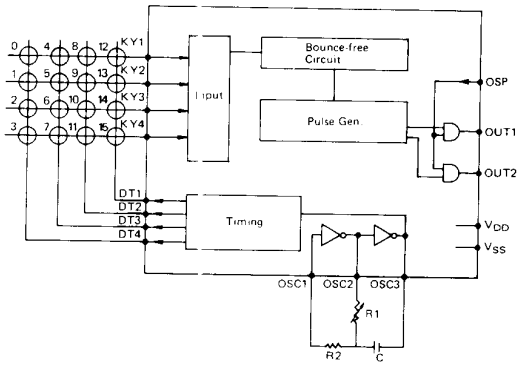
Peripheral LSI's

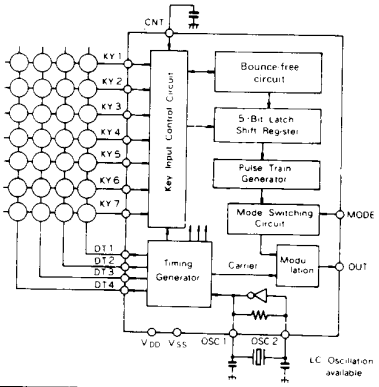
Type No.	Function	Maximum Ratings (Ta=25°C)	Electrical Characteristics (Ta=25°C)						
			Item	Symbol	Condition	min.	typ.	max.	Unit
MN6024	CMOS 16-Function Remote Control Circuit	V_{DD}=−0.3~+3V V_I=−0.3~V_{DD}+0.3V V_O=−0.3~V_{DD}+0.3V Topr=−20~+70℃ Tstg=−40~+100℃ **Operating Condition** V_{DD}=1.5V V_{SS}=0V f_{OSC}=600Hz Ta=25℃	"H" Level Input Voltage	V_{IH}	OSC1, OSC2	1.1		1.5	V
			"L" Level Input Voltage	V_{IL}				0.3	V
			Input Current	I_{IH}	KY1~KY2, V_I=1.5V	7	15		μA
			"H" Level Output Current	I_{OH1}	DT1~DT4, V_O=1.2V	−100			μA
			"L" Level Output Current	I_{OH2}	OUT1, V_{DD}=1.1V, V_O=0.8V	−600			μA
			"L" Level Output Current	I_{OL1}	OUT1, V_{DD}=1.1V, V_O=0.3V	15			μA
			"H" Level Output Current	I_{OH3}	OUT2, V_{DD}=1.1V, V_O=0.8V	−300			μA
			"L" Level Output Current	I_{OL2}	CUT2, V_{DD}=1.1V, V_O=0.3V	15			μA
			"H" Level Output Current	I_{OH4}	OSC2, OSC3, V_O=1.2V	−60			μA
			"L" Level Output Current	I_{OL3}	OSC2, OSC3, V_O=0.3V	60			μA
△MN6025	CMOS Multi-Function Remote Control Circuit	V_{DD}=−0.3~+5V V_I=−0.3~V_{DD}+0.3V V_O=−0.3~V_{DD}+0.3V Topr=−30~+70℃ Tstg=−35~+100℃ **Operating Condition** V_{DD}=3V V_{SS}=0V Ta=25℃	Supply Current	I_{DD}	Without key input			30	μA
			Power Consumption	P_{tot}				60	μW
			Input Pin KY1~KY7 "H" Level Voltage	V_{IH}		2.4			V
			Input Pin KY1~KY7 "L" Level Voltage	V_{IL}				0.6	V
			Input Pin KY1~KY7 Input Current	I_I	V_I=3V	10		50	μA
			Input Pin CNT OSC2 MODE "H" Level Voltage	V_{IH}		2.4			V
			Input Pin CNT OSC2 MODE "L" Level Voltage	V_{IL}				0.6	V
			Output Pin DT1~DT4 "H" Level Current	I_{OH1}	V_O=2.4V	−100			μA
			Output Pin OUT "H" Level Current	I_{OH2}	V_O=0.8V	−1.5			mA
			Output Pin OUT "L" Level Current	I_{OL2}	V_O=0.6V	50			μA
			Output Pin OSC1 "H" Level Current	I_{OH3}	V_O=2.4V	−100			μA
			Output Pin OSC1 "L" Level Current	I_{OL3}	V_O=0.6V	100			μA
MN6044	CMOS Frequency Synthesizer for TV	V_{DD}=−0.3~+7V V_I=−0.3~+7V V_O=−0.3~+7V P_D=30mW Topr=−20~+70℃ Tstg=−55~+100℃ **Operating Condition** V_{DD}=5V V_{SS}=0V Ta=−20~+70℃	Supply Current	I_{DD}	Without load RC=1/3667, SC=1/1023		1	5	mA
			Power Consumption	P_{tot}			5	25	mW
			Input Pin LF1 Input Frequency Upper Limit	f_i		3.7			MHz
			Input Pin LF1 Input Voltage Swing	V_i		1			V_{P-P}
			Input Pin LF1 Input Current	I_I	V_I=V_{SS}~V_{DD}			±30	μA
			Input Pin PI0~3 CI0~2 LDI "H" Level Input Voltage	V_{IH2}		2.4		V_{DD}	V
			Input Pin PI0~3 CI0~2 LDI "L" Level Output Current	V_{IL2}		V_{SS}		0.8	V
			Output Pin PDO "H" Level Output Current	I_{OH}	V_O=3V	−0.8			mA
			Output Pin PDO "L" Level Output Voltage	I_{OL}	V_O=2V	+0.8			mA
			Output Pin TMO "H" Level Output Voltage	V_{OH}	I_{OH}=−100μA	3			V
			Output Pin TMO "L" Level Output Voltage	V_{OL}	I_{OL}=100μA			0.4	V
			QI, QO Osc. Frequency	f_{OSC}	C_I=22pF, C_O=30±10pF		3.58		MHz
MN6047	CMOS PLL Frequency Synthesizer for FM/AM Radio	V_{DD}=−0.3~+10V V_I=−0.3~+10V V_O=−0.3~+10V P_D=50mW Topr=−30~+70℃ Tstg=−55~+100℃ **Operating Condition** V_{DD}=5V V_{SS}=0V Ta=−30~+70℃	Supply Current	I_{DD}	V_{DD}=5V, Ta=25℃		3	5	mA
			Power Consumption	P_{tot}			15	25	mW
			"H" Level Input Voltage	V_{IH}	P0~P3, C0~C2, LD, V_{DD}=5V	2.4		V_{DD}	V
			"L" Level Input Voltage	V_{IL}		V_{SS}		0.8	V
			Input Frequency Upper Limit	$f_{i\,max}$	V_{DD}=4.5~6.5V	4			MHz
					V_{DD}=5.5~6.5V	6			MHz
			Oscillation Frequency	f_{OSC}	OSC1, OSC2		11.52		MHz
			"H" Level Output Current	I_{OH}	PD, V_O=3V	−0.8			mA
			"L" Level Output Current	I_{OL}	PD, V_O=2V	0.8			mA
			"H" Level Output Voltage	V_{OH}	CPO, QO, V_{DD}=5V, I_{OH}=−100μA	4			V
			"L" Level Output Voltage	V_{OL}	CPO, QO, V_{DD}=5V, I_{OL}=100μA			0.4	V
			Input Capacitance	C_I	V_I=2V		5		pF
			Output Capacitance	C_O	V_O=2V		7		pF

