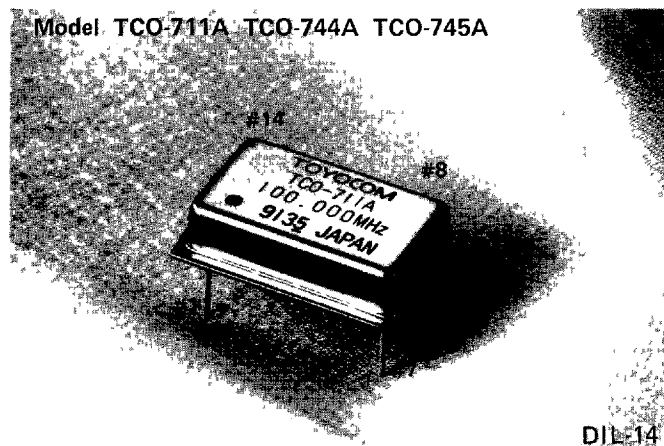


FULL DIP TTL 711A Series

Features

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

Model TCO-711A TCO-744A TCO-745A



DIL-14

Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Supply voltage	V_{CC}	-0.5 to +7.0	V
Input voltage	V_{IN}	-0.5 to $V_{CC} + 0.5$	V
Output voltage	V_O	-0.5 to $V_{CC} + 0.5$	V
Input current	I_{IN}	± 10	mA
Output current	I_O	± 25	mA
Storage temperature	T_{stg}	-55 to +125	$^{\circ}\text{C}$

Dimensions

20.8x13.2x5.0 max. (mm) .820x.520x.200 max. (inch)

Pin Connections

#14 V_{CC} #8 OUTPUT
#1 N.C. #7 GND/CASE

Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Frequency range	F_O	0.25	—	100	MHz	TCO-711A
		0.25	—	70	MHz	TCO-744A, TCO-745A
Frequency stability	$\Delta F/F_O$	-100	—	100	ppm	TCO-711A *1
		-25	—	25	ppm	TCO-744A
		-50	—	50	ppm	TCO-745A
Operating temperature	T_{opr}	0	25	70	$^{\circ}\text{C}$	
Operating voltage	V_{CC}	4.5	5.0	5.5	V	DC
Operating current	I_{CC}	—	—	*3	mA	$V_{CC} = 5.5\text{V}$
Output voltage	V_{OH} V_{OL}	2.4 —	— —	— 0.4	V V	$I_{OH} = -0.4\text{ mA}$ $I_{OL} = 16\text{ mA}$
Symmetry	SYM	40	50	60	%	at 1.4V
Rise/Fall time	t_r, t_f	—	—	*3	ns	at 0.4V to 2.4V/at 2.4V to 0.4V
Fanout	n	—	—	10 5	— —	0.25 to 60 MHz 60+ to 100 MHz
Start-up time	t_{st}	—	—	4 10	ms ms	0.25 to 26 MHz *2 26+ to 100 MHz *2

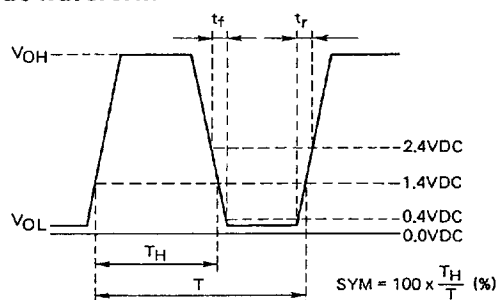
*1 Inclusive of calibration tolerance at 25 $^{\circ}\text{C}$, operating temperature, operating voltage range, load change, aging, shock and vibration.

*2 Rise time (0 to 4.5V) of $V_{CC} > 150\text{ }\mu\text{s}$

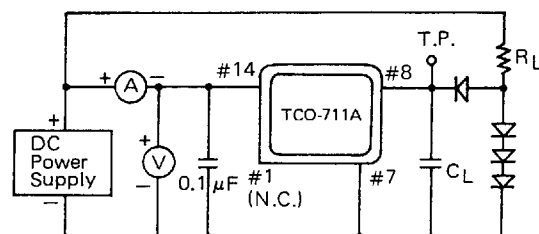
*3

Freq.	1.5 to 9	9+ to 23	23+ to 32	32+ to 60	60+ to 80	80+ to 100	MHz
I_{CC}	30	30	40	50	70	90	mA
t_r, t_f	15	10	10	5	5	4	ns

Output waveform



Test circuit



TTL logic output

$R_L = 400\Omega$ (0.25 to 60 MHz)

$R_L = 800\Omega$ (60+ to 100 MHz)

$C_L = 15\text{ pF}$ max.

Note: total fixture and probe capacitance