MITSUBISHI ICs (AV COMMON)

M54472L

1/64 HIGH SPEED DIVIDER WITH ECL OUTPUT

DESCRIPTION

The M54472L is a semiconductor integrated circuit consisting of a high-speed 1/64 divider using emitter-coupled logic.

FEATURES

- High-speed operation (fmax=1.1GHz)
- Operates at low input amplitude (150mVp-p min)
- ECL level output

APPLICATION

Prescalers for PLL synthesized TV tuners, and general use in industrial and consumer digital equipment.

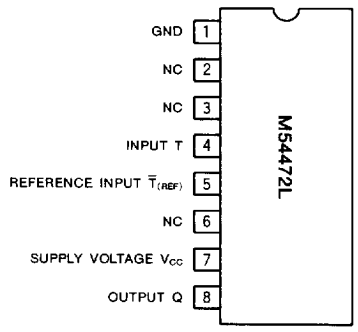
RECOMMENDED OPERATING CONDITION

Supply voltage range.....4.5~5.5V
Input Frequency.....80~1,100MHz
Input amplitude .....150~1000mVP-P
(Vcc=5V,fin=80~1100MHz,Ta=25℃)

FUNCTION

The M54472L consists of a divider using emitter-coupled logic. When a frequency from 80 through 1,100MHz is applied to the input pin T, the 1/64 divided frequency is obtained. Output Q is the ECL level.

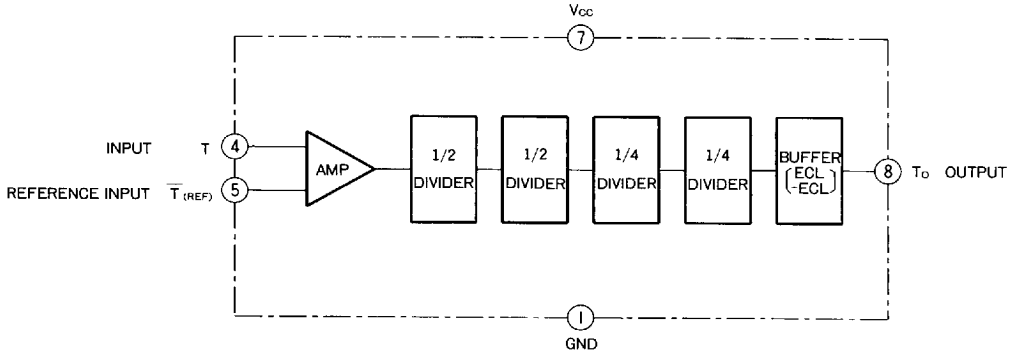
PIN CONFIGURATION (TOP VIEW)



Outline 8P5

NC : No connection

BLOCK DIAGRAM



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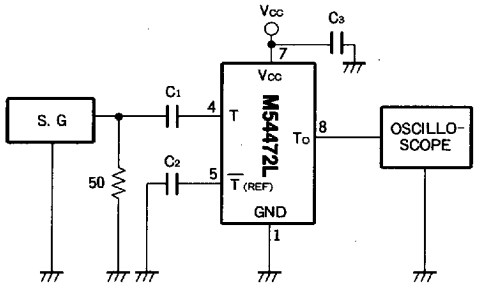
ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Ratings	Unit
V_{CC}	Supply voltage		V
V_I	Input voltage	V_{CC}	V
Pd	Power dissipation	1.33	W
Topr	Operating temperature	−10∼75	℃
Tstg	Storage temperature	−55∼125	℃

ELECTRICAL CHARACTERISTICS (T_a=−10∼75℃, unless otherwise noted)

Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
I_{CC}	Supply current	V_{CC}=5V	40	47	60	mA
V_{IN}	Input amplitude	V_{CC}=5V, Ta=25℃ f_{IN}=80MHz∼1100MHz			150	mV_{P-P}
V_O	Output amplitude	V_{CC}=5V	0.6			V_{P-P}

TEST CIRCUIT



$C_1=C_2\simeq1000pF$, $C_3\simeq0.1\,\mu F$
Resistance : Ω

TYPICAL CHARACTERISTICS

INPUT AMPLITUDE VS INPUT FREQUENCY