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PIC32MX470F512L 100-pin to 100-pin TQFP USB Plug-In Module (PIM) Information Sheet

OVERVIEW

The PIC32MX470F512L USB PIM is designed to demonstrate the capabilities of the PIC32MX430/450/470F512L family of devices using development boards such as the Explorer 16 Development Board, which supports 100-pin PIM interfaces.

The PIC32MX470F512L is a high performance 32-bit Microcontroller in a 100-pin TQFP package.

[Table 1](#) shows the mapping between the 100-pin PIM interface board functions and the device pins.

[Figure 1](#) through [Figure 3](#) provide schematics for the device and the PIM.

TABLE 1: 100-PIN TO 100-PIN PIM

Device Pin #	PIC32MX470F512L Functional Description	PIM Pin #
1	RG15	69
2	VDD	2
3	AN22/RPE5/PMD5/RE5	3
4	AN23/PMD6/RE6	4
5	AN27/PMD7/RE7	5
6	RPC1/RC1	6
7	RPC2/RC2	7
8	RPC3/RC3	8
9	RPC4/CTED7/RC4	9, 54
10	AN16/C1IND/RPG6/SCK2/PMA5/RG6	10
11	AN17/C1INC/RPG7/PMA4/RG7	11
12	AN18/C2IND/RPG8/PMA3/RG8	12
13	MCLR	13
14	AN19/C2INC/RPG9/PMA2/RG9	14
15	VSS	15
16	VDD	16
17	TMS/CTED1/RA0	17
18	RPE8/RE8	18
19	RPE9/RE9	19
20	AN5/C1INA/RPB5/VBUSon/RB5	96
21	AN4/C1INB/RB4	21
22	PGED3/AN3/C2INA/RPB3/RB3	22
23	PGEC3/AN2/C2INB/RPB2/CTED13/RB2	20
24	PGEC1/AN1/RPB1/CTED12/RB1	24
25	PGED1/AN0/RPB0/RB0	25
26	PGEC2/AN6/RPB6/RB6	26, 32
27	PGED2/AN7/RPB7/CTED3/RB7	27
28	VREF-/CVREF-/PMA7/RA9	28
29	VREF+/CVREF+/PMA6/RA10	29
30	AVDD	30
31	AVSS	31
32	AN8/RPB8/CTED10/RB8	26, 32
33	AN9/RPB9/CTED4/RB9	33
34	CVREFOUT/AN10/RPB10/CTED11/PMA13/RB10	34

Device Pin #	PIC32MX470F512L Functional Description	PIM Pin #
35	AN11/PMA12/RB11	35
36	VSS	36
37	VDD	37
38	TCK/CTED2/RA1	38
39	RPF13/RF13	39
40	RPF12/RF12	40
41	AN12/PMA11/RB12	41
42	AN13/PMA10/RB13	42
43	AN14/RPB14/CTED5/PMA1/RB14	43
44	AN15/RPB15/OCFB/CTED6/PMA0/RB15	44
45	VSS	45
46	VDD	46
47	RPD14/RD14	47
48	RPD15/RD15	48
49	RPF4/PMA9/RF4	49
50	RPF5/PMA8/RF5	50
51	USBID/RF3	95
52	RPF2/RF2	52
53	RPF8/RF8	51
54	VBUS	1
55	VUSB3V3	62
56	D-	89
57	D+	90
58	SCL2/RA2	58
59	SDA2/RA3	59
60	TDI/CTED9/RA4	60
61	TDO/RA5	61
62	VDD	62
63	OSC1/CLKI/RC12	63
64	OSC2/CLKO/RC15	64
65	VSS	65
66	SCL1/RPA14/RA14	57
67	SDA1/RPA15/RA15	67
68	RPD8/RTCC/RD8	68

