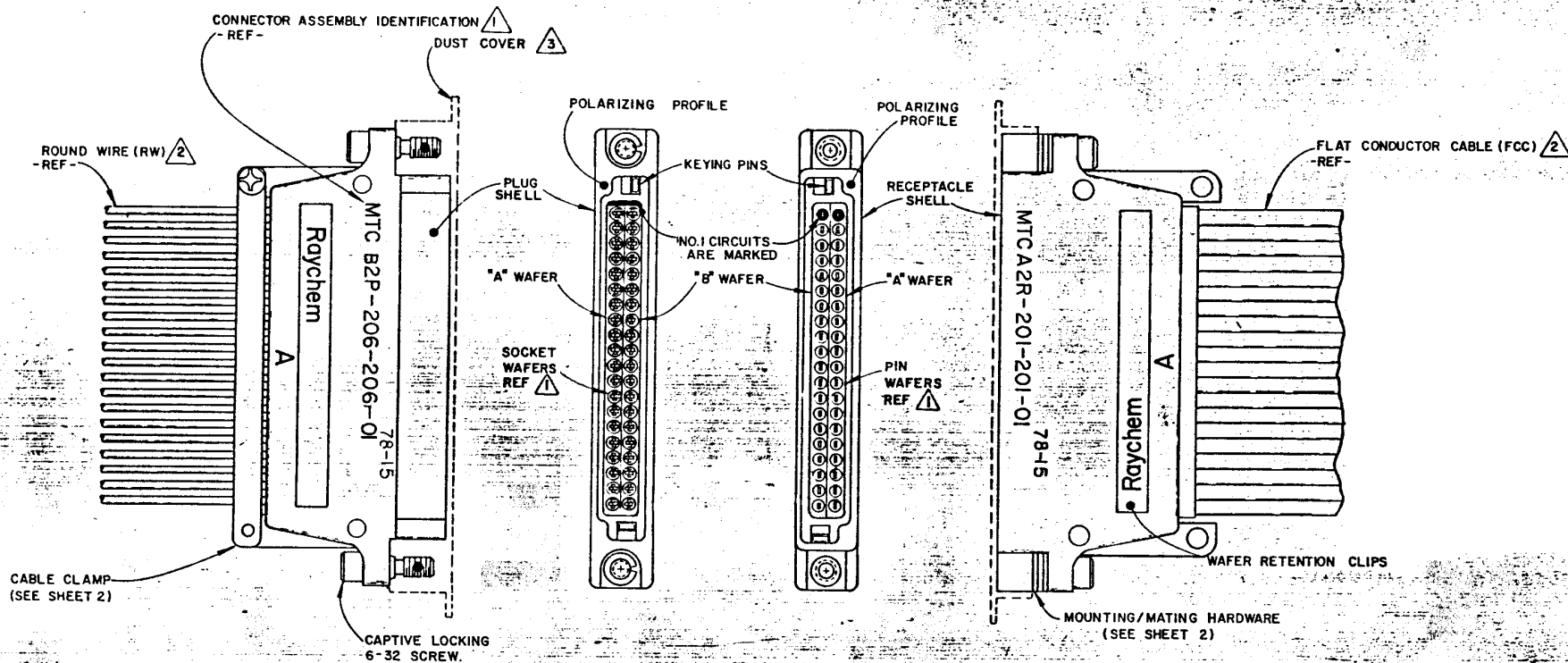


REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
M	REVISED PER ECN #T-11856	8/24/77	JB
N	REVISED PER ECN T-20169	6-13-95	Wagon
P	REV PER ECO 12-020967	CT 12-12	RH



