



VCO 0306TO15

(TOM9307)

rev_0

initial rev

	<u>MIN</u>	<u>TYP</u>	<u>MAX</u>	<u>UNITS</u>	<u>NOTES</u>	<u>Production Test</u>	<u>First Article Test</u>
Frequency Range	300		600	MHz	1	..	..
Tuning Voltage	0		20	V	1	..	..
Modulation Sensitivity	5	20		MHz/V	1	..	..
Operates with Vtune = 0V					1	..	..
Output Power	10	12	14	dBm	1	..	..
Phase Noise @							
1 KHz Offset			-75	dBc/Hz	1	..	..
10 KHz Offset			-100	dBc/Hz	1	..	..
100 KHz Offset			-120	dBc/Hz	1	..	..
1 MHz Offset			-140	dBc/Hz	1	..	..
10 MHz Offset			-160	dBc/Hz	1	..	..
Pushing		2	4	MHz/V	3	..	..
Pulling (12dB RL, any phase)		5	15	MHz _{p-p}	3	..	..
Modulation Bandwidth		8		MHz	4	..	..
Tuning Port Capacitance		100		pF	2,7	..	..
Harmonics		-15	-10	dBc	3	..	..
Vcc		15.0		V		..	..
Icc		17	25	mA	1	..	..
Operating Temperature	-55		+85	C	3	..	..
Package		TO-8				..	..
Diameter		0.500		inch	5	..	..
Height		0.220		inch	5	..	..

Notes

1. Tested in production, and guaranteed
2. Per current design, not a tested parameter
3. Sample tested from production lot
4. Not a tested or guaranteed design goal
5. By inspection
6. RoHS compliant
7. Design goal subject to change

VOLTAGE CONTROLLED OSCILLATOR

TOM9307 300 - 600 MHz

Available as:

TOM9307, 4 Pin TO-8 (T4)
TON9307, 4 Pin Surface Mount (SM3)
TOP9307, 4 Pin Flatpack (FP4)
BXO9307, Connectorized Housing (H1)

Features

- Low Noise Bipolar Transistor
- Broad Tuning Range
- Operating Case Temp. -55 °C to + 85 °C
- Environmental Screening available

Specifications

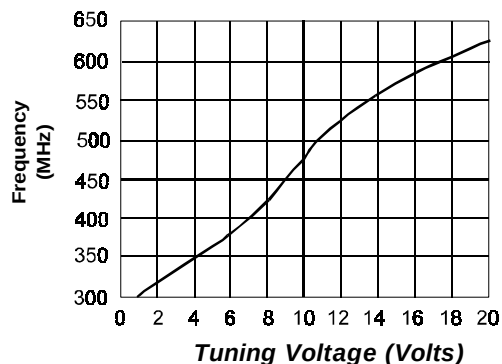
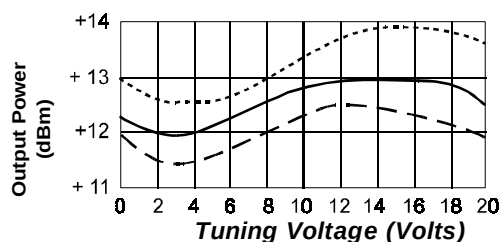
CHARACTERISTIC	TYPICAL Ta = 25 °C	MIN/MAX Ta = - 55 °C to + 85 °C
Frequency	300 - 600 MHz	300 - 600 MHz
Output Power (dBm)	12	+10 Min.
Power Flatness (dB)	±1	±2.0 Max.
Tuning Voltage Range (v)	1 to 17	0 to 20
Tuning Voltage Sensitivity (MHz/V)	20	5 Min.
Harmonics (dBc)	-15	-10
Spurious (dBc)	<-80	- 80 Max.
3dB Modulation BW, Zg = 50 Ohm	---	8MHz Min.
Pushing (MHz/V)	2	4 Max.
Pulling (MHz); 12dB RL	5	15 Max.
Frequency Drift (MHz/°C)	—	-0.05 Max.
Power Vdc	+15	+15
mA	17	25

