

# FEATURES

PETERMANN



TECHNIK

Time & Frequency Components

- HIGH RELIABILITY FOR LOW COST
- FREQUENCY STABILITY TO  $\pm 1.0$  PPM
- LOW PACKAGE HEIGHT OF 4.7 MM MAX.
- EXTENDED TEMPERATURE RANGE TO  $-40/+85^{\circ}\text{C}$

<b>SERIES</b>		TC18
<b>PACKAGE</b>		14 PIN DIP
<b>FREQUENCY RANGE</b>		1.0 ~ 40.0 MHz
<b>FREQUENCY ACCURACY</b>		$\pm 0.1$ PPM max.
<b>FREQUENCY STABILITY</b>	<b>VS. AGING</b>	$\pm 1$ PPM per year max.
	<b>VS. LOAD</b>	$\pm 0.1$ PPM / load changement of $\pm 10\%$
	<b>VS. SUPPLY VOLTAGE</b>	$\pm 0.2$ PPM / supply voltage changement of $\pm 5\%$
	<b>VS. TEMPERATURE</b>	see table 1
<b>OPERATING TEMPERATURE RANGE</b>		$0/+50^{\circ}\text{C}$ ~ $-40/+85^{\circ}\text{C}$
<b>STORAGE TEMPERATURE RANGE</b>		$-40/+100^{\circ}\text{C}$
<b>SUPPLY VOLTAGE</b>		$+5.0$ VDC $\pm 5\%$
<b>FREQUENCY CONTROL RANGE</b>		$\pm 7.0$ PPM min. per internal trimmer
<b>PHASE NOISE</b>	<b>10 Hz</b>	-70 dBc/Hz
	<b>100 Hz</b>	-100 dBc/Hz
	<b>1 kHz</b>	-130 dBc/Hz
	<b>10 kHz</b>	-140 dBc/Hz
	<b>100 kHz</b>	-145 dBc/Hz
<b>OUTPUT SIGNAL AND LOAD CHARACTERISTICS</b>		see table 2

OTHER PARAMETERS ARE AVAILABLE ON REQUEST / CREATE HERE YOUR SPECIFICATION

**TABLE 1 - FREQUENCY STABILITY VS. TEMPERATURE**

CODE	FREQUENCY STABILITY VS. TEMPERATURE	TEMPERATURE RANGE
A	$\pm 1.0$ PPM	$0/+50^{\circ}\text{C}$
B	$\pm 1.5$ PPM	$0/+70^{\circ}\text{C}$
C	$\pm 2.0$ PPM	$-20/+70^{\circ}\text{C}$
D	$\pm 3.0$ PPM	$-30/+75^{\circ}\text{C}$
E	$\pm 5.0$ PPM	$-40/+85^{\circ}\text{C}$

**TABLE 2 - OUTPUT WAVEFORM AND LOAD CHARACTERISTICS**

OUTPUT WAVEFORM	OUTPUT TYPE CODE	FREQUENCY RANGE	OSCILLATION STATE	OUTPUT CHARACTERISTICS
CLIPPED SINE WAVE	0	8.000 ~ 40.000 MHz	F: FUNDAMENTAL	Load: 10 k $\Omega$ /10pF Output level: $>1\text{Vp-p}$ Max. current = 10 mA
TTL	1	1.000 ~ 40.000 MHz	F: FUNDAMENTAL	Load: 10 low power consumption TTL "1" level: $>+2.4$ VDC / "0" level: $<+0.2$ VDC Duty Cycle: 40/60% / Tr and Tf: $<6\text{ns}$ Max. current = 20 mA
HCMOS	2	1.000 ~ 40.000 MHz	F: FUNDAMENTAL	Load: 10 low power consumption TTL/HCMOS gates "1" level: $>+4.5$ VDC / "0" level: $<+0.5$ VDC Duty Cycle: 40/60% / Tr and Tf: $<6\text{ns}$ Max. current = 20 mA
ACMOS	3	1.000 ~ 40.000 MHz	F: FUNDAMENTAL	Load: 10 low power consumption TTL/ACMOS gates "1" level: $>+4.5$ VDC / "0" level: $<+0.5$ VDC Duty Cycle: 40/60% / Tr and Tf: $<6\text{ns}$ Max. current = 20 mA

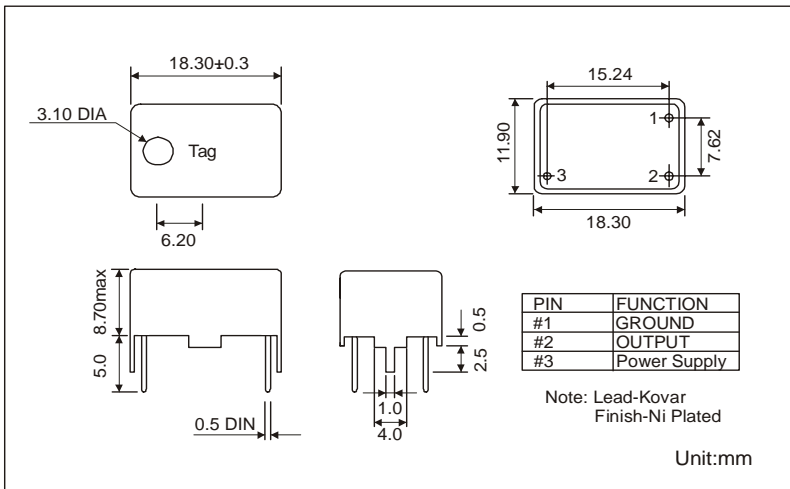


### PART NUMBERING SYSTEM

EXAMPLE	TC18L-F-A-2-10.000MHz
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TYPE	PACAKGE STYLE	VERSION	FREQUENCY STABILTY VS. TEMPERATURE	OUTPUT TYPE - FREQUENCY
TC	18 18L	F for FUND.	SEE TABLE 1	SEE TABLE 2 - FREQUENCY

### OUTLINE DRAWING OF TC18



### OUTLINE DRAWING OF TC18L

