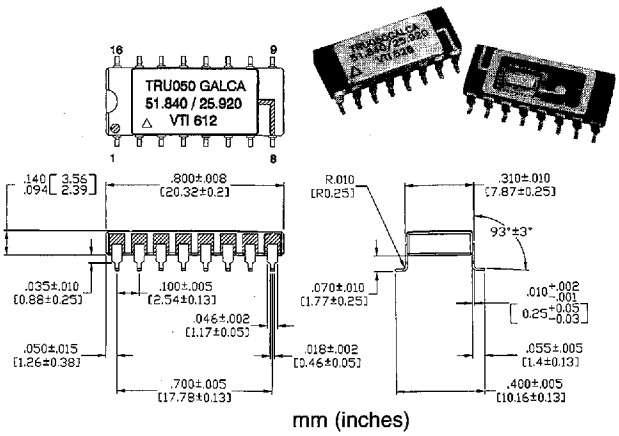
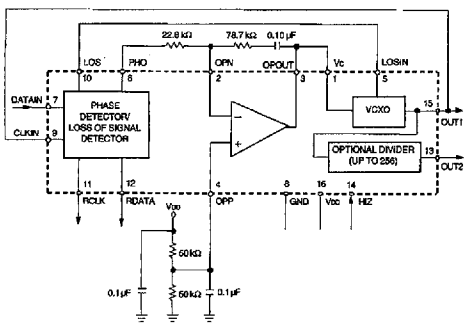
Crystal Based Clock and Data Recovery Products

TRU-050 Timing Based Recovery Unit

Features
- Frequency translator
- Compact phase-locked loop (PLL) saves board space
- Quartz crystal stabilized by internal VCXO
- User-defined loop filter for tailoring performance
- Input data and clock rates from 8 kb/s to 52 Mb/s
- NRZ data compatible
- Low transition density capability
- Superior jitter performance
- TTL output compatible
- 3-state clock and data output
- Loss of signal indicator



Typical NRZ Data Retiming Application



Ordering Information

TRU050 – ☐ ☐ ☐ ☐ ☐

PACKAGE TYPE
16-pin ceramic DIP

LEADS
T = thru hole
G = gull wing

SECOND OUTPUT
A = divide by 2
B = divide by 4
C = divide by 8
D = divide by 16
E = divide by 32
F = divide by 64
G = divide by 128
H = divide by 256
K = output 2 disabled

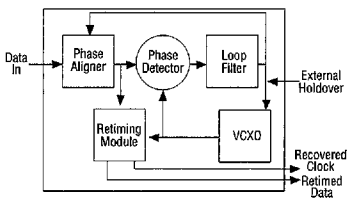
VERSION NUMBER

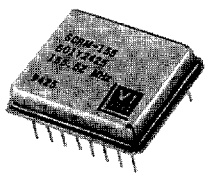
ABSOLUTE PULL RANGE
C = 20 ppm
F = 32 ppm
G = 50 ppm
H = 100 ppm

TEMPERATURE RANGE
C = 0 to 70 °C
L = 40 to 85 °C

Sonet Clock Recovery Module SCRM-155 (155.52 MHz)

- Clock Recovery and Data Retiming (with VCXO). Meets CCITT Type A or B interfaces with either type
- Holdover feature offers ±20 ppm clock accuracy with no data
- Acquires lock quickly (40 bit periods)
- Eliminates pattern (systematic) jitter
- Virtually unlimited cascades





Acquisition Time	Input Density = 50%		40 bit periods (260 nanosec)
Phase Drift due to input data	20 non-transitions 60 non-transitions		<0.002 UI <0.006 UI
Jitter Tolerance (Exceeds requirements of TR-NWT-000253 and CCITT G.958)	10 Hz 300 Hz 6.5 kHz 65 kHz		>40 UI >10 UI > 2 UI > 2 UI
Jitter Transfer	Peaking Bandwidth Residual Jitter		0 dBm 15.5 kHz typical <2° rms for input density of 50% <2°rms for 2^7 -1 PRB Sequence <2°rms for 2^{23}-1 PRB Sequence
Free Running Temperature Stability 0°C to +70°C or –40°C to +85°C			±20 ppm over temperature
Tuning Range	0 to –5V (ECL) 0 to +5V (PECL)		±50 ppm ±50 ppm
Signal levels			10 KH ECL/PECL compatible, differential input, complementary output
Supply			–5.2 Vdc ±5% at 85 mA (ECL) +5.0 Vdc ±5% at 85 mA (PECL)

How to Order	Temp Range	Output	SCRM-155
	0°C to +70°C	ECL	**601Y2425**
	0°C to +70°C	PECL	**601Y2425-1**
	–40°C to +85°C	ECL	**601Y2425-2**
	–40°C to +85°C	PECL	**601Y2425-3**

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