NOTES-

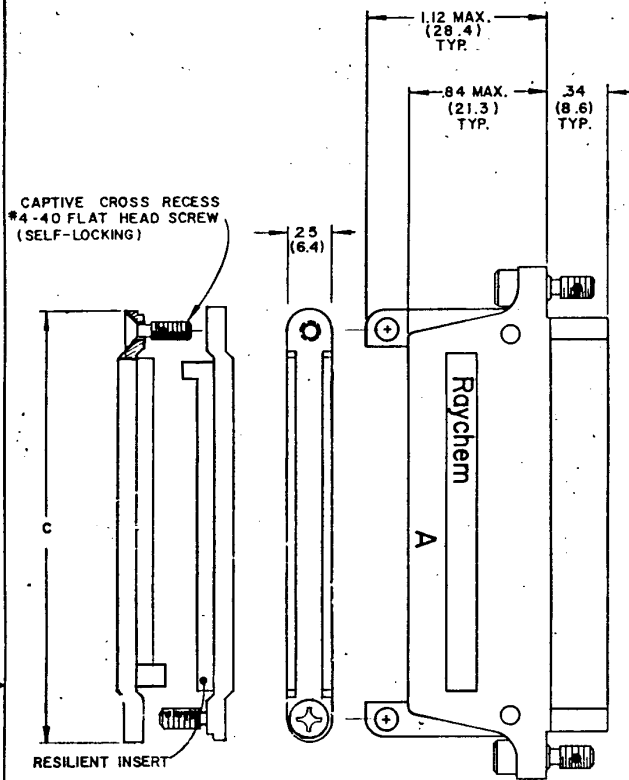
1. PLUG & RECEPTACLE SHELLS ACCEPT BOTH PIN & SOCKET WAFERS INTERCHANGEABLY. FOR SHELL AND MOUNTING DETAILS, SEE SHEET 2. FOR WAFER DETAILS, SEE SHEET 3.
2. THE TERMINATED AND ASSEMBLED CONNECTOR IS SHOWN FOR REFERENCE. SEE SHEET 4 FOR ORDERING INFORMATION.
3. DUST COVER SUPPLIED WITH EACH SHELL.

CUSTOMER DRAWING

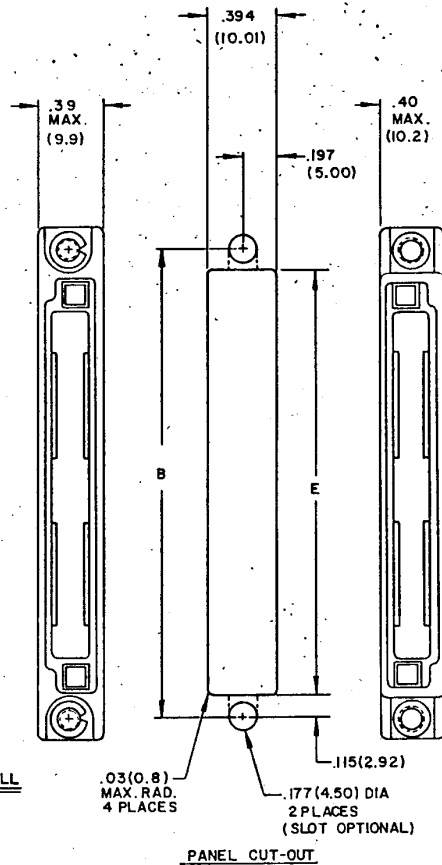
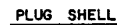
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DRAWN	V.D.T.	9-13-76	Raychem	
CHECKED	ELM	1-25-77	SPECIFICATION CONTROL DRAWING	
APPROVED			MTC CONNECTOR TYPE I, .100 INCH CENTERS ASSEMBLY	
APPROVED				
APPROVED				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND TOLERANCES ARE			SZL	CODE IDENT
XXX XX X			C	NO 06090
			DWG NO D652-0001	
			DO NOT SCALE THIS DRAWING	
			SHEET 1 OF 5	

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2 CABLE CLAMP (2-PIECE)



