Preliminary TOSHIBA Bipolar Linear Integrated Circuit Silicon Monolithic

T A 1 3 2 4 A F N

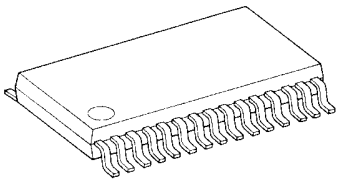
Mixer Oscillator Built-in Frequency Synthesizer
for VHF, CATV and UHF Band.

The TA1324AFN is a single chip which integrates a PLL and a Mixer, Oscillator for VHF, CATV and UHF band.

The control data conforms to 3-wire bus and I^2C-bus formats.

Bus-SW can be used to easily switch for easy tuner system set-up.

Flat, compact package: SSOP30 (0.65 mm pitch)



SSOP30-P-300-0.65

Weight: 0.17 g (typ.)

Features

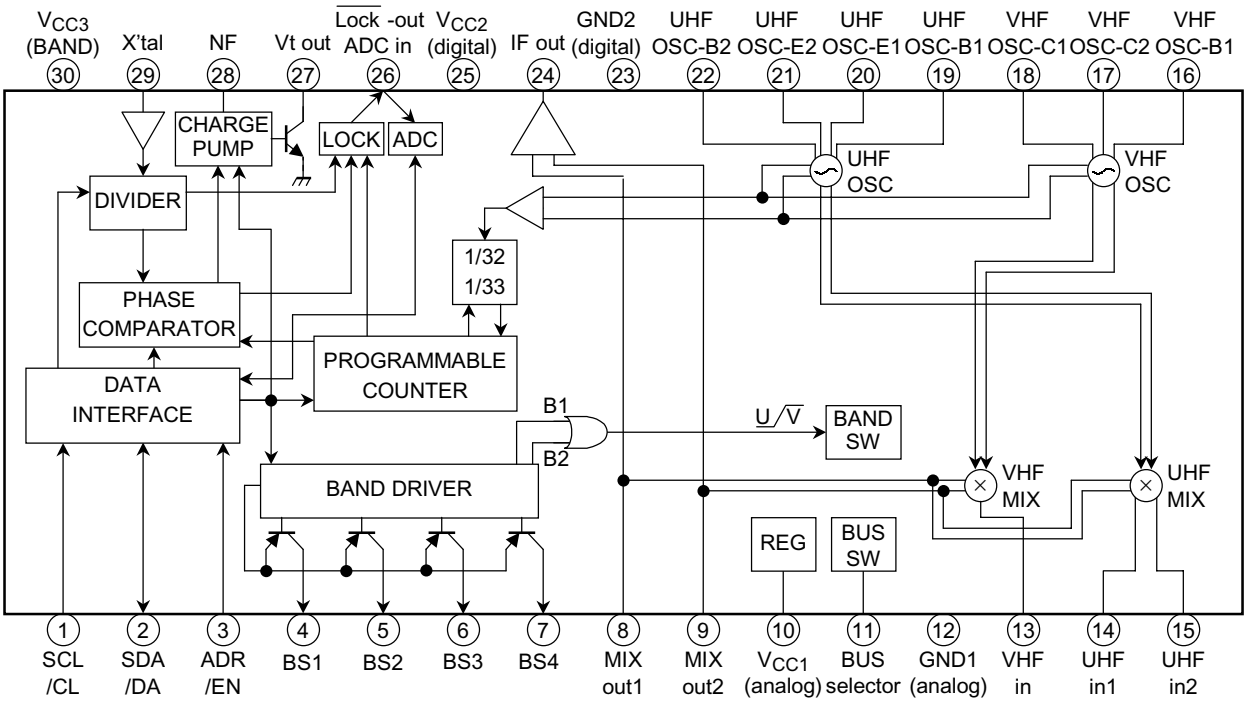
- Low supply voltage: 5.0 V (typ.)
- For VHF, CATV, HYPER BAND and UHF BAND, 2-band oscillator and 2-mixer
- IF amplifier circuit
- Single IF output terminal
- Fast mode I^2C-bus format control
- 3-wire bus format control
- 18-bit and 19-bit automatical discrimination circuit (when 3-wire bus selected)
- No prescaler
- 33 V high voltage tuning amplifier built-in
- 4-bit bandswitch drive transistor
- 5-level A/D converter (when I^2C-bus selected)
- Frequency step: 31.25kHz, 50kHz, 62.5kHz (at 4MHz X'tal used)
- 4 programmable chip address (when I^2C-bus selected)
- Power on reset circuit

Power-On Reset Operation Conditions

- Frequency step: 62.5 kHz
- Charge pump output current: Low
- Counter data: all [1]
- Band driver: OFF
- Tuning amplifier: ON

Note 1: These devices are easy to be damaged by high voltage or electric fields. In regards to this, please handle with care.

