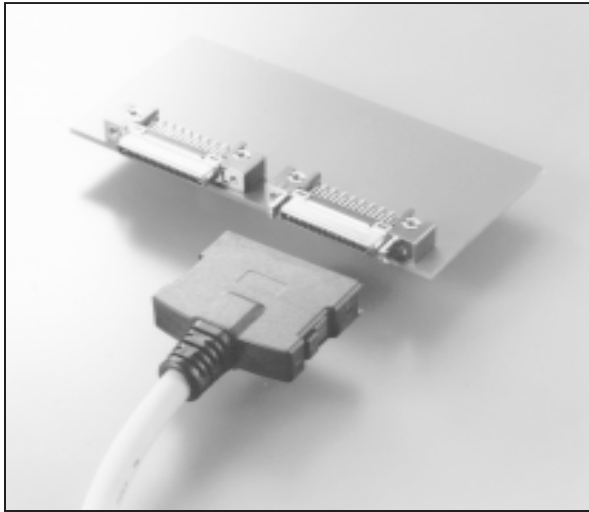


# TX20A SERIES CONNECTORS

## 1.27mm (.050") Contact Spacing, PCB-to-Cable (IDC Type) Connectors



### FEATURES

- Mating side contacts are arranged on 1.27mm (.050") centers, double row
- Extremely low profile
- Right-angle through hole and SMT (right-angle and straddle) receptacle versions available
- Standard PCB front and reverse right-angle SMT versions available
- Reliable ribbon type contacts withstand twisting force of mating and unmating
- Rapid, sure-locking mechanism
- IDC termination for plugs

### GENERAL SPECIFICATIONS

Number of Contacts	10, 14, 26, 36, 50, 68
Contact Spacing	1.27mm (.050"), Double row
Current Rating	0.5 Amps
Dielectric Withstanding Voltage	500 VAC r.m.s. (for one minute)
Insulation Resistance	100 megohms min.
Contact Resistance	40 milliohms max.
Operating Temperature	-40°C to +80°C
Applicable Wire	#28 AWG, discrete wires
Applicable PCB Thickness:	
Through Hole Type	1.2mm or 1.6mm (.047" or .063")
SMT Type	0.7mm (.028") min. 1.0mm, 1.2mm, 1.6mm (.039", .047", .063") for straddle
Applicable Panel Thickness	1.2mm (.047") max.



TX20A Series connectors are extremely low profile, high density connectors with contact spacing on 1.27mm (.050") centers. This series includes receptacles (board side), plugs (IDC termination) and hoods with a locking mechanism. This product is ideal for interface between electronic units. The ribbon type contact configuration will not fail under a twisting force during mating and unmating. The rapid locking system provides a positive "click" feel when locked. The TX20A Series is highly reliable and has excellent EMI shielding. The connectors provide flexibility in connecting between units of state-of-the-art electronic devices, such as laptop and pocket-type miniature computers.

### MATERIALS AND FINISHES

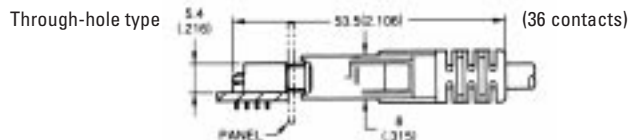
#### • Receptacle

Description	Materials/Finishes
Shell	Steel/Nickel Plating
Contact	Phosphor Bronze Connecting area: Gold plated over Nickel [Gold 0.1 μm (.000004") min.] Terminal area: Tin Plating
Insulator	Glass-filled PBT (UL94V-0, Black) for through hole Glass-filled PPS (UL94V-0, Black) for SMT
Locator	Glass-filled PBT (UL94V-0, Black) (Through hole)
Hook Lug	Zinc Alloy/Nickel Plating
Ground Lug	Zinc Alloy/Nickel Plating (Through hole)
Hook Pin	Phosphor Bronze/Tin Plating (With-hook-pin type)
Spring Pin	Stainless (Straddle SMT)
Hold-Down	Phosphor Bronze/Tin Plating (Option for right angle SMT)

#### • Plug

Shell	Steel/Nickel Plating
Contact	Copper Alloy Connecting area: Gold plated over Nickel [Gold 0.1 μm (.000004") min.] Terminal area: Tin Plating
Base Insulator	Glass-filled Nylon (UL94V-0, Black)
Cover Insulator	Glass-filled PBT (UL94V-0, Black)
Backshell	Stainless Steel
Hood	Glass-filled PC (UL94V-0, Black)
Bushing	PVC/UL94V-0, Black
Lock Spring	Stainless Steel

Connector Profile (Ref.)