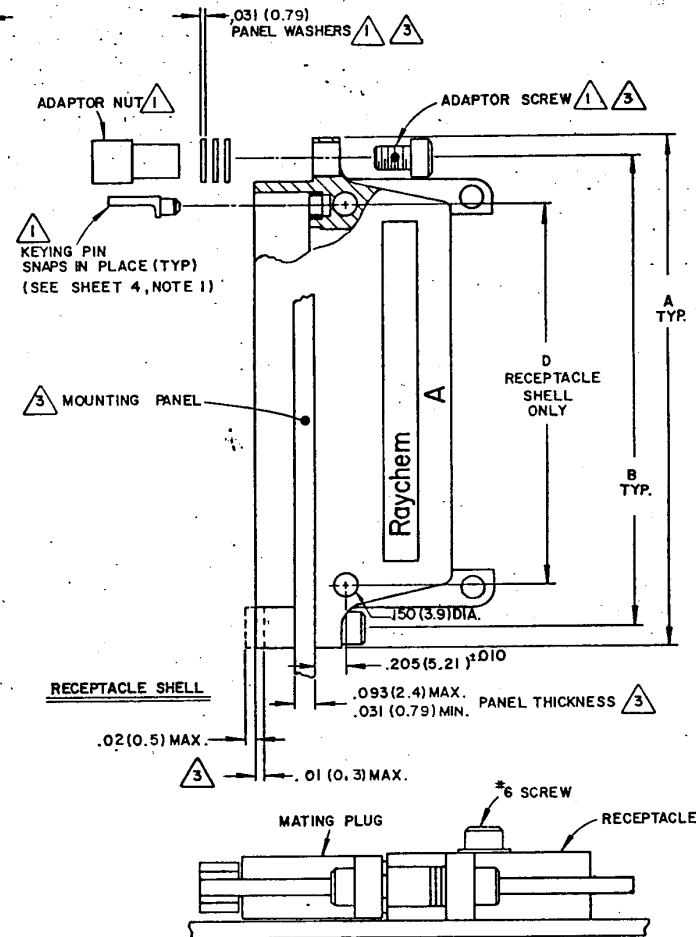
PANEL CUT-OUT

NOTES :

 KEYING PIN IS SUPPLIED UNINSTALLED. MOUNTING/MATING HARDWARE IS SUPPLIED LOOSE WITH EACH RECEPTACLE.

2 CABLE CLAMP IS AVAILABLE ON BOTH PLUG & RECEPTACLE SHELLS

3 RECEPTACLE IS PANEL MOUNTED BY REMOVING AS MANY PANEL WASHERS AS REQUIRED TO ACCOMMODATE THE THICKNESS OF PANEL BEING USED. DO NOT FRONT MOUNT (PANEL ON BACK SIDE OF FLANGE) WITHOUT CONSULTING FACTORY. USE ONLY ADAPTER SCREWS SUPPLIED WITH CONNECTOR. NUT TO BE FLUSH WITH RECEPTACLE WITHIN TOLERANCE INDICATED.



