

# MN152810

<b>Type</b>		<b>MN152810</b>	
<b>ROM (x8-bit)</b>		8K	
<b>RAM (x4-bit)</b>		320	
<b>Number of Instructions</b>		115	
<b>Minimum Instruction Execution Time</b>		At 1/12 frequency dividing 2 $\mu$ s (at 4.5 to 5.5V, 6MHz)	
<b>Interrupts</b>		• RESET • SIRQ • Remote Control Input • Timer • Serial (Only when choosing Mask Option)	
<b>Timer Counter</b>		<b>Timer Counter : 8-bit x 1</b> Clock Source .....1/2, 1/8, 1/32, 1/128 of System Clock Interrupt Source .....Overflow of Timer Counter	
<b>Serial Interface</b>		<b>Serial : 8-bit x 1</b> (Synchronous Type) Clock Source .....System Clock, $\overline{\text{SBT}}$ Pin Input	
<b>I/O Pins</b>	<b>I/O</b>	<b>6</b>	• Common use : 2 • Specified pull-up Resistor available (Mask Option) • Nch Open-drain available (Output) : 4
	<b>Input</b>	<b>4</b>	• Common use : 1 • Specified pull-up Resistor available : 4 ( Mask Option) • Output selectable : 3 (Software Programmable)
	<b>High Voltage Output</b>	<b>5</b>	• Nch Open-drain (Breakdown Voltage 12V) : 5 • Push-pull Output selectable : 4 (Mask Option)
	<b>Output</b>	<b>5</b>	
<b>A/D Inputs</b>		5-bit x 4ch (Conversion by Software)	
<b>D/A Outputs</b>		6-bit x 5ch	
<b>PWM</b>		7-bit x 4ch (Repetition Cycle 256 $\mu$ s, at 6MHz), 14-bit x 1ch (Repetition Cycle 32.8ms, at 6MHz)	
<b>Special Ports</b>		Tri-state Output (PTO), Remote Control Reception	
<b>CRTC</b>		5 x 7 dots, 16 characters, 6 lines, 7 colors, 120 patterns, Rounding function, Framing function	
<b>Notes</b>		Remote Control Data Detection Circuit built-in, For Voltage Synthesizer, Stand-by	
<b>Package</b>		SDIP052-P-0600	

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**Electrical Characteristics**

**Supply Current**

Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
Operating Supply Current	IDD1	fosc=6MHz, VDD=VDDC=AVDD=5V VSSC=2V, Ta=25°C		28	50	mA
	IDD2	fosc=6MHz, VDD=VDDC=AVDD=5V VSSC=2V, Ta=25°C		4.0	8.0	mA
Supply Current at STOP	IDD3	VDD=VDDC=AVDD=3V, VSSC=0V fosc=0Hz, Ta=25°C			2.0	µA

(Ta=25, 80°C, VDD=5.0V, VSS=0V)

**A/D, D/A Converter Characteristics**

Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
A/D Conversion Absolute Error		VDD=5V, VSS=0V			±1	LSB
D/A Conversion Absolute Error		VDD=5V, VSS=0V			±1/2	LSB
Analog Input Voltage			VSS		VDD	V

(Ta=25, 80°C, VDD=5.0V, VSS=0V, VSSC=0V, VDDC=AVDD=5V)

**Support Tool**

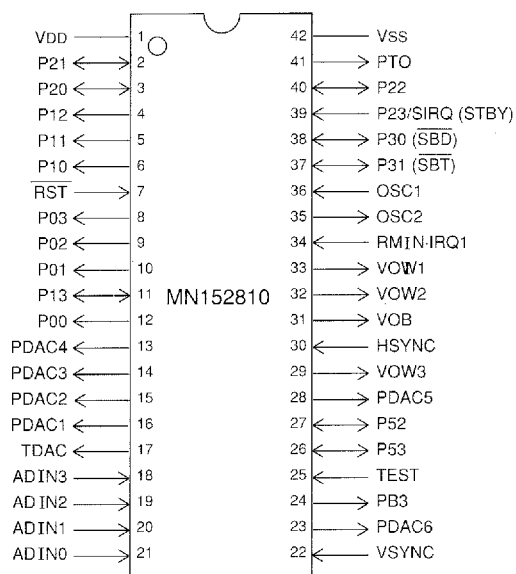
**In-Circuit Emulator**

PX-ICE1500 + PX-PRB152810

**Piggyback**

Use EP152810 as piggy in SDIP052-P-0600 package.

**Pin Assignment**



SDIP052-P-0600

NC : Nothing connected with pin