

Preliminary

TOSHIBA Bipolar Linear Integrated Circuit Silicon Monolithic

TA1324AFN

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.

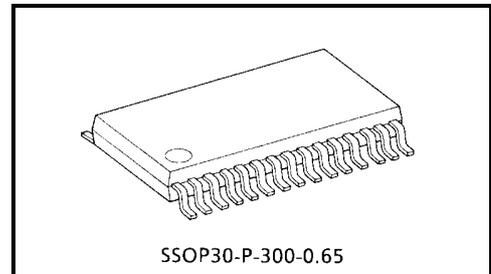
The control data conforms to 3-wire bus and I²C-bus formats.

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

Flat, compact package: SSOP30 (0.65 mm pitch)

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 I²C-bus format control
- 3-wire bus format control
- 18-bit and 19-bit automatic 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 I²C-bus selected)
- Frequency step: 31.25kHz, 50kHz, 62.5kHz (at 4MHz X'tal used)
- 4 programmable chip address (when I²C-bus selected)
- Power on reset circuit



Weight: 0.17 g (typ.)

Power-On Reset Operation Conditions

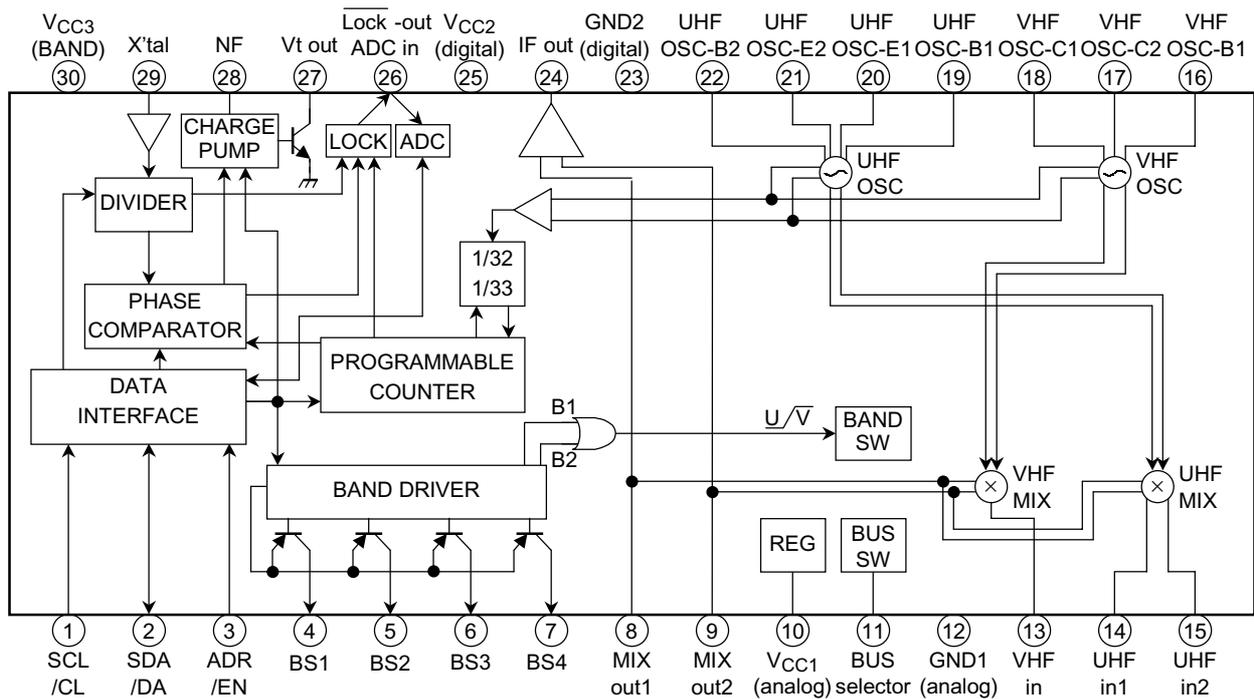
- Frequency step: 62.5 kHz
- Charge pump output current: Low
- Counter data: all [1]
- Band driver: OFF
- Tuning amplifier: ON