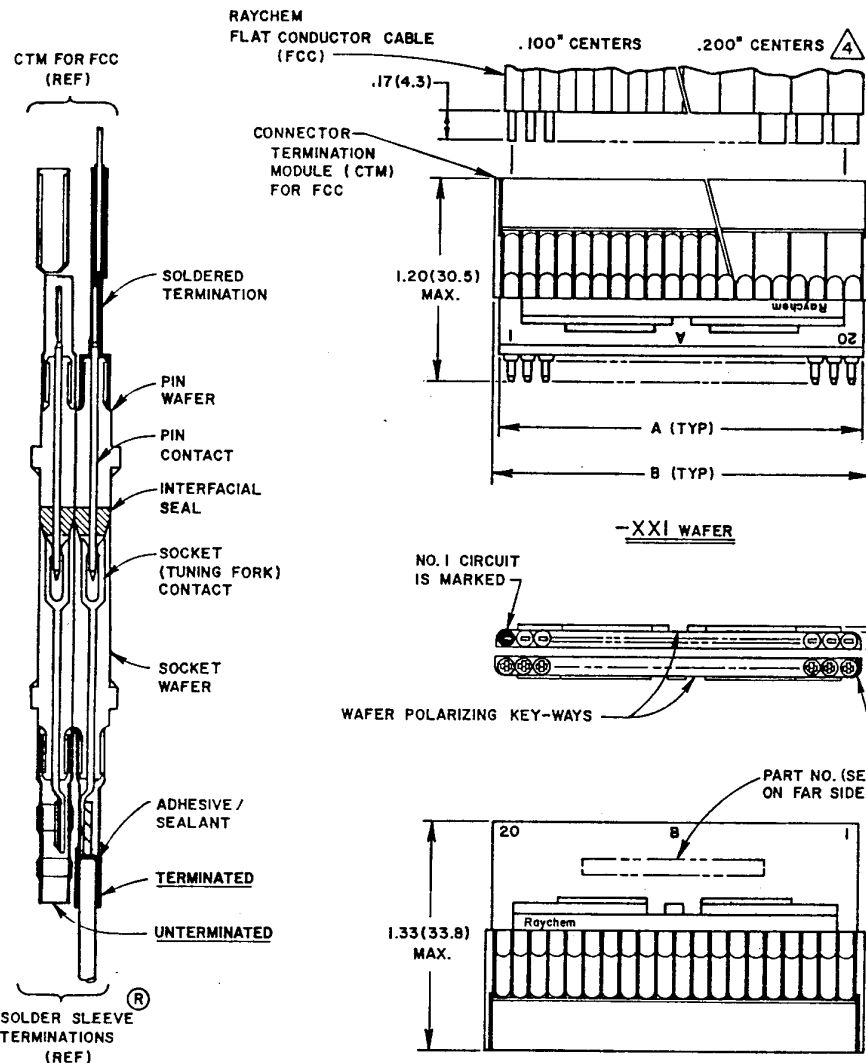
FLAT MOUNTING OF RECEPTACLE SHELL

© 1976

DIMENSION	SHELL SIZE	
	1 INCH	2 INCH
A	2.00(50.8)	3.00(76.2)
B	1.75(44.45)	2.75(69.85)
C	1.50(38.1)	2.50(63.5)
D	1.27(32.25)	2.27(57.66)
E	1.52(38.61)	2.52(64.01)
MATED LENGTH (MAX)	W/CLAMPS	W/O
	2.6 (66)	2.1 (53.3)

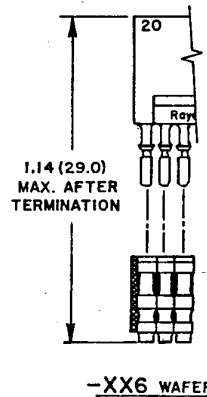
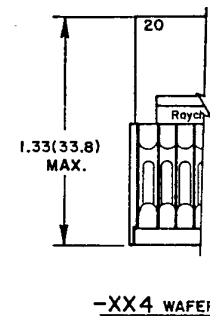
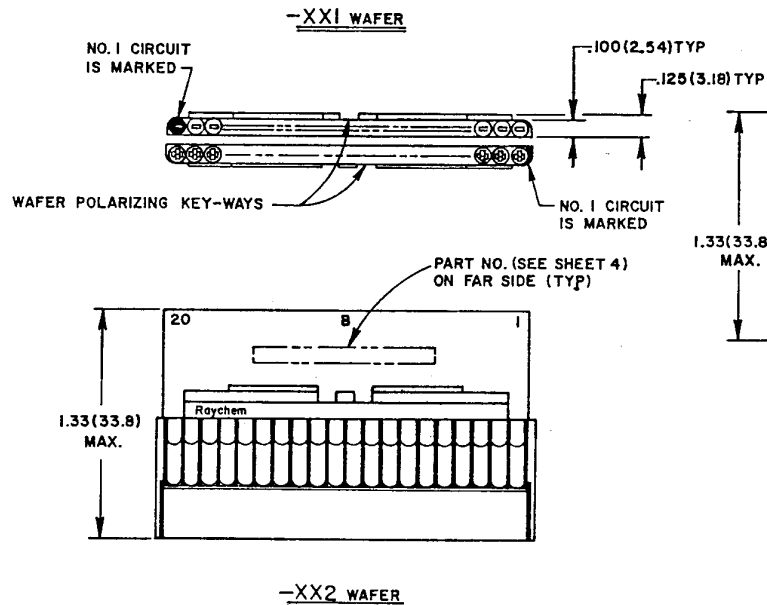
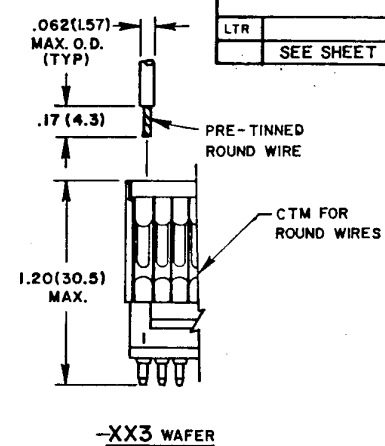
DRAWN	V.D.T.	9-13-77	Raychem			RAYCHEM CORPORATION 300 CONSTITUTION DRIVE BERKELEY, CA 94705		
CHECKED	<i>R.M.H.</i>	1-25-77	SPECIFICATION CONTROL DRAWING					
APPROVED	<i>V.D.T.</i>	2-7-77	TITLE					
APPROVED			MTC CONNECTOR, TYPE I, .100 INCH CENTERS SHELL DETAIL & MOUNTING					
APPROVED								
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES (MM) AND TOLERANCES ARE:			SIZE	CODE IDENT.	DWG. NO.			
.XXX ± .005 (0.13)			C	NO. 06090	D652-0001			
.XX ± .02 (0.5)			DO NOT SCALE THIS DRAWING			SHEET 2 OF 5		

