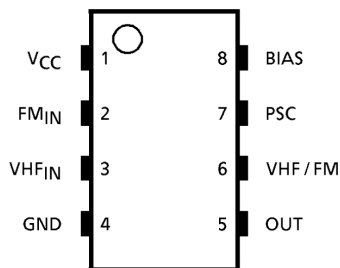
Features

- Operating frequency range is 50~250MHz.
- 2 modulus prescaler: $N = 4 \times 15 / 16$
and $N = 8 \times 15 / 16$
- Input voltage sensitivity is 25mV_{rms}.
- 3V low operating supply voltage
- The package is SOP8 pins.

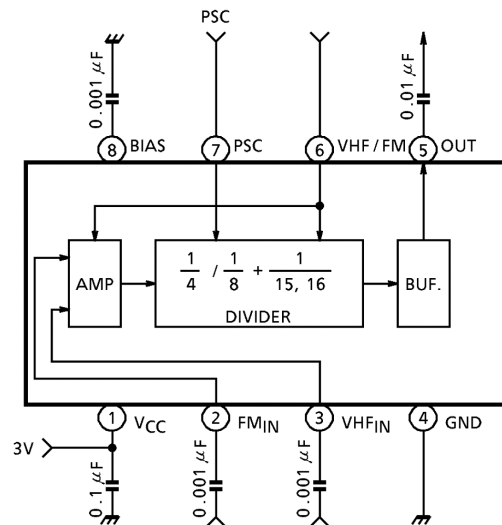


Weight: 0.08g (typ.)

Pin Connection (top view)



Block Diagram



(Note) This device is vulnerable to surge voltages.
Take it into account when using this device in your system.

Pin Function

Pin No.	Symbol	Function	Remarks
1	V _{CC}	Power supply terminal.	—
2	FM _{IN}	Signal input terminal from FM local oscillator.	—
3	VHF _{IN}	Signal input terminal from TV VHF local oscillator.	—
4	GND	Ground terminal.	—
5	Out	Divider signal output terminal.	—
6	VHF / FM	Dividing mode control terminal. "H" level input: VHF _{IN} is selected, 1 / 8 mode. "L" level input: FM _{IN} is selected, 1 / 4 mode.	—
7	PSC	2 modulus mode control terminal. "H" level input: N = 4 / 8 × 16 "L" level input: N = 4 / 8 × 15	—
8	BIAS	Bias capacitor terminal. Bias capacitor is connected.	—

Maximum Ratings (Ta = 25°C)

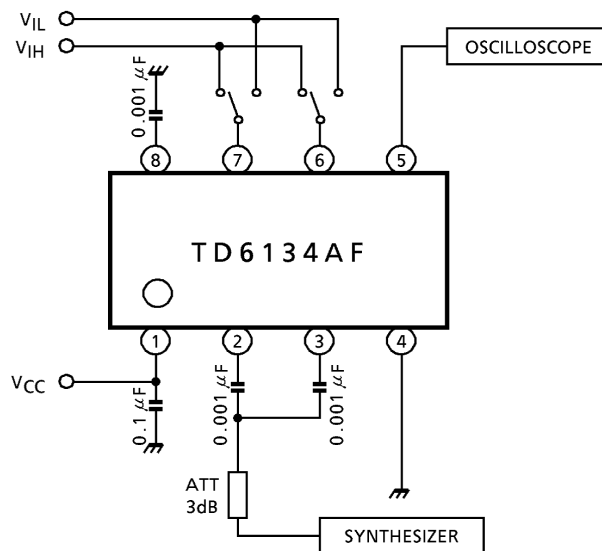
Characteristic	Symbol	Rating	Unit
Power supply voltage	V _{CC}	6.5	V
Power dissipation	P _D	200	mW
Input voltage	V _{IN}	-0.3~V _{CC} + 0.3	V
Operating temperature	T _{opr}	-10~60	°C
Storage temperature	T _{stg}	-55~150	°C

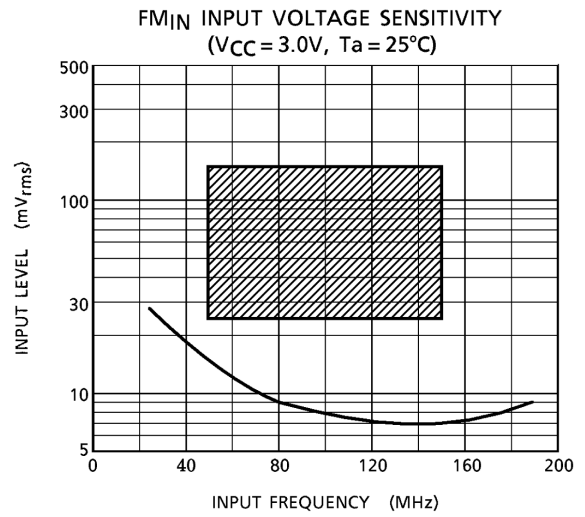
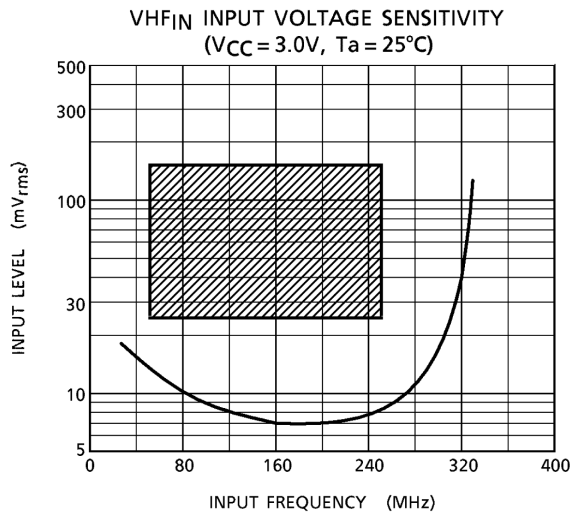
Electrical Characteristics


