

# M3T-DIRECT80S

Direct Dummy IC for 80-pin 0.65mm pitch QFP

## User's Manual

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### CAUTION

If the requirements shown in the "CAUTION" sentences are ignored, the equipment may cause personal injury or damage to the products.

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# 1. Description

This accessory tool connects an emulation pod and the target. It can be mounted on the same foot pattern as the MCU housed in the 80-pin 0.65mm pitch QFP. It is applicable to the M16C and 740 Family, etc.

# 2. Package Components (see Figure 1)

- (1) DIRECT80S main unit (16.8x16.8mm)
- (2) DIRECT80S User's Manual (this manual)

# 3. Specifications

Table 1 Specifications

Item	Description
Package	PRQP0080JA-A (formerly: 80P6S-A) (80-pin 0.65mm-pitch QFP)
Max. current	200mA, 5V
Insertion/removal iterations of connector	20 times guaranteed
Insulation resistance	100MΩ or over

# 4. Application (see Figure 2)

Mount this dummy IC on the foot pattern on the target. Then connect the emulation pod at the top of dummy IC. Before using M3T-DIRECT80S, be sure to read the precautions on page 3.

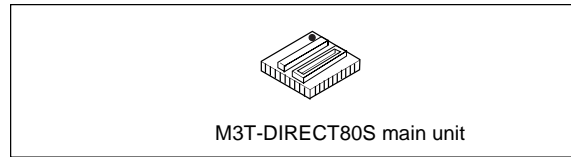


Figure 1 Package components of M3T-DIRECT80S

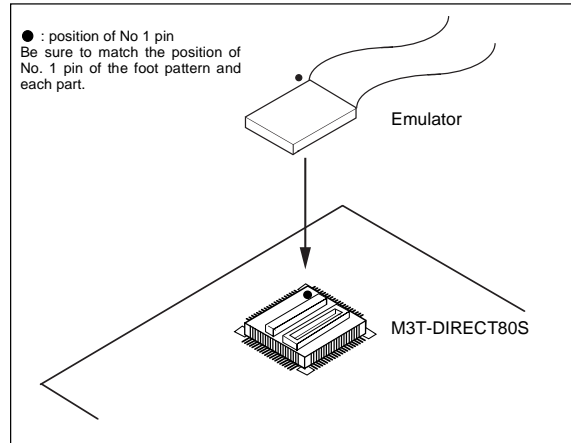


Figure 2 Usage of M3T-DIRECT80S

# 5. Target Foot Pattern

Figure 3 shows the recommended foot pattern of M3T-DIRECT80S.