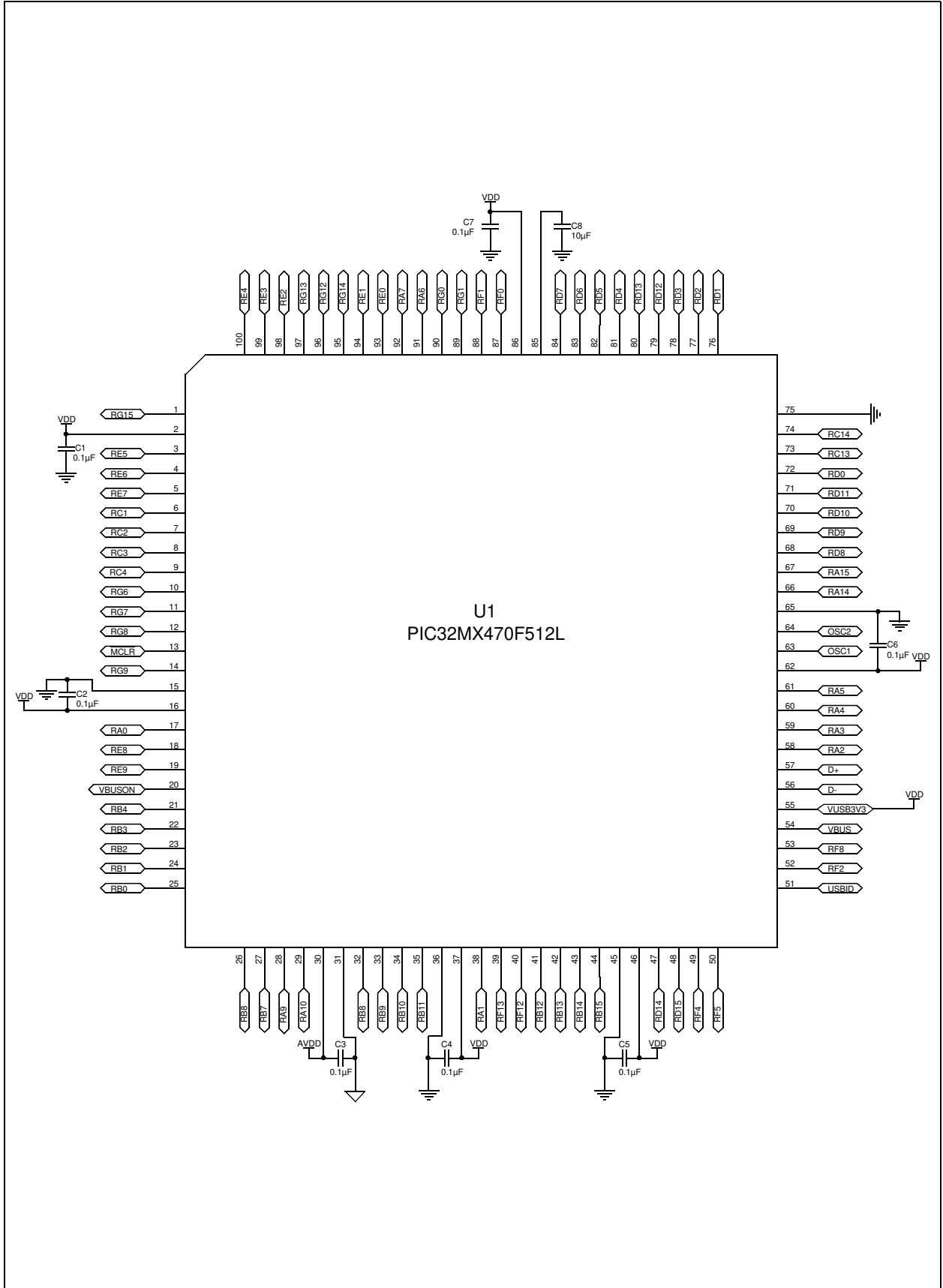
PIC32MX470F512L

TABLE 1: 100-PIN TO 100-PIN PIM (CONTINUED)

Device Pin #	PIC32MX470F512L Functional Description	PIM Pin #	Device Pin #	PIC32MX470F512L Functional Description	PIM Pin #
69	RPD9/RD9	23	85	VCAP	NC
70	RPD10/SCK1/PMCS2/RD10	70	86	VDD	86
71	RPD11/PMCS1/RD11	71	87	RPF0/PMD11/RF0	87
72	RPD0/INT0/RD0	72	88	RPF1/PMD10/RF1	88
73	SOSCI/RPC13/RC13	73	89	RPG1/PMD9/RG1	NC
74	SOSCO/RPC14/T1CK/RC14	74	90	RPG0/PMD8/RG0	NC
75	Vss	75	91	TRCLK/RA6	91
76	AN24/RPD1/RD1	76	92	TRD3/CTED8/RA7	92
77	AN25/RPD2/RD2	77	93	PMD0/RE0	93
78	AN26/RPD3/RD3	78	94	PMD1/RE1	94
79	RPD12/PMD12/RD12	79	95	TRD2/RG14	NC
80	PMD13/RD13	80	96	TRD1/RG12	NC
81	RPD4/PMWR/RD4	81	97	TRD0/RG13	97
82	RPD5/PMRD/RD5	82	98	AN20/CTPLS/PMD2/RE2	98
83	PMD14/RD6	83	99	RPE3/PMD3/RE3	99
84	PMD15/RD7	84	100	AN21/PMD4/RE4	100

PIC32MX470F512L

FIGURE 1: 100-PIN DEVICE SCHEMATIC



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FIGURE 2: 100-PIN PIM SOCKET SCHEMATIC