(Unless otherwise specified, $V_{CC} = 1.8\sim 5.5V$, $T_a = -10\sim 60^\circ C$, $f_{in} = 50\sim 250MHz$)

Characteristic		Symbol	Test Circuit	Test Condition	Min.	Typ.	Max.	Unit
Supply voltage		V_{CC}	—	—	1.8	3.0	5.5	V
Supply current		I_{CC}	—	$V_{CC} = 3.0V$	—	5.5	9.5	mA
Operating frequency range		f_{IN1}	—	FM_{IN}	50	—	150	MHz
		f_{IN2}	—	VHF_{IN}	50	—	250	
Input voltage range		V_{IN}	—	—	25	—	150	mV_{rms}
Output amplitude		V_{OUT}	—	—	0.5	—	—	V_{p-p}
Input voltage	"H" level	V_{IH}	—	PSC, VHF / FM	1.6	—	V_{CC}	V
	"L" level	V_{IL}	—	PSC, VHF / FM	0	—	1.0	
Input current	"H" level	I_{IH}	—	PSC VHF / FM $V_{CC} = 5.0V, V_{IH} = 4.0V$	—	—	60	μA
	"L" level	I_{IL}	—	PSC VHF / FM $V_{CC} = 5.0V, V_{IL} = 1.0V$	—	—	10	

Test Circuit (input voltage sensitivity)



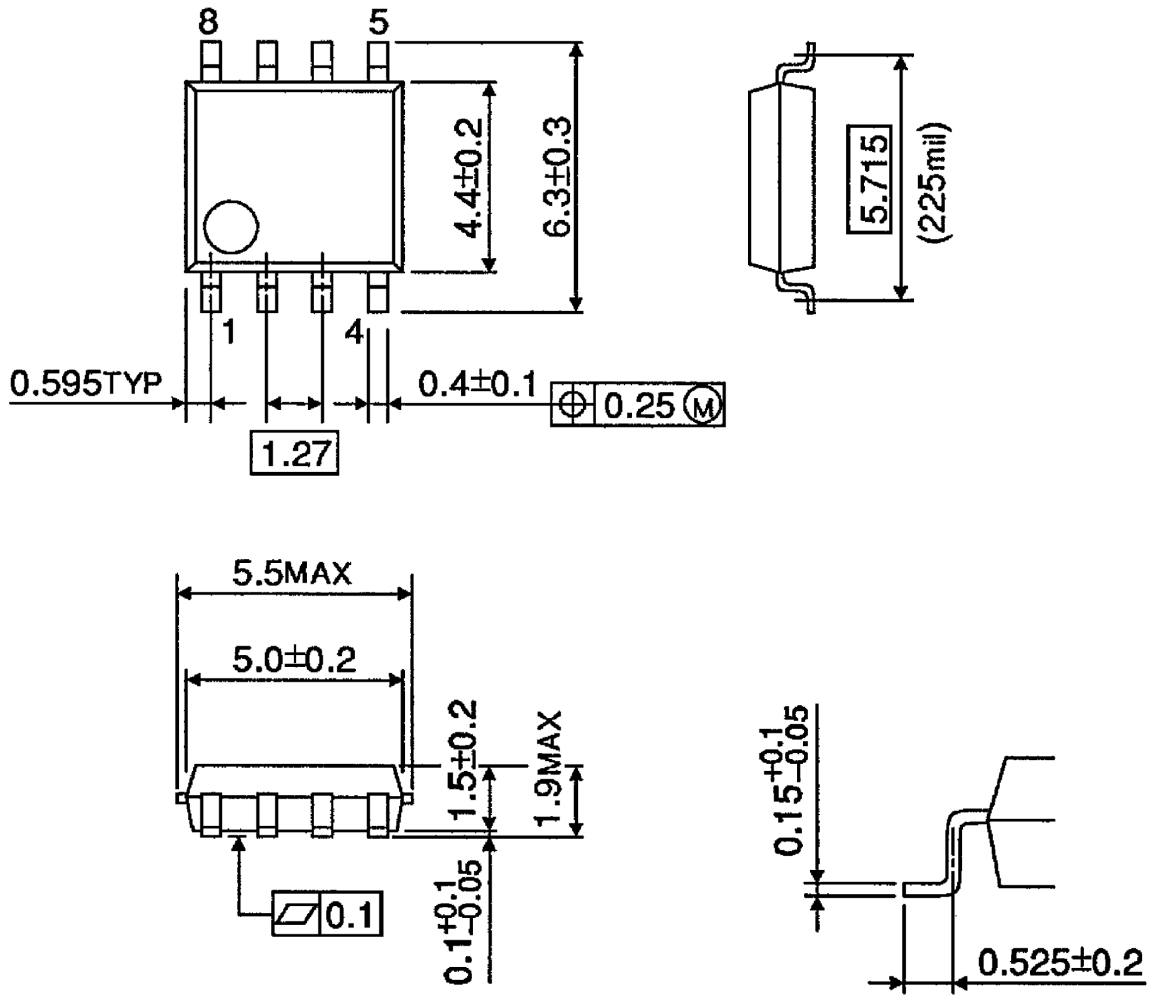


(Note)  Operating Range (V_{CC} = 1.8~5.5V, T_a = -10~60°C)

Package Dimensions

SOP8-P-225-1.27

Unit : mm



Weight: 0.08g (typ.)

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