

Type TXF programmable

TXF-T (10~245)MHz, HCMOS
TXF-P (10~1450)MHz, LEPECL
TXF-D (10~1450)MHz, LVDS
(3.2x2.5)mm, height 1.60mm
Tolerance from $\pm 1.0\text{ppm}$ (-40~85)°C

TXF programmable Quick-Turn Around
Temperature Compensated oscillators that can
deliver within days. With low current consumption
(44mA for LVPECL 622.08MHz at 3.3V) and an
integrated phase jitter performance of 1.0pS
RMS, providing engineers solution for prototype
samples at low cost and fast delivery, also
support any volume production

RoHS Compliant

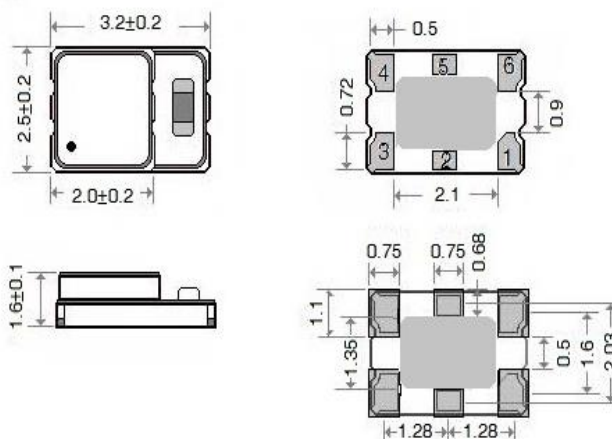
Frequency Stability –vs- Temperature

TEMP RANGE	TOLERANCE		
	(-30+85) °C	$\pm 0.5\text{ppm}$	$\pm 1.0\text{ppm}$
(-40+85) °C		$\pm 1.0\text{ppm}$	$\pm 2.5\text{ppm}$
TEMPERATURE (ref to +25 °C)			

Electrical specification

TYPE	TXF-T	TXF-P	TXF-D
output logic	LVC MOS/LVTTL	LVPECL	LVDS
frequency range (MHz)	10~245	10~1450	10~1450
load	15pF	differential	differential
output logic "HIGH", "1"	90%V _{DD}	V _{DD} -1.03(min.), V _{DD} -0.6 (max.)	1.4V typical, 1.6V (max.)
output logic "LOW", "0"	10%V _{DD}	V _{DD} -1.85(min.), V _{DD} -1.6 (max.)	1.1V typical, 0.9V (min.)
(V _{DD} = + 2.5V) current Consumption	50MHz : 24mA	156MHz : 36mA	156MHz : 22mA
	125MHz : 28mA	600MHz : 40mA	600MHz : 28mA
	200MHz : 30mA	800MHz : 46mA	800MHz : 30mA
		1GHz : 50mA	1GHz : 34mA
All values are typical and over the operating temperatures			

Dimensions (mm)



Pad connections

- #1 No Connection for TCXO/Voltage Control for VCTCXO
- #2 Output Enable
- #3 Ground
- #4 CMOS: Output, LVPECL/LVDS: Differential
- #5 CMOS: NO Connection, LVPECL/LVDS: Complementary
- #6 Supply Voltage

Suggested Land Pattern



(VDD = + 3.3V) current Consumption	50MHz : 26mA	156MHz : 40mA	156MHz : 25mA				
	125MHz : 30mA	600MHz : 45mA	600MHz : 30mA				
	200MHz : 34mA	800MHz : 48mA	800MHz : 32mA				
		1GHz : 52mA	1GHz : 36mA				
All values are typical and over the operating temperatures							
current with output disabled	18mA typical						
rise time / fall time	1.5nS.(typ.),3.0nS.(max.) Tr/Tf:10%-90% waveform	0.2nS.(typ.), 0,5nS.(max.) Tr/Tf:20%-80% waveform	0.2nS.(typ.), 0,4nS.(max.) Tr/Tf:20%-80% waveform				
start-up time	5mS (max.)						
frequency stability vs	aging	±1.0ppm (max.), per year @25C					
	Voltage change	±0.2ppm (max.), for a ±5% input voltage change					
	Load change	±0.2ppm (max.), for a ±10% load condition change					
	reflow	±1.0ppm (max.), 1 reflow & measured 24 Hr afterwards					
Initial calibration tolerance	±1.0ppm (max.)at +25°C ±2.0°C (at the time of shipping)						
duty cycle	50% ± 5%						
storage temperature	-55°C to +155°C						
SSB phase noise [dBc/Hz typical]	off set	77.76	156.25	212.5	622.08	1000	1250
	10Hz	-62	-65	-61	-51	-40	-43
	100Hz	-100	-92	-90	-79	-73	-75
	1kHz	-116	-108	-106	-97	-91	-89
	10kHz	-122	-114	-110	-102	-99	-95
	100kHz	-124	-117	-112	-103	-99	-96
	1MHz	-144	-139	-133	-124	-121	-117
	10MHz	-152	-147	-142	-134	-129	-127
phase jitter (12kHz~20MHz;RMS) unit : pS	0.90	0.90	1.0	1.1	1.1	1.2	
integrated phase jitter	1.0pS typical (12kHz to 20MHz); 400fS (1.875kHz to 21MHz)						
Control Voltage Function on pad 1				Output Enable Function on pad 2			
control voltage centre & range	+1.5V ±1.0V for both VDD=+2.5V & 3.3V			OE control on pad 2	0.7% of VDD (min.) or no connection to enable output. LVCMOS/LVTTL level		
frequency pulling range	±8ppm (min.)				0.3% of VDD (max.) to disable output (high impedance). LVCMOS/LVTTL level		
linearity	±1% (typ.) ±10% (max.)						
transfer function	positive transfer			output	enable time	disable time	
absolute voltage	4.0V (max.)				200nS (max.)	50nS (max.)	
Input impedance	770KΩ (typ.)						
harmonics	-5.0dBc (max.)						



Ordering information

EXAMPLE	Type TXF-T smd TCXO, 100.0MHz, +2.5V, $\pm 1.0\text{ppm}(-40+85)^\circ\text{C}$
TFC PART NUMBER	TXF-T 100.0M JBL
TYPE	TXF-T = LVCMOS/LVTTL
100.0MHz	frequency: 100.0MHz, frequency range (10~245)MHz
J	supply voltage: J: = +2.5V
B	frequency stability: B: = $\pm 1.0\text{ppm}$
L	temperature range: L: = $(-40+85)^\circ\text{C}$
OPTIONS	
supply voltage	J: +2.5V, E: +3.3V
frequency stability	A: $\pm 0.5\text{ppm}$, B: $\pm 1.0\text{ppm}$, D: $\pm 2.5\text{ppm}$
temperature range	D: $(-30+85)^\circ\text{C}$, L: $(-40+85)^\circ\text{C}$