

APPENDICES

Appendix A. BASIC Stamp specification

The tables below show the specification for basic stamp

Table (2-1) shows the specification for model (BS1-IC &Rev .D& BS2-IC)

Released Products	Rev.D / BS1-IC	BS2-IC
Package	PCB w/Proto / 14-pin SIP	24-pin DIP
Package Size (L x W x H)	2.5"x1.5"x.5 / 1.4"x.6"x.1"	1.2"x0.6"x0.4"
Environment	-40 to +185 °F (-40 to +85 °C) **	-40 to +185 °F (-40 to +85 °C) **
Processor Speed	4 MHz	20 MHz
Program Execution Speed	~2,000 instructions/sec.	~4,000 instructions/sec.
RAM Size	16 Bytes (2 I/O, 14 Variable)	32 Bytes (6 I/O, 26 Variable)
Scratch Pad RAM	N/A	N/A
EEPROM (Program) Size	256 Bytes, ~80 instructions	2K Bytes, ~500 instructions
Number of I/O pins	8	16 +2 Dedicated Serial
Voltage Requirements	5 - 15 vdc	5 - 15 vdc
Current Draw @ 5V	1 mA Run / 25 µA Sleep	3 mA Run / 50 µA Sleep
Source / Sink Current per I/O	20 mA / 25 mA	20 mA / 25 mA
Source / Sink Current per unit	40 mA / 50 mA	40 mA / 50 mA per 8 I/O pins
PBASIC Commands	32	42
PC Programming Interface	Serial (w/BS1 Serial Adapter)	Serial Port (9600 baud)
Windows Text Editor	Stampw.exe (v2.1 and up)	Stampw.exe (v1.04 and up)

Table (2-2) shows the specification for model (BS2e-IC& BS2sx-IC)

Released Products	BS2e-IC	BS2sx-IC
Package	24-pin DIP	24-pin DIP
Package Size (L x W x H)	1.2"x0.6"x0.4"	1.2"x0.6"x0.4"
Environment	-40 to +185 °F (-40 to +85 °C) **	-40 to +185 °F (-40 to +85 °C) **

Processor Speed	20 MHz	50 MHz
Program Execution Speed	~4,000 instructions/sec.	~10,000 instructions/sec.
RAM Size	32 Bytes (6 I/O, 26 Variable)	32 Bytes (6 I/O, 26 Variable)
Scratch Pad RAM	64 Bytes	64 Bytes
EEPROM (Program) Size	8x2K Bytes, ~4,000 instructions	8x2K Bytes, ~4,000 instructions
Number of I/O pins	16 +2 Dedicated Serial	16 +2 Dedicated Serial
Voltage Requirements	5 - 12 vdc	5 - 12 vdc
Current Draw @ 5V	25 mA Run / 200 µA Sleep	60 mA Run / 500 µA Sleep
Source / Sink Current per I/O	30 mA / 30 mA	30 mA / 30 mA
Source / Sink Current per unit	60 mA / 60 mA per 8 I/O pins	60 mA / 60 mA per 8 I/O pins
PBASIC Commands	45	45
PC Programming Interface	Serial Port (9600 baud)	Serial Port (9600 baud)
Windows Text Editor	Stampw.exe (v1.096 and up)	Stampw.exe (v1.091 and up)

Table (2-3) shows the specification for model (BS2p24-IC & BS2p40-IC)

Released Products	BS2p24-IC	BS2p40-IC
Package	24-pin DIP	40-pin DIP
Package Size (L x W x H)	1.2"x0.6"x0.4"	2.1"x0.6"x0.4"
Environment	-40 to +185 °F (-40 to +85 °C) **	+32 to +158 °F (0 to +70 °C) **
Processor Speed	20 MHz Turbo	20 MHz Turbo
Program Execution Speed	~12,000 instructions/sec.	~12,000 instructions/sec.
RAM Size	38 Bytes (12 I/O, 26 Variable)	38 Bytes (12 I/O, 26 Variable)
Scratch Pad RAM	128 Bytes	128 Bytes
EEPROM (Program) Size	8x2K Bytes, ~4,000 instructions	8x2K Bytes, ~4,000 instructions
Number of I/O pins	16 +2 Dedicated Serial	32 +2 Dedicated Serial
Voltage Requirements	5 - 12 vdc	5 - 12 vdc
Current Draw @ 5V	40 mA Run / 350 µA Sleep	40 mA Run / 350 µA Sleep

Source / Sink Current per I/O	30 mA / 30 mA	30 mA / 30 mA
Source / Sink Current per unit	60 mA / 60 mA per 8 I/O pins	60 mA / 60 mA per 8 I/O pins
PBASIC Commands	61	61
PC Programming Interface	Serial Port (9600 baud)	Serial Port (9600 baud)
Windows Text Editor	Stampw.exe (v1.1 and up)	Stampw.exe (v1.1 and up)

Table (2-4) shows the specification for model (BS2pe-IC & BS2px-IC)

Released Products	BS2pe-IC	BS2px-IC
Package	24-pin DIP	24-pin DIP
Package Size (L x W x H)	1.2"x0.6"x0.4"	1.2"x0.60"x0.4"
Environment	+32 to +158 °F (0 to +70 °C) **	+32 to +158 °F (0 to +70 °C) **
Processor Speed	8 MHz Turbo	32 MHz Turbo
Program Execution Speed	~6,000 instructions/sec.	~19,000 instructions/sec.
RAM Size	38 Bytes (12 I/O, 26 Variable)	38 Bytes (12 I/O, 26 Variable)
Scratch Pad RAM	128 Bytes	128 Bytes
EEPROM (Program) Size	16x2K Bytes (16K for source)	8 x 2k Bytes, ~4000 inst.
Number of I/O pins	16 +2 Dedicated Serial	16+2 Dedicated Serial
Voltage Requirements	5 - 12 vdc	5 - 12 vdc
Current Draw @ 5V	15 mA Run / 36 µA Sleep	55 mA Run / 450 µA Sleep
Source / Sink Current per I/O	30 mA / 30 mA	30 mA / 30 mA
Source / Sink Current per unit	60 mA / 60 mA per 8 I/O pins	60 mA / 60 mA per 8 I/O pins
PBASIC Commands	61	63
PC Programming Interface	Serial Port (9600 baud)	Serial Port (19200 baud)
Windows Text Editor	Stampw.exe (v1.33 and up)	Stampw.exe (v2.2 and up)

Appendix B. DATA SHEETS

MT8870D/MT8870D-1 Integrated DTMF Receiver

BASIC Stamp 2 model (BS2 -IC)

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