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

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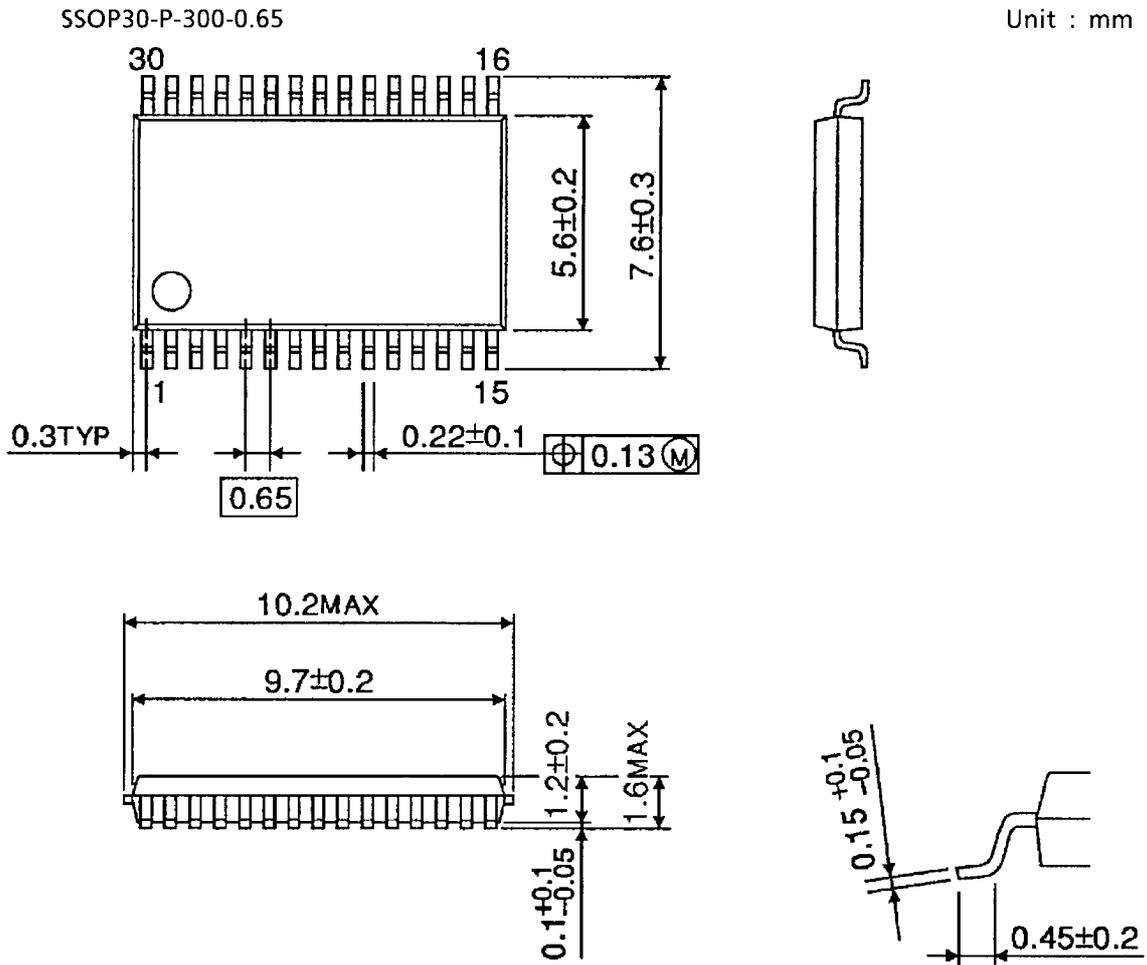
Block Diagram



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



Weight: 0.17 g (typ.)