

□ MN15G0804

Type	MN15G0804	
ROM (×8-bit)	8 K	
RAM (×4-bit)	512	
Package	QFP044-P-1010E *Lead-free	
Number of Instructions	103	
Minimum Instruction Execution Time	0.96 ms at 1/4 frequency dividing (at 2.4 V to 5.5 V, 32 kHz) 1.91 ms at 1/8 frequency dividing (at 2.0 V to 5.5 V, 32 kHz)*	
	* The lower limit for operation guarantee for EPROM built-in type is 2.3 V. V _{RST} when using auto reset.	
Interrupts	• RESET • IRQ1 • IRQ2 • IRQ3	
Timer Counter	<p>Timer counter 0 : 8-bit × 1 (event count, pulse output) Clock source 1/2 of system clock frequency; RMO; TCO2; TCI input</p> <p>Timer counter 1 : 8-bit × 1 (event count, pulse output) Clock source 1/2 of system clock frequency; fout1; TCO0; fx1 Possible 16-bit cascade connection with timer counter 0</p> <p>Timer counter 2 : 8-bit × 1 (event count, pulse output) Clock source 1/2 of system clock frequency; RMO; fx1; TCI input</p> <p>Time base timer</p> <p>Watchdog timer</p>	
I/O Pins	I/O	34 • Common use : 34 • Specified pull-up resistor available : 34 (software programmable) • Specified output architecture available : Nch open drain / push-pull : 34 (software programmable)
LCD	30 segments × 4 commons (1/2 , 1/3 , 1/4 duty)	
Remote Control Output	Duty and period are variable.	
Notes	Auto reset circuit selectable (mask option)	

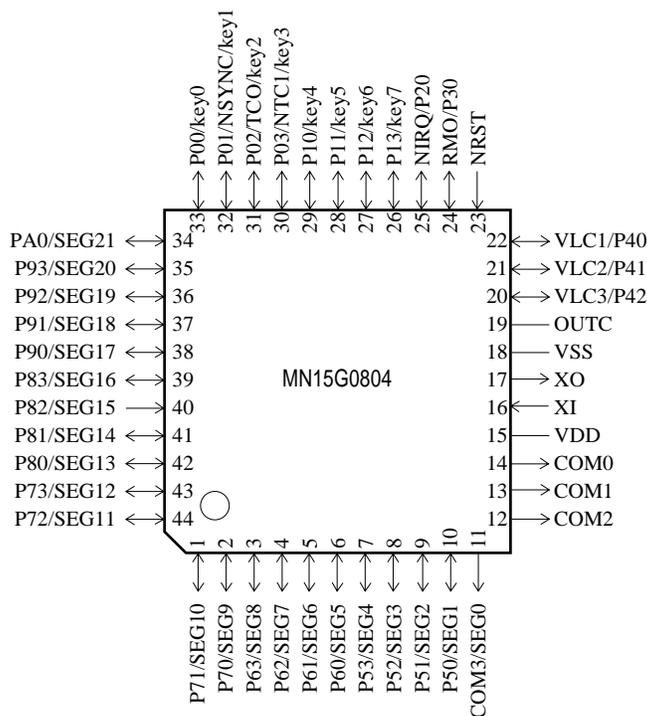
Electrical Characteristics

Supply current

Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
Operating supply current	IDD1	$f_{X1} = 32.768 \text{ kHz}$ (1/8 dividing) when using multiply circuit		3.0	5.0	mA
	IDD2	$f_{X1} = 32.768 \text{ kHz}$ (1/8 dividing)		10	40	μA
Supply current at HALT	IDD3	$f_{X1} = 32.768 \text{ kHz}$ (1/8 dividing)		3	15	mA
Supply current at STOP	IDD6	$f_{X1} = 32.768 \text{ kHz}$		2.0	5.0	μA
	IDD7	$f_{X1} = \text{Stop}$		1.0	3.5	μA
Auto reset power consumption	IDD9			3.0	6.0	μA

($T_a = -10^\circ\text{C}$ to $+60^\circ\text{C}$, $V_{DD} = 3.0 \text{ V}$, $V_{SS} = 0 \text{ V}$)

Pin Assignment



QFP044-P-1010E *Lead-free

Support Tool

In-circuit Emulator	PX-ICE1500 + PX-PRB15G1604-QFP044-P-1010E		
EPROM Built-in Type	Type	MN15GP1604	
	ROM (× 8-bit)	16 K	
	RAM (× 4-bit)	512	
	Minimum instruction execution time	0.96 μs at 1/4 frequency dividing (at 2.4 V to 5.5 V, 32 kHz)	
		1.91 μs at 1/8 frequency dividing (at 2.3 V to 5.5 V, 32 kHz)	
Package	QFP044-P-1010E *Lead-free		

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