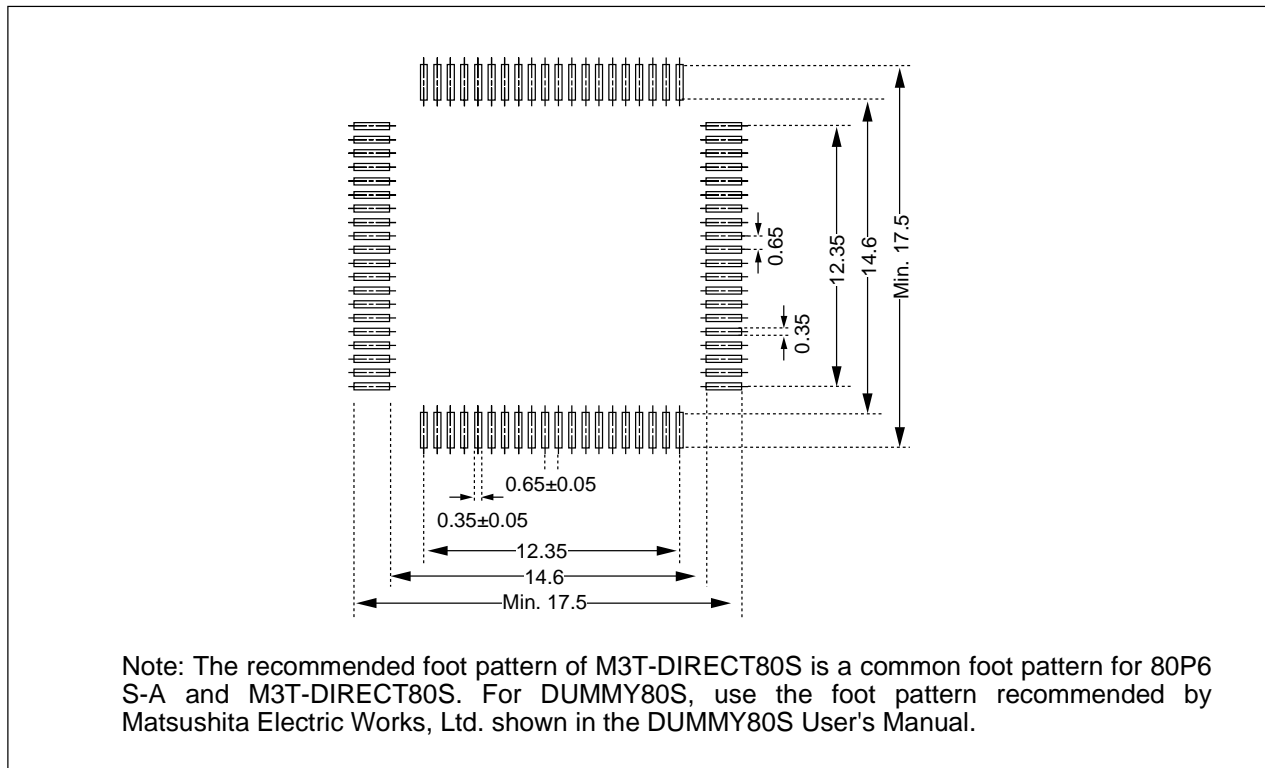


Figure 3 Recommended foot pattern of M3T-DIRECT80S

## 6. Precautions

### ⚠ CAUTION

Caution To Be Taken for This Product:

- ⚠ • Before mounting the M3T-DIRECT80S, be sure to check the pin positions.

### IMPORTANT

Notes for This Product:

- We cannot accept any request for repair.
- For inquiries about the product or the contents of this manual, contact your local distributor.

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## 7. External Dimensions of M3T-DIRECT80S