Block Diagram

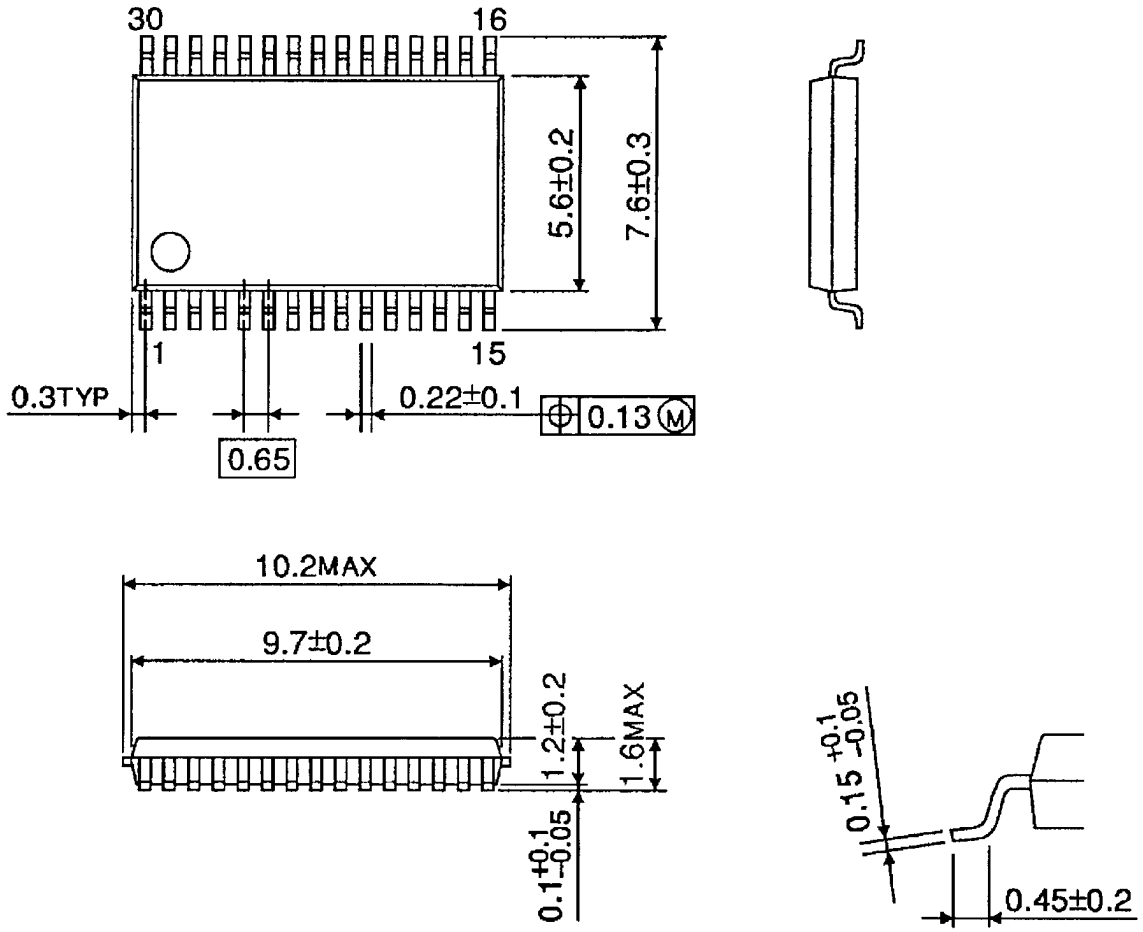


Terminal Function

Pin No.	Pin Name	Pin No.	Pin Name
1	SCL/CL input	16	VHF oscillator-base 1
2	SDA input and output/DA input	17	VHF oscillator-collector 2
3	ADR set (I^2C-bus), EN input (3-wire bus)	18	VHF oscillator-collector 1
4	BAND 1 output	19	UHF oscillator-base 1
5	BAND 2 output	20	UHF oscillator-emitter 1
6	BAND 3 output	21	UHF oscillator-emitter 2
7	BAND 4 output	22	UHF oscillator-base 2
8	MIX output 1	23	GND2 (PLL block)
9	MIX output 2	24	IF output
10	V_{CC1} (analog block)	25	V_{CC2} (PLL block)
11	BUS switch (I^2C-bus = GND, 3-wire bus = open and V_{CC2})	26	ADC input (I^2C-bus), Lock output (3-wire bus)
12	GND1 (analog)	27	Vt output
13	VHF RF input	28	NF
14	UHF RF input 1	29	X'tal input
15	UHF RF input 2	30	V_{CC3} (band block)

Package Dimensions

SSOP30-P-300-0.65 Unit : mm



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