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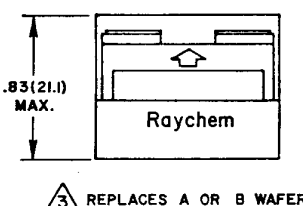
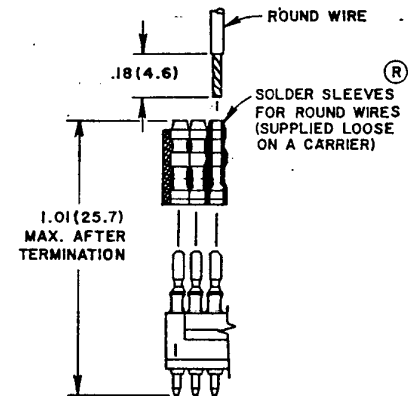


NOTES:

1. FOR ORDERING INFORMATION SEE SHEET 4. FOR TERMINATION TOOLING REQUIREMENTS SEE SHEET 5.
2. ANY A AND B WAFER OF THE SAME WIDTH MAY BE INSTALLED IN EITHER PLUG OR RECEPTACLE SHELLS, INTERCHANGEABLY (SEE SHEET 1).
3. A DUMMY WAFER (NO CONTACTS) MAY BE SUBSTITUTED FOR ANY STYLE WAFER OF THE SAME WIDTH (SEE SHEET 4).
4. 2-INCH WAFERS ARE SHOWN FOR REFERENCE.



WAFER SIZE	A	B MAX.
1-INCH	1.03 (26.2)	1.12 (28.4)
2-INCH	2.03 (51.6)	2.12 (53.8)



3 REPLACES A OR B WAFER

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
SEE SHEET 1			

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DRAWN	CHANG	1-24-77	Raychem	
CHECKED	Ed Hall	1-25-77	SPECIFICATION CONTROL DRAWING	
APPROVED	Ed Hall	2-7-77	TITLE	
APPROVED			MTC CONNECTOR, TYPE I, .100 INCH CENTERS	
APPROVED			WAFER DETAIL	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND TOLERANCES ARE (MM)			SIZE	CODE IDENT.
.XXX : ± .005 (0.13)			C	NO. 06090
.XX : ± .02 (0.5)			DWG. NO.	
— : ± .001			D652-0001	
DO NOT SCALE THIS DRAWING			SHEET 3 OF 5	

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MULTIPLE TERMINATION CONNECTOR

