

# MICROCOMPUTER and PERIPHERAL LSI's

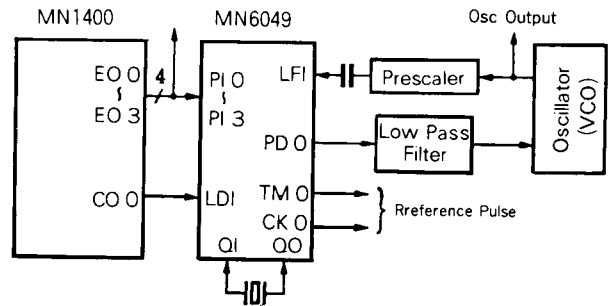
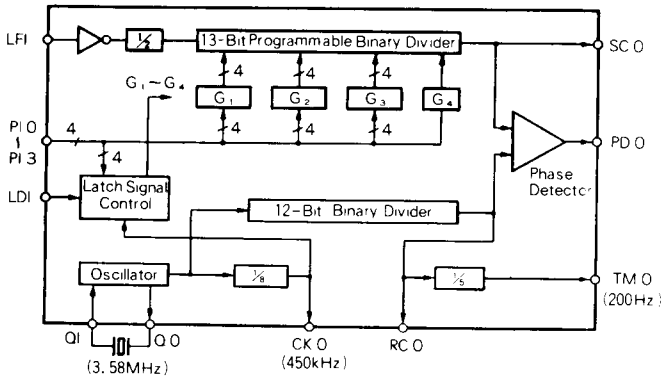
## Peripheral LSI's

Type No.	Function	Maximum Ratings (Ta=25°C)	Electrical Characteristics (Ta=25°C)							
			Item	Symbol	Condition	min.	typ.	max.	Unit	
MN6049	CMOS Frequency Synthesizer for TV	$V_{DD} = -0.3 \sim +9V$	Supply Current	$I_{DD}$	$V_{DD} = 7V$ , Without load			15	mA	
		$V_I = -0.3 \sim V_{DD} + 0.3V$	Power Consumption	$P_{tot}$				105	mW	
		$V_0 = -0.3 \sim V_{DD} + 0.3V$	Input Frequency Upper Limit	$f_i$	Input sine wave Free running	15.6			MHz	
		$T_{opr} = -20 \sim +70^\circ C$	Input Voltage Swing	$V_i$		0.7			V <sub>P-P</sub>	
		$T_{stg} = -55 \sim +100^\circ C$	Input Current	$I_{I1}$	LFI	$V_I = V_{SS} \sim V_{DD}$	-50		+50	μA
		Operating Condition	"H" Level Input Voltage	$V_{IH}$	PI0~PI3 LDI	$V_I = V_{SS} \sim V_{DD}$	3.4		$V_{DD}$	V
			"L" Level Input Voltage	$V_{IL}$			$V_{SS}$		0.8	V
		$V_{DD} = 7V$	Input Current	$I_{I2}$			-10		+10	μA
		$V_{SS} = 0V$	"H" Level Output Voltage	$V_{OH}$	$I_{OH} = -0.05mA$ , TM $\bar{O}$	6.0				V
		$T_a = 25^\circ C$	"L" Level Output Voltage	$V_{OL}$	$I_{OL} = 0.1mA$ , TM $\bar{O}$				0.4	V
			Oscillation Frequency	$f_{OSC}$	QI, Q $\bar{O}$			3.58		MHz
MN6142	CMOS PLL Frequency Synthesizer for FM/AM Radio	$V_{DD} = -0.3 \sim +10V$	Supply Current	$I_{DD}$	$V_{DD} = 6V$		3	5	mA	
		$V_I = -0.3 \sim V_{DD} + 0.3V$	Power Consumption	$P_{tot}$			15	25	mW	
		$V_0 = -0.3 \sim V_{DD} + 0.3V$	"H" Level Input Voltage	$V_{IH1}$	$V_{DD} = 6V$ P0~P3 C0~C2	$V_I = V_{SS} \sim V_{DD}$	2.4		$V_{DD}$	V
		$P_D = 50mW$	"L" Level Input Voltage	$V_{IL1}$			$V_{SS}$		0.8	V
		$T_{opr} = -20 \sim +70^\circ C$	Input Current	$I_{I1}$	LD				±10	μA
		$T_{stg} = -55 \sim +100^\circ C$	Input Voltage	$V_{I2}$	PI	1.0				V <sub>P-P</sub>
		Operating Condition	Input Current	$I_{I2}$	PI, $V_I = 0V$ または $6V$	±1	±5	±25		μA
			Input Frequency Upper Limit	$f_i$	PI, $V_{DD} = 5.5 \sim 6.5V$	6				MHz
		$V_{DD} = 6V$	Oscillation Frequency	$f_{OSC}$	OSCI, OSC2			11.52		MHz
		$V_{SS} = 0V$	"H" Level Output Voltage	$V_{OH}$	CPO, QO $\frac{V_{DD}=6V}{I_{OH}=-100\mu A}$					V
		$T_a = 25^\circ C$	"L" Level Output Voltage	$V_{OL}$	CPO, QO $\frac{V_{DD}=6V}{I_{OL}=100\mu A}$				0.4	V