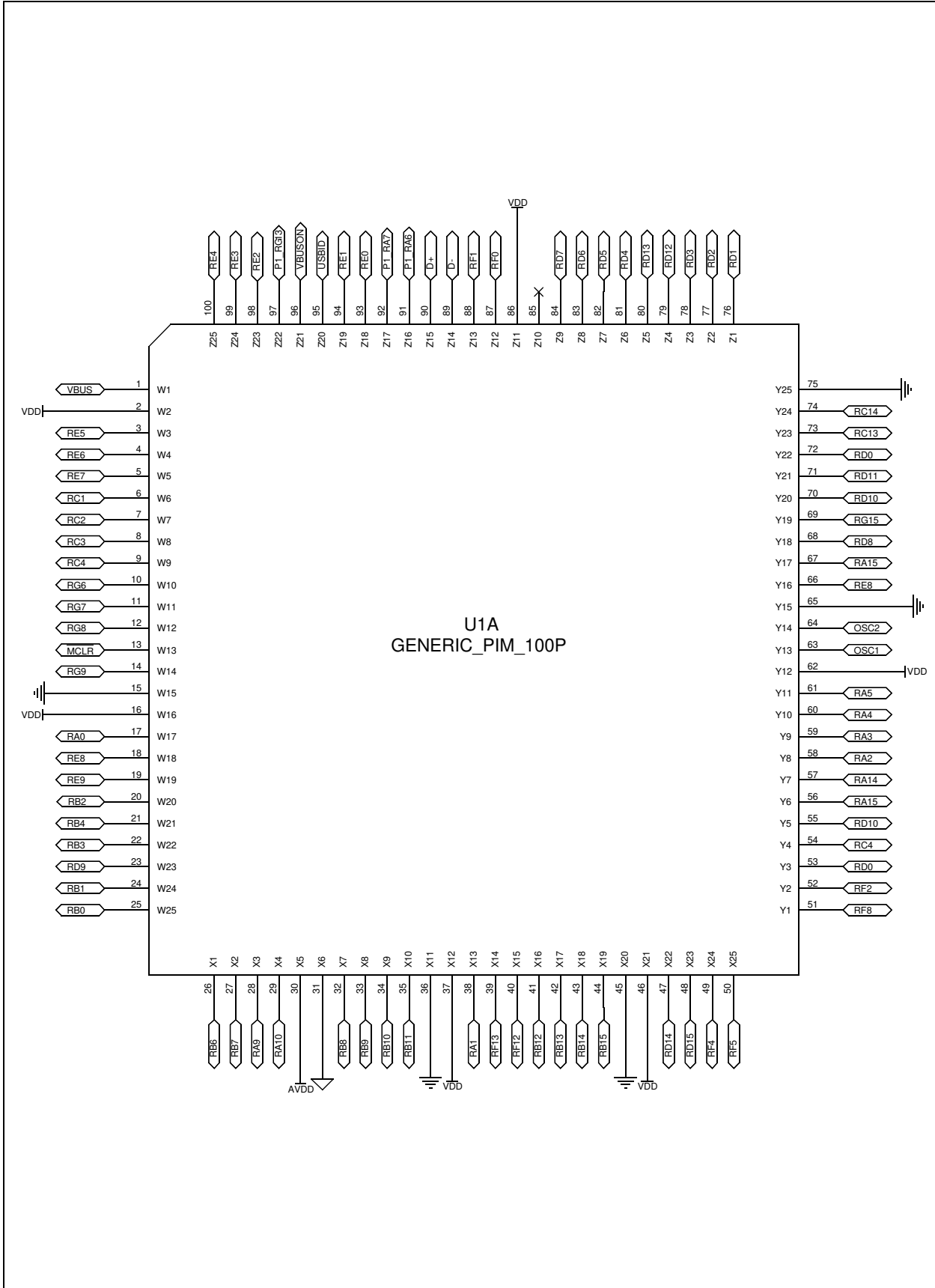
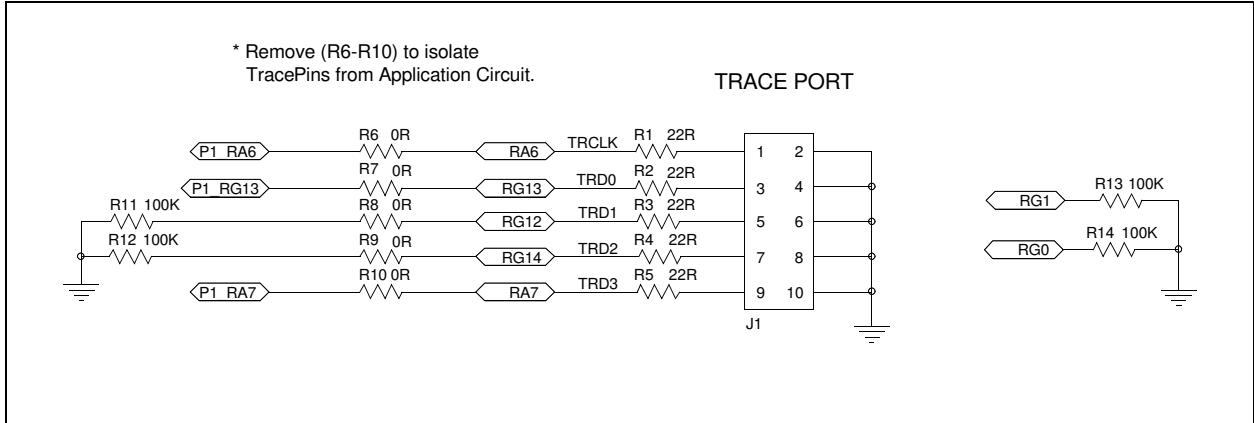


FIGURE 3: TRACE PORT SCHEMATIC



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 Printed on recycled paper.

ISBN: 978-1-62077-561-5

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