SERIES: A-125° C RATING BLACK ANODIZE FINISH
B-150° C RATING NICKEL PLATE
C-150° C RATING CADMIUM PLATE

"A" WAFER DESIGNATION

"B" WAFER DESIGNATION

SHELL MODIFICATION CODE:
00-WITHOUT CABLE CLAMP BUT WITH EARS
01-WITH CABLE CLAMP

MTC X XX-XXX-XXX-XX-YY

KEYING CODE (SEE CHART)

CONTACT STYLE, WIRE TYPE:

0- NO CONTACTS (DUMMY)

1- PIN, FCC

2- SOCKET, FCC

3- PIN, R.W. (CTH)

4- SOCKET, R.W. (CTH)

5- PIN, R.W.-SOLDER SLEEVE

6- SOCKET, R.W.-SOLDER SLEEVE

7- PIN, R.W. GRIPPER RING SOLDER SLEEVE

8- SOCKET, R.W. GRIPPER RING SOLDER SLEEVE

NUMBER OF CONDUCTORS PER WAFER: 05,10,20, (SEE TABLE)
OR 10- 1 INCH DUMMY WAFER
20- 2 INCH DUMMY WAFER

SHELL TYPE:
P- PLUG
R- RECEPTACLE

CONNECTOR WIDTH (NOM.)
1- 1 INCH
2- 2 INCH

ACCESSORIES / REPLACEMENTS			
DESCRIPTION	QTY (REF)	FOR USE WITH	
		SERIES A OR B	SERIES C
CABLE CLAMP, 1-INCH	2	CB1276-000	CHA-0091
CABLE CLAMP, 2-INCH	2	CB1277-000	CHA-0092
KEYING PIN	2	D659-0043	
ADAPTOR NUT	2	D659-0043	CHA-0095
PANEL WASHER	6	D659-0042	CHA-0093
ADAPTOR SCREW	2	D659-0044	CHA-0094
MOCK-UP WAFER 1-INCH	A/R	D659-0063	
MOCK-UP WAFER 2-INCH	A/R	D659-0064	
SOLDER SLEEVE	A/R		
A SERIES, 1-INCH STRIP		D659-0028	
A SERIES, 2-INCH STRIP		D659-0038	
B OR C SERIES, 1-INCH STRIP		CTA-0026	
B OR C SERIES, 2-INCH STRIP		CTA-0027	

WIRE TYPE	CONDUCTOR CENTER SPACING	NUMBER OF CONDUCTORS PER WAFER		CONDUCTOR AWG.	MAXIMUM ROUND WIRE O.D.
RW	.100	10	20	26-20	.062 (1.57)
FCC				24-22	
CONNECTOR WIDTH (NOM.)		1 INCH	2 INCH		

CABLE ACCOMMODATION

RECEPTACLE	AA	PLUG
	AB	
	AC	
	AD	
	BA	
	BB	
	BC	
	BD	
	CA	
	CB	
	CC	
	CD	
	DA	
	DB	
	DC	
	DD	

RECEPTACLE CODE PLUG

KEYING CHART

NOTES-

- KEYING CODE DOES NOT FORM A PART OF RAYCHEM PART NUMBERING SYSTEM AND SHOULD BE OMITTED WHEN ORDERING. SHELLS ARE SUPPLIED WITH A BLANK SPACE FOR KEYING CODE, KEYING PINS ARE SUPPLIED UN-INSTALLED.
- WHEN SUPPLIED AS PART OF A COMPLETE CONNECTOR, SHELL WILL BE MARKED WITH COMPLETE CONNECTOR PART NUMBER. WHEN SUPPLIED SEPARATELY, SHELL WILL BE PROVIDED WITH BLANKS FOR WAFER DESIGNATION.
- CONNECTOR IS DESIGNED TO ACCEPT RAYCHEM FLAT CABLE PER RAYCHEM SPECIFICATION 50. (125°C OPERATION)
- FOR TORQUE REQUIREMENTS ON MATING SEE RCPS 200-21.
- FOR ORDERING REPLACEMENT OR ACCESSORY ITEMS, REFER TO THE RAYCHEM SPECIFICATION CONTROL DRAWINGS INDICATED IN THE TABLE.
- EXAMPLES OF PART NUMBERING:
MTCB 2P-205-205-01

COMPLETE 150° C CONNECTOR WITH:
2" PLUG SHELL (NO CABLE CLAMP)
A PIN WAFER WITH SOLDER SLEEVE ROUND WIRE TERMINATIONS, .100 CENTERS
B PIN WAFER WITH FLAT CABLE MTM, .100 CENTERS.

