

MICROCOMPUTER and PERIPHERAL LSI's

Peripheral LSI's

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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	"H" Level Input Voltage	V _{IH}	OSC1, OSC2	1.1		1.5	V		
		V _I =-0.3~V _{DD} +0.3V	"L" Level Input Voltage	V _{IL}				0.3	V		
		V _O =-0.3~V _{DD} +0.3V	Input Current	I _{IH}	KY1~KY2, V _I =1.5V	7	15		μA		
		T _{opr} =-20~+70°C	"H" Level Output Current	I _{OH1}	DT1~DT4, V _O =1.2V	-100			μA		
		T _{stg} =-40~+100°C	"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		
		Operating Condition	"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		
		V _{DD} =1.5V V _{SS} =0V f _{OSC} =600Hz Ta=25°C	"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		
		ΔMN6025	CMOS Multi-Function Remote Control Circuit	V _{DD} =-0.3~+5V	Supply Current		I _{DD}	Without key input			30
V _I =-0.3~V _{DD} +0.3V	Power Consumption			P _{tot}			60		μW		
V _O =-0.3~V _{DD} +0.3V T _{opr} =-30~+70°C T _{stg} =-35~+100°C	Input Pin			KY1~KY7	"H" Level Voltage	V _{IH}	2.4			V	
					"L" Level Voltage	V _{IL}			0.6	V	
					Input Current	I _I	V _I =3V	10	50	μA	
Operating Condition	CNT OSC2 MODE				"H" Level Voltage	V _{IH}	2.4			V	
					"L" Level Voltage	V _{IL}			0.6	V	
V _{DD} =3V V _{SS} =0V Ta=25°C	Out-put Pin			DT1~DT4	"H" Level Current	I _{OH1}	V _O =2.4V	-100			μA
					"H" Level Current	I _{OH2}	V _O =0.8V	-1.5			mA
				OUT	"L" Level Current	I _{OL2}	V _O =0.6V	50			μA
					"H" Level Current	I _{OH3}	V _O =2.4V	-100			μA
				OSC1	"L" Level Current	I _{OL3}	V _O =0.6V	100			μA
MN6044	CMOS Frequency Synthesizer for TV	V _{DD} =-0.3~+7V	Supply Current		I _{DD}	Without load RC=1/3667, SC=1/1023		1	5	mA	
		V _I =-0.3~+7V	Power Consumption		P _{tot}			5	25	mW	
		V _O =-0.3~+7V P _D =30mW T _{opr} =-20~+70°C T _{stg} =-55~+100°C	Input Pin	LF1	Input Frequency Upper Limit	f _i	3.7			MHz	
					Input Voltage Swing	V _i	1			V _{P-P}	
					Input Current	I _I	V _I =V _{SS} ~V _{DD}			±30	μA
		Operating Condition	PI0~3 CI0~2 LDI		"H" Level Input Voltage	V _{IH2}	2.4		V _{DD}	V	
					"L" Level Output Current	V _{IL2}		V _{SS}	0.8	V	
		V _{DD} =5V V _{SS} =0V Ta=-20~+70°C	Out-put Pin	PDO	"H" Level Output Current	I _{OH}	V _O =3V	-0.8			mA
					"L" Level Output Voltage	I _{OL}	V _O =2V	+0.8			mA
				TMO	"H" Level Output Voltage	V _{OP}	I _{OH} =-100μA	3			V
					"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	Supply Current		I _{DD}	V _{DD} =5V, Ta=25°C		3	5	mA	
		V _I =-0.3~+10V	Power Consumption		P _{tot}			15	25	mW	
		V _O =-0.3~+10V P _D =50mW T _{opr} =-30~+70°C T _{stg} =-55~+100°C			"H" Level Input Voltage	V _{IH}	P0~P3, C0~C2, LD,	2.4		V _{DD}	V
					"L" Level Input Voltage	V _{IL}	V _{DD} =5V	V _{SS}		0.8	V
					Input Frequency Upper Limit	f _{i max}	V _{DD} =4.5~6.5V V _{DD} =5.5~6.5V	4 6			MHz MHz
		Operating Condition			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}	V _O =2V		0.8		mA	
		V _{DD} =5V V _{SS} =0V Ta=-30~+70°C			"H" Level Output Voltage	V _{OH}	CPO, QO	V _{DD} =5V I _{OH} =-100μA	4		V
					"L" Level Output Voltage	V _{OL}		V _{DD} =5V I _{OL} =100μA			0.4
				Input Capacitance		C _I	V _I =2V		5		pF
				Output Capacitance		C _O	V _O =2V		7		pF

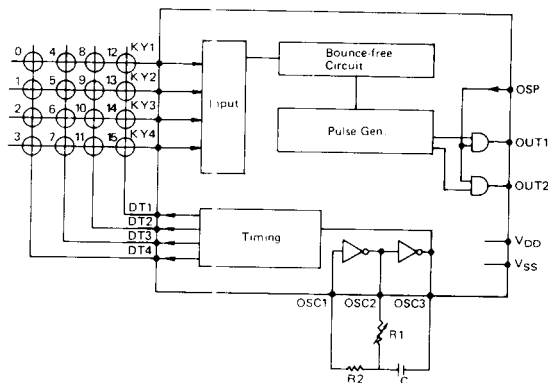
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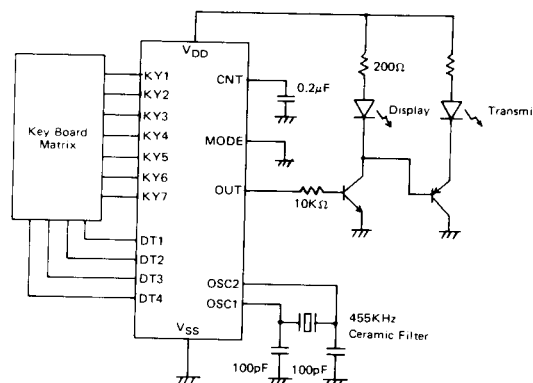
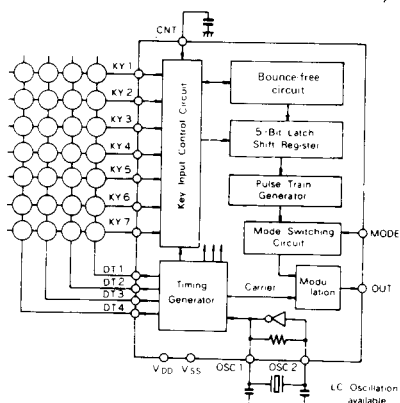
Block Diagram

Application Circuit

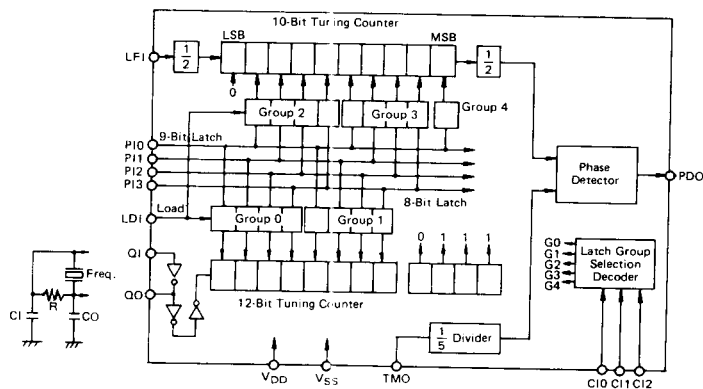
MN6024 (Package L-13, 16-Lead Plastic DIL)



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



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



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