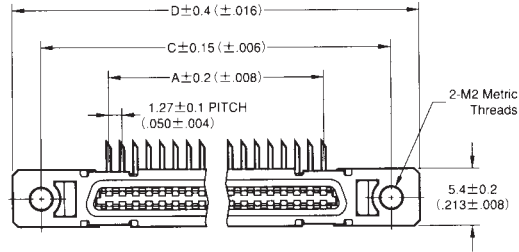
Dimensions and specifications subject to change without notice.

# TX20A SERIES CONNECTORS

## 1.27mm (.050") Contact Spacing, PCB-to-Cable (IDC Type) Connectors

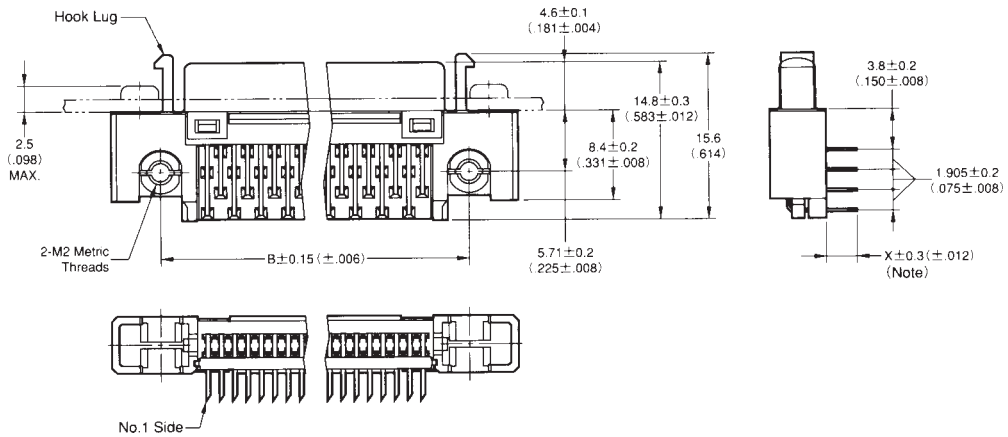
### RECEPTACLE • RIGHT ANGLE THROUGH HOLE WITH SCREWS

Note : Shown with hook lug for locking mechanism. No hook lugs without locking mechanism.



Note: Terminal Length

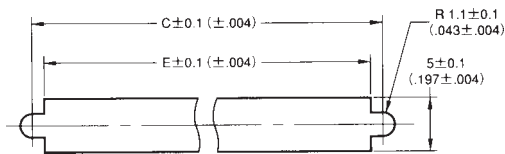
Code*	Dimension X
None	2.4 (.094)
1	2.8 (.110)



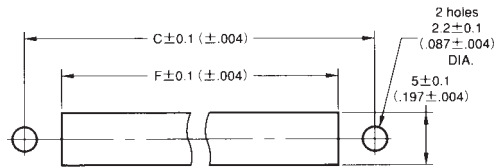
#### Panel Cut-Out (Ref.)

Panel thickness 1.2mm (.047") max.

#### WITH HOOK LUG



#### WITHOUT HOOK LUG



Refer to PCB Mounting Dimension Page.

No. of Contacts	Part Number (Note 1)		A $\pm 0.2$ ( $\pm .008$ )	B $\pm 0.15$ ( $\pm .006$ )	C	D $\pm 0.4$ ( $\pm .016$ )	E $\pm 0.1$ ( $\pm .004$ )	F $\pm 0.1$ ( $\pm .004$ )
	With Hook Lug	Without Hook Lug						
10	TX20A-10R-D2LT*-A1L	TX20A-10R-D2LT*-A1	5.08 (.200)	13.97 (.550)	17.78 (.700)	23.08 (.909)	15.48 (.609)	10.74 (.423)
14	TX20A-14R-D2LT*-A1L	TX20A-14R-D2LT*-A1	7.62 (.300)	16.51 (.650)	20.32 (.800)	25.62 (1.009)	18.02 (.709)	13.28 (.523)
26	TX20A-26R-D2LT*-A1L	TX20A-26R-D2LT*-A1	15.24 (.600)	24.13 (.950)	27.94 (1.100)	33.24 (1.309)	25.64 (1.009)	20.90 (.823)
36	TX20A-36R-D2LT*-A1L	TX20A-36R-D2LT*-A1	21.59 (.850)	30.48 (1.200)	34.29 (1.350)	39.59 (1.559)	31.99 (1.259)	27.25 (1.073)
50	TX20A-50R-D2LT*-A1L	TX20A-50R-D2LT*-A1	30.48 (1.200)	39.37 (1.550)	43.18 (1.700)	48.48 (1.909)	40.88 (1.609)	36.14 (1.423)
68	TX20A-68R-D2LT*-A1L	TX20A-68R-D2LT*-A1	41.91 (1.650)	50.80 (2.000)	54.61 (2.150)	59.91 (2.359)	52.31 (2.059)	47.57 (1.873)

Note 1: \* Add PCB thickness code.  
No letter: 1.2mm (.047"), 1: 1.6mm (.063")

Dimensions in mm (inches).