Maximum Ratings

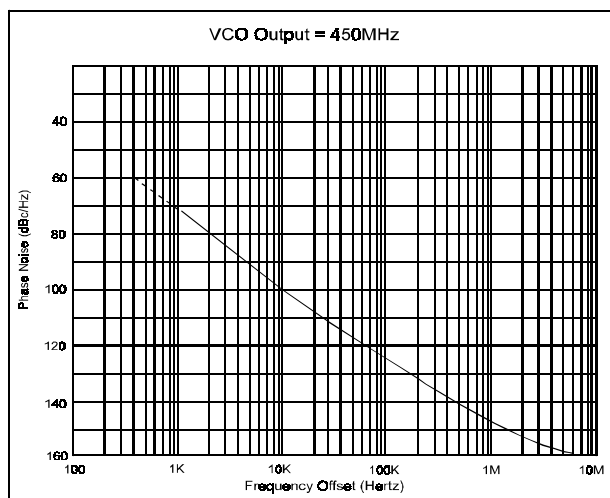
Ambient Operating Temperature -54°C to + 100 °C
Storage Temperature -62°C to + 125 °C
Case Temperature + 125 °C
DC Voltage + 20 Volts
Maximum DC Tuning Voltage + 20 Volts
Minimum DC Tuning Voltage 0 Volts

Note: Care should always be taken to effectively ground the case of each unit.

Typical Performance Data



Legend ——— + 25 °C - - - - - +85 °C -54 °C



Notes:

1. Phase Noise is measured using the Aeroflex PN9000.
2. Worst case phase noise @ 100KHz offset across frequency range and temperature extremes is - 120 dBc/Hz.

Amplifonix

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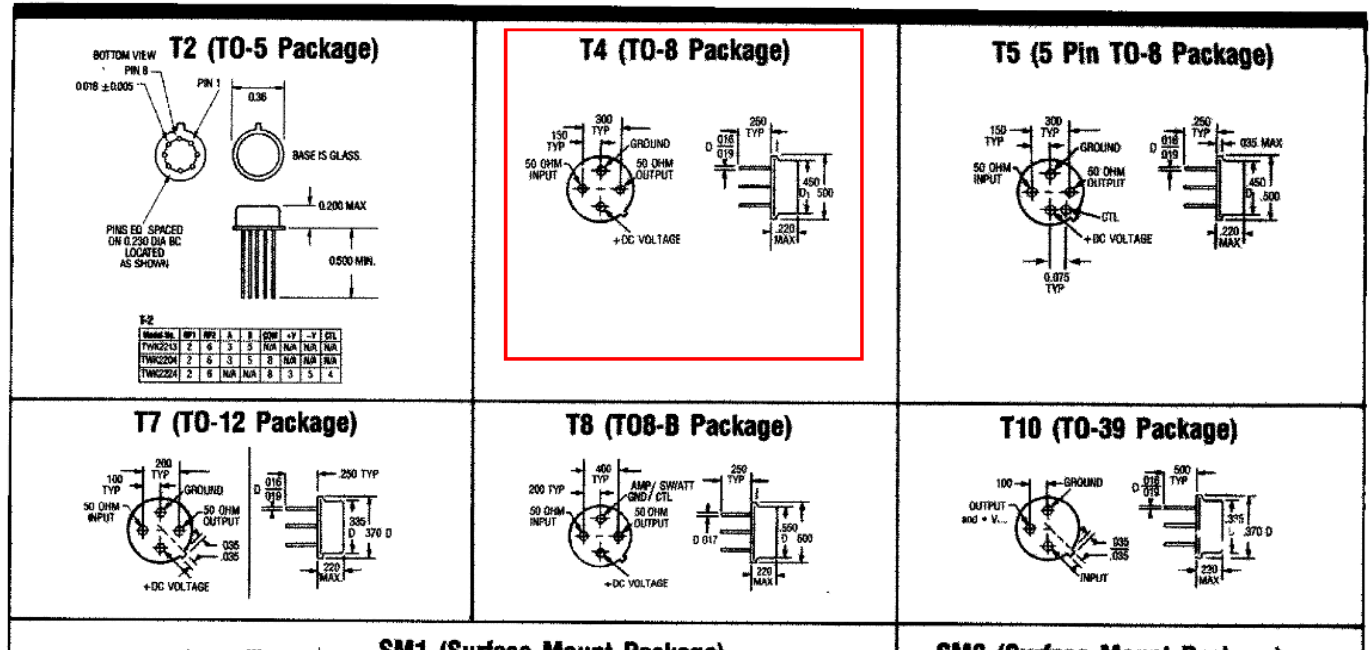
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04/11/02

Outline Drawings

All unmarked Pins are internally grounded.

T-90-20



SM1 (Surface Mount Package)

SM2 (Surface Mount Package)