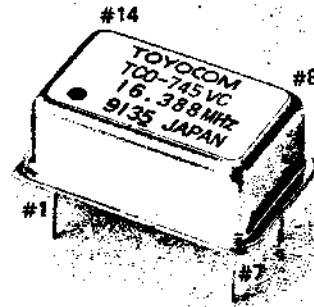


## FULL DIP VCXO CMOS 745VC Series

### Features

- CMOS logic output
- DIL-14 pin package compatible
- Hermetically sealed metal package
- Case ground 7-pin for minimizing RF radiation

《Model》 TCO-744VC TCO-745VC



DIL-14H

### Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Supply voltage	V <sub>CC</sub>	-0.5 to +7.0	V
Input voltage	V <sub>IN</sub>	-0.5 to V <sub>CC</sub> +0.5	V
Output voltage	V <sub>O</sub>	-0.5 to V <sub>CC</sub> +0.5	V
Input current	I <sub>IN</sub>	±10	mA
Output current	I <sub>O</sub>	±25	mA
Storage temperature	T <sub>stg</sub>	-20 to +85	°C

### Dimensions

20.8x13.2x7.11 max. (mm) .820x.520x.280 max. (inch)

### Pin Connections

#14 V<sub>CC</sub> #8 OUTPUT  
#1 Control Voltage #7 GND/CASE

### Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Frequency range	F <sub>O</sub>	1.5	—	40	MHz	
Frequency stability	ΔF/F <sub>O</sub>	-25 -50	—	25 50	ppm	TCO-744VC *1 TCO-745VC
Pullability	ΔF/F <sub>O</sub> vs V <sub>CONTROL</sub>	±100 ±150	—	—	ppm	TCO-744VC TCO-745VC
Control voltage range	V <sub>CONTROL</sub>	0	2.5	5	V	
Operating temperature	T <sub>opr</sub>	0	25	70	°C	
Operating voltage	V <sub>CC</sub>	4.75	5.0	5.25	V	DC
Operating current	I <sub>CC</sub>	—	—	*3	mA	V <sub>CC</sub> = 5.25V
Output voltage	V <sub>OH</sub> V <sub>OL</sub>	V <sub>CC</sub> -0.4 —	—	— 0.4	V	I <sub>OH</sub> = -4 mA I <sub>OL</sub> = 4 mA
Symmetry	SYM	40	50	60	%	at 50% V <sub>CC</sub>
Rise/Fall time	t <sub>r</sub> , t <sub>f</sub>	—	—	*3	ns	at 10% V <sub>CC</sub> to 90% V <sub>CC</sub> /at 90% V <sub>CC</sub> to 10% V <sub>CC</sub>
Load capacitance	C <sub>L</sub>	—	15	50	—	1.5 to 26 MHz 26+ to 40 MHz
Start-up time	t <sub>st</sub>	—	—	4 10	ms	1.5 to 26 MHz *2 26+ to 40 MHz *2

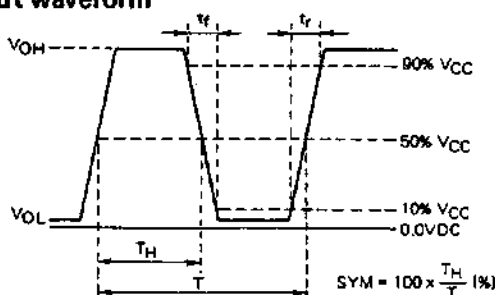
\*1 Inclusive of calibration tolerance at 25°C, operating temperature, operating voltage range, load change, aging, shock and vibration.

\*2 Rise time (0 to 4.5V) of V<sub>CC</sub> > 150 μs

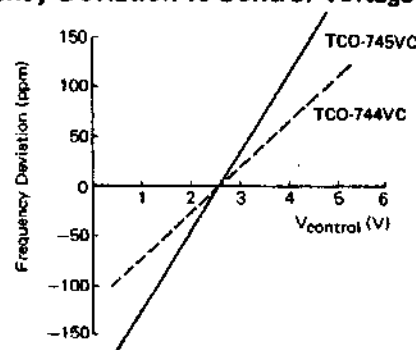
\*3

Freq.	1.5 to 10	10+ to 26	26+ to 34	34+ to 40	MHz
I <sub>CC</sub>	15	20	35	40	mA
t <sub>r</sub> , t <sub>f</sub>	15	15	10	10	ns

### Output waveform



### Frequency Deviation vs Control Voltage



### Test circuit

See page 11 TEST-4