Block Diagram

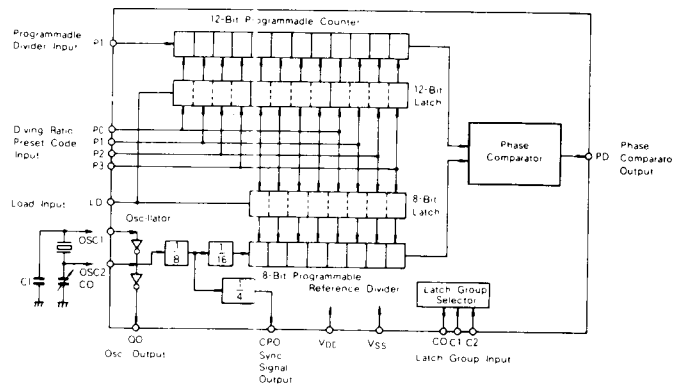
Application Circuit

**MN6049** (Package L-13,16-Lead Plastic DIL)

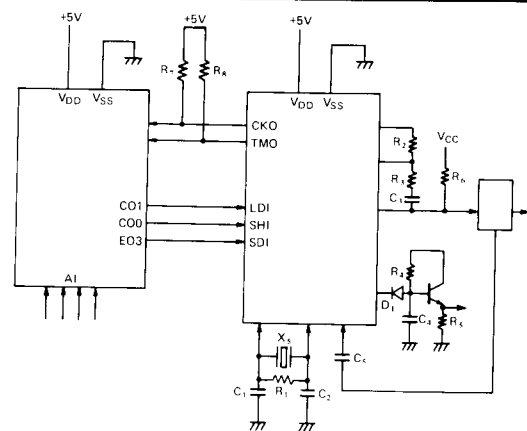
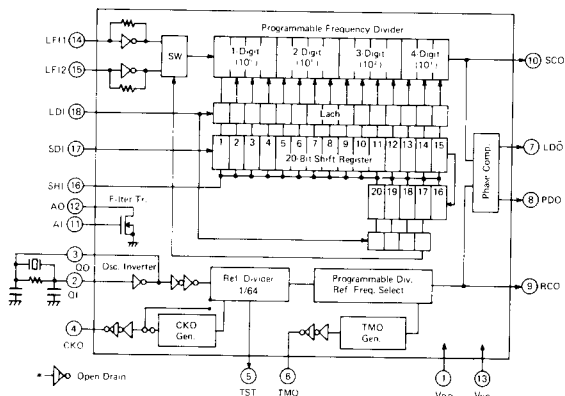


Note) LDI requires a special control signal

**MN6142** (Package L-13,16-Lead Plastic DIL)



**MN6145** (Package L-15,18-Lead Plastic DIL)



**MN6147** (Package L-15,18-Lead Plastic DIL)