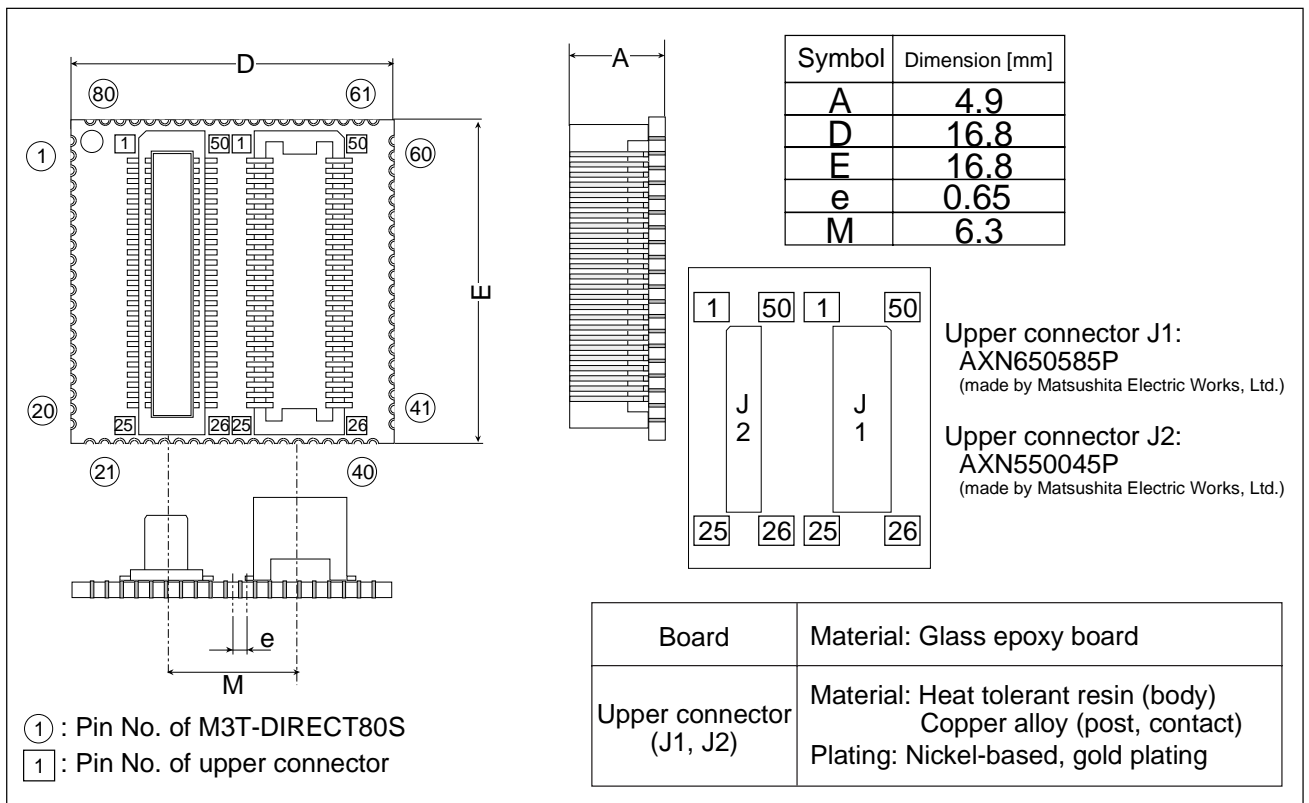


Figure 4 External dimensions of M3T-DIRECT80S

Note:

Some part numbers in this user's manual can be referred to as the following.

In this manual      Actual part number

DIRECT80S   ->  M3T-DIRECT80S

## 8. Correspondence of Connectors J1 and J2

Table 2 lists the correspondence of M3T-DIRECT80S and connectors J1, J2.

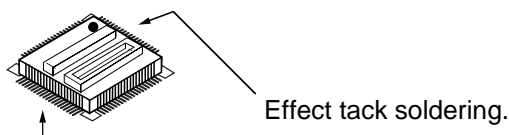
Table 2 Correspondence of M3T-DIRECT80S and connectors J1, J2

Connector pin No.	DIRECT80S pin No.	Connector pin No.	DIRECT80S pin No.	Connector pin No.	DIRECT80S pin No.	Connector pin No.	DIRECT80S pin No.
J1-1	63	J1-26	NC	J2-1	79	J2-26	23
J1-2	64	J1-27	39	J2-2	80	J2-27	24
J1-3	65	J1-28	40	J2-3	1	J2-28	25
J1-4	66	J1-29	41	J2-4	2	J2-29	26
J1-5	67	J1-30	42	J2-5	3	J2-30	27
J1-6	68	J1-31	43	J2-6	4	J2-31	28
J1-7	69	J1-32	44	J2-7	5	J2-32	29
J1-8	70	J1-33	45	J2-8	6	J2-33	30
J1-9	NC	J1-34	46	J2-9	7	J2-34	NC
J1-10	NC	J1-35	47	J2-10	8	J2-35	NC
J1-11	NC	J1-36	48	J2-11	9	J2-36	NC
J1-12	NC	J1-37	49	J2-12	10	J2-37	NC
J1-13	NC	J1-38	50	J2-13	11	J2-38	NC
J1-14	NC	J1-39	51	J2-14	12	J2-39	NC
J1-15	NC	J1-40	52	J2-15	13	J2-40	NC
J1-16	NC	J1-41	53	J2-16	14	J2-41	NC
J1-17	NC	J1-42	54	J2-17	15	J2-42	NC
J1-18	31	J1-43	55	J2-18	16	J2-43	71
J1-19	32	J1-44	56	J2-19	17	J2-44	72
J1-20	33	J1-45	57	J2-20	18	J2-45	73
J1-21	34	J1-46	58	J2-21	19	J2-46	74
J1-22	35	J1-47	59	J2-22	20	J2-47	75
J1-23	36	J1-48	60	J2-23	21	J2-48	76
J1-24	37	J1-49	61	J2-24	22	J2-49	77
J1-25	38	J1-50	62	J2-25	NC	J2-50	78

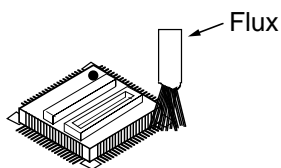
(NC: not connected)

## 9. Recommended Procedure for Soldering M3T-DIRECT80S

(1) Fix the soldering position

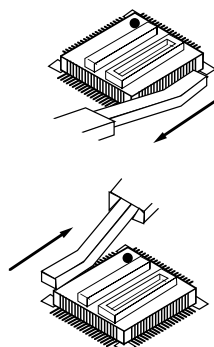


(2) Apply the flux



- Apply flux to the semicircular through holes on the four sides.

(3) Solder



- Use a soldering iron having a large contact surface.
- Move the soldering iron in parallel with each surface (with a feeling of causing the solder to flow).
- Pressing the semicircular through holes hard may cause them to get crushed, so be careful.
- Make certain that no solder bridges are present.

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