MTCB2X-XXX-206
MTCX2X-200-200

B. SOCKET WAFER WITH SOLDER SLEEVE ROUND WIRE TERMINATIONS.
2" DUMMY WAFER

- IN TWO CASES THE WAFER DESIGNATION IS USED IN SHELL ASSEMBLY PART NUMBERING:
-010-010-1" SHELL ASSEMBLY
-020-020-2" SHELL ASSEMBLY
THESE NUMBERS SHOULD BE USED WHEN ORDERING SHELLS ONLY.

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DRAWN	V.D.T.	9-13-76	Raychem	
CHECKED	L.H. HUL	1-25-77	SPECIFICATION CONTROL DRAWING	
APPROVED	H.H.	1-7-77	TITLE	
APPROVED			MTC CONNECTOR	
APPROVED			TYPE I, .100 INCH CENTERS	
APPROVED			ORDERING INFORMATION	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES (MM) AND TOLERANCES ARE			SIZE	CODE IDENT
.XXX .			C	NO 06090
.XX .			DWG NO. D652-0001	
. .			DO NOT SCALE THIS DRAWING	
			SHEET 4 OF 5	

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RAYCHEM CORPORATION
300 CONSTITUTION DRIVE
BERKELEY, CA 94025

SPECIFICATION

Refer to Raychem Specification D-6006
for complete details
Unless Otherwise Specified

Ratings

Temperature	MTCA	-65°C to +125°C
	MTCB	-65°C to +150°C
	MTCC	-65°C to +150°C
	500 volts	
Voltage		
Current	5 amps	

Materials

MTM Insulating Body	Polyvinylidene Fluoride
Solder Sleeve Tubing	Polyvinylidene Fluoride
Sealing Material	Thermally Stabilized Thermoplastic
Wafer Material	High grade Polyarylene Thermoplastic
Solder	MTCA -Sn63 per QQ-S-571 MTCB -Sb5 per QQ-S-571
Flux	Per QQ-S-571 type SRAP
Contact Finish	Gold Plated per MIL-G-45204, Type I, Grade C, Class 1 on mating surfaces
Shell Finish	MTCA -Black Anodized per MIL-A-8625, Type II MTCB -Electroless nickel per MIL-C-26074, Class 3, Grade B MTCC -Cadmium plate per QQ-P-416 over nickel underplate
Mounting/Mating Hardware	Stainless Steel, passivated for MTCA and MTCB connectors Stainless Steel, Cadmium plated for BTCC connectors
Elastomeric Seals	Fluorosilicone Rubber

Tooling Required

Consult Factory For Tooling Required

Summary of Specifications

Test	Test Method	Performance Requirement	
Insulation Resistance	*Method 3003		
Room Temperature	23°C	5000 Megohms, minimum	
Upper Rated Temperature	after 1000 hours	200 Megohms, minimum	
Dielectric Withstanding Voltage			
Sea Level	*Method 3001, 1500 VAC rms, 60 Hz	No breakdown or flashover	
High Altitude	*Method 105, 70,000 ft., 375 VAC rms, 60 Hz	No breakdown or flashover	
Contact Resistance			
At Rated Current	Initial	10 milliohms	maximum
	After Conditioning	12 milliohms	
At Low Level Current	Initial	10 milliohms	
	After Conditioning	14 milliohms	
Shell-to-Shell Conductivity	1 amp	50 millivolts	maximum
Electrical Engagement	Fully Mated Position	.050" minimum	
		Engaging	Separating
Contact Engaging and Separating Forces	Initial (max. avg.)	9 oz. max.	1 oz. min.
	After Conditioning	12 oz. max.	1 oz. min.
Durability	500 cycles	No damage, pass Contact Resistance	

▲ ENTIRE SYSTEM MUST BE CADMIUM PLATED FOR 500 HOURS SALT SPRAY COMPATABILITY TO BE EFFECTIVE.