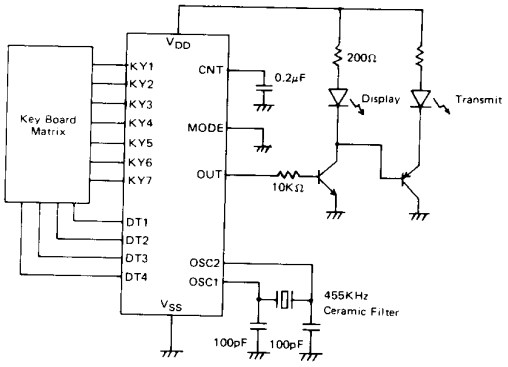
Block Diagram	Application Circuit

MN6024 (Package L-13,16-Lead Plastic DIL)

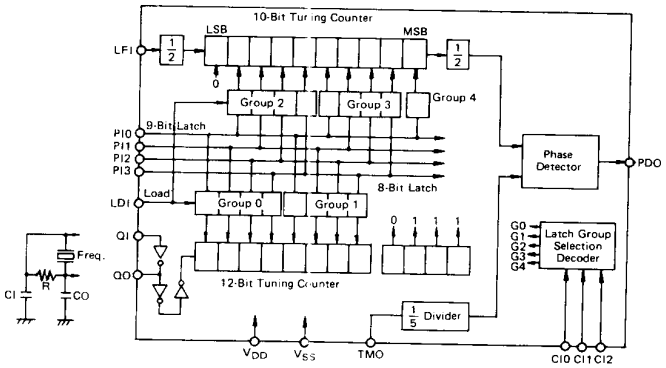


MN6025 (Package L-15,18-Lead Plastic DIL)

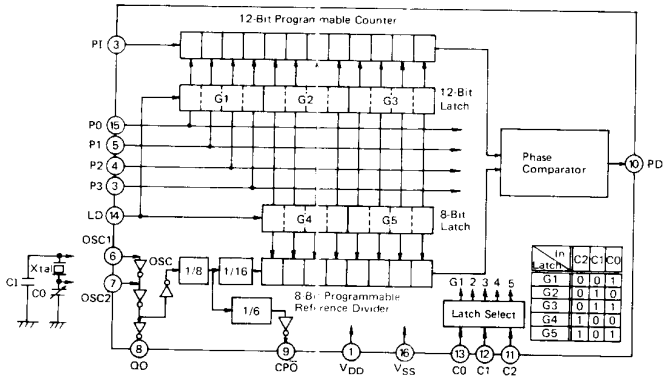




MN6044 (Package L-14,16-Lead Plastic DIL)



MN6047 (Package L-13,16-Lead Plastic DIL)



In Latch	C2	C1	C0
G1	0	0	1
G2	0	1	0
G3	0	1	1
G4	1	0	0
G5	1	0	1