

# PA591-44Q(03 or 06T) Data Sheet

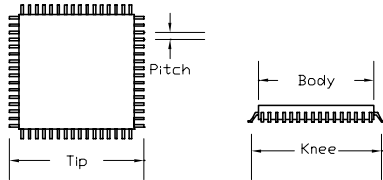
44 pin TQFP or PQFP socket/40 pin DIP 0.6" plug

## Supported Device/Footprints

This adapter allows programming of Philips 87C591 44 pin QFP devices in the 40 pin DIP footprint of an 87C51-FC.

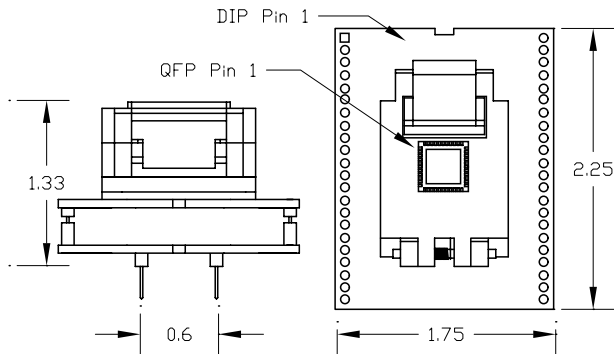
Mfgr	Device		Footprint	
	Device	Package	Device	Plug
Philips	87C591	QFP	87C51-FC	40 Pin DIP

The QFP socket accepts packages with the dimensions listed below:

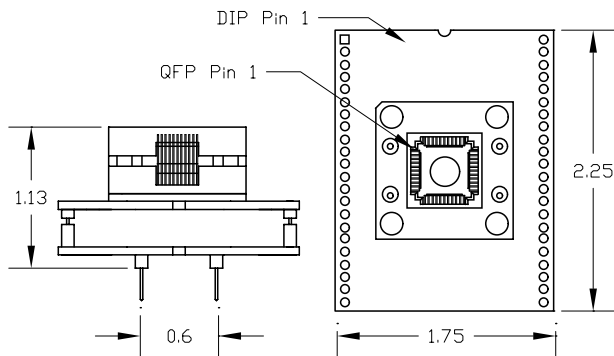


Socket	Body	Knee	Tip	Pitch
44QF-03 TQFP	10.0 mm typ	11 mm typ 11.3 mm max	12 mm typ 12.8 mm max	0.8 mm
44QF-06T TQFP or PQFP	10.0 mm typ	11 mm typ 11.6 mm max	12 mm typ 13.2 mm max	0.8 mm

## Adapter Dimensions



PA591-44Q06T



PA591-44Q03

## Adapter Parts & Part Numbers

The following chart shows the various socket and board part numbers that make up these adapters.

Adapter	Socket	Top Board	Bottom Board
PA591-44Q03	44QF-03	44QFP-03	591-44
PA591-44Q06T	44QF-06T	44QFP-6T	591-44

## Adapter Construction

The adapter is made up of 3 sub-assemblies. They assemble via connectors making the adapter modular. This way the sub-assemblies can be replaced when they wear out.

When disassembling the adapter take care not to bend the pins. When reassembling the adapter note the pin 1 indicators to align the parts correctly.

## Test Sockets

LSC #	Style	Mfgr/Pn
44QF-03	Open Top ZIF	Enplas OTQ-44-0.8-03
44QF-06T	Lidded ZIF	Enplas FPQ-44-0.8-06T

## Adapter Wiring

The following chart shows the connections from the QFP device to the adapter's DIP plug.

DEVICE	SIGNAL	PLUG	DEVICE	SIGNAL	PLUG
1	P1.5	6	23	P2.5	26
2	P1.6	7	24	P2.6	27
3	P1.7	8	25	P2.7	28
4	RST*	9	26	PSEN-	29
5	P3.0	10	27	ALE/PROG-	30
6	PMW0	-	28	PMW1	-
7	P3.1	11	29	EA-/Vpp	31
8	P3.2	12	30	P0.7	32
9	P3.3	13	31	P0.6	33
10	P3.4	14	32	P0.5	34
11	P3.5	15	33	P0.4	35
12	P3.6	16	34	P0.3	36
13	P3.7	17	35	P0.2	37
14	XTAL2	18	36	P0.1	38
15	XTAL1	19	37	P0.0	39
16	Vss	20	38	Vdd	40
17	Vdd	40	39	AVss	20
18	P2.0	21	40	P1.0	1
19	P2.1	22	41	P1.1	2
20	P2.2	23	42	P1.2	3
21	P2.3	24	43	P1.3	4
22	P2.4	25	44	P1.4	5

\*RESET is active low for the 87C591, and active high for the 87C51-FC. The signal is inverted on the adapter.

## Memory Map

The 87C591 is a 16K device (0000 - 3FFF), while the 87C51-FC is an 32K device (0000 - 7FFF). The programmer's address range should be reduced when using this adapter.