1. THIS SPECIFICATION SHEET TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN.

NOTES: REFERENCE DOCUMENTS SHALL BE OF THE ISSUES IN EFFECT ON DATE OF INVITATION TO BID.

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
SEE SHEET 1			

Tensile Strength
Flat Cable
Round Wires

100 lbs. per inch of cable width minimum
20 lbs. for AWG 20
12 lbs. for AWG 22
8 lbs. for AWG 24
5 lbs. for AWG 26 minimum

Insert Retention *Method 2010, 100 psi
Contact Retention *Method 2007, 10 lbs. load
Connector Mating and Unmating Per D-6006, 10 cycles

Retain normal position
Axial displacement not to exceed 0.02 inches
Pass Contact Resistance and Engaging/Separating Forces

Maintenance Aging 3 mating cycles, 5 wafer removal cycles, 3 mating cycles
Vibration *Method 2005, (20g's peak)
Test Condition IV

No damage

Mechanical Shock *Method 2004, 6 ms, Sawtooth 9.7 ft/sec, 100g's
Thermal Shock *Method 1003, rated temperatures
Temperature Life *Method 1005, 1000 hours

No physical damage or electrical discontinuity greater than 1 microsecond
No physical damage or electrical discontinuity greater than 1 microsecond
No cracking, crazing or physical damage
Pass Insulation Resistance, Elevated and Ambient Temperature and Contact Resistance

Humidity *Method 1002, Type II
10 cycles, 90-98% relative humidity

Insulation Resistance of 100 Megohms, minimum

Altitude Immersion *Method 1004, 75,000 ft., 3 cycles
Altitude-Low Temp. 70,000 ft., -50°C

Insulation Resistance of 1000 Megohms, minimum
Pass Dielectric Withstanding Voltage
Dielectric Withstanding Voltage of 625 volts, 60 Hz

Pass Insulation Resistance and Dielectric Withstanding Voltage at Sea Level

Salt Spray (Corrosion) ▲ *Method 1001
(48 hours for MTCA and MTCB connectors)
(500 hours for MTCC connectors)

No damage detrimental to connector operation

Ozone Resistance 0.010 to 0.015% ozone in air for 2 hours

No cracking in termination area, pass Insulation Resistance

Fungus Resistance MIL-STD-454, Req. 4
Fluid Immersion MISC. Fluids (see D-6006)
Permeability Indicator per MIL-I-17214
Solderability **Method 208
MTCA-Sn63 solder at 230°C
MTCB-Sb5 solder at 316°C

No fungus growth
No damage sufficient to prevent functioning
2.0 maximum
95% minimum coverage

*MIL-STD-1344
**MIL-STD-202

TEST METHODS FOR ELECTRICAL CONNECTORS
TEST METHODS FOR ELECTRICAL COMPONENT PARTS

SPECIFICATION CONTROL DRAWING

D6520001.DRW

DRAWN	LUTTICKEN	1-22-86	Raychem		RAYCHEM CORPORATION 300 CONSTITUTION DRIVE MENLO PARK, CALIFORNIA 94025	
CHECKED			TITLE		MTC CONNECTOR TYPE I, .100 INCH CENTERS SPECIFICATION SHEET	
APPROVED			SIZE		CODE IDENT. NO.	DWG. NO.
APPROVED			C		06090	D652-0001
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. METRIC DIMENSIONS ARE IN PARENTHESES			DO NOT SCALE THIS DRAWING		WEIGHT	SHEET 5 OF 5

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Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[TE Connectivity:](#)

[MTCB2P-020-020-01](#)