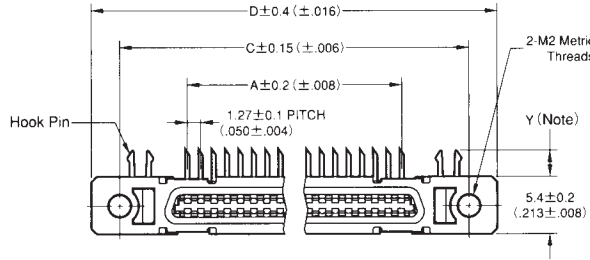


# TX20A SERIES CONNECTORS

## 1.27mm (.050") Contact Spacing, PCB-to-Cable (IDC Type) Connectors

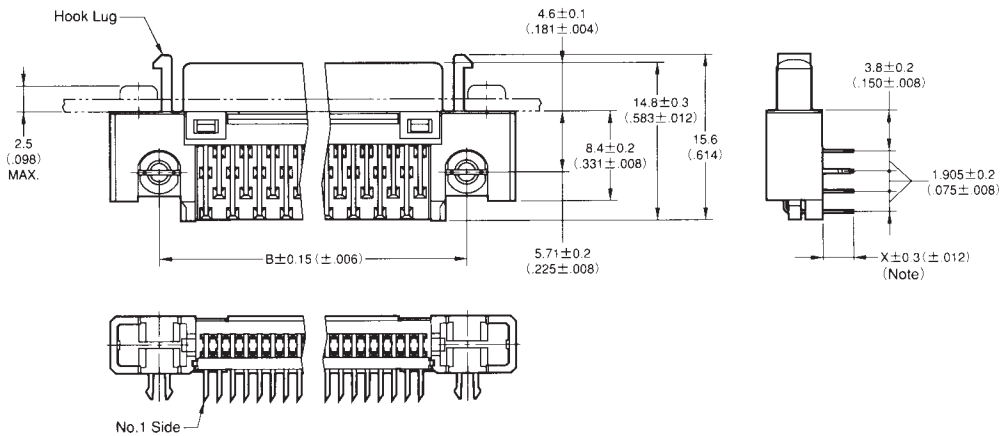
### RECEPTACLE • RIGHT ANGLE THROUGH HOLE WITH HOOK-PINS

Note : Shown with hook lug for locking mechanism. No hook lugs without locking mechanism.



Note: Terminal Length (X)/Hook-Pin Length (Y)

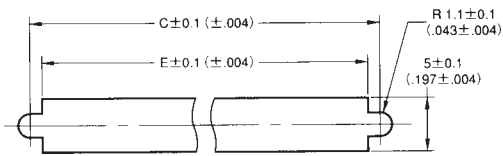
Code*	Dimension X	Dimension Y
None	2.4 (.094)	1.3 (.051)
1	2.8 (.110)	2.5 (.098)



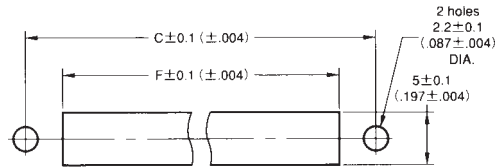
#### Panel Cut-Out (Ref.)

Panel thickness 1.2mm (.047") max.

#### WITH HOOK LUG



#### WITHOUT HOOK LUG



Refer to PCB Mounting Dimension Page.

No. of Contacts	Part Number (Note 1)		A $\pm 0.2$ ( $\pm .008$ )	B $\pm 0.15$ ( $\pm .006$ )	C	D $\pm 0.4$ ( $\pm .016$ )	E $\pm 0.1$ ( $\pm .004$ )	F $\pm 0.1$ ( $\pm .004$ )
	With Hook Lug	Without Hook Lug						
10	TX20A-10R-D2LT*-A1LH	TX20A-10R-D2LT*-A1H	5.08 (.200)	13.97 (.550)	17.78 (.700)	23.08 (.909)	15.48 (.609)	10.74 (.423)
14	TX20A-14R-D2LT*-A1LH	TX20A-14R-D2LT*-A1H	7.62 (.300)	16.51 (.650)	20.32 (.800)	25.62 (1.009)	18.02 (.709)	13.28 (.523)
26	TX20A-26R-D2LT*-A1LH	TX20A-26R-D2LT*-A1H	15.24 (.600)	24.13 (.950)	27.94 (1.100)	33.24 (1.309)	25.64 (1.009)	20.90 (.823)
36	TX20A-36R-D2LT*-A1LH	TX20A-36R-D2LT*-A1H	21.59 (.850)	30.48 (1.200)	34.29 (1.350)	39.59 (1.559)	31.99 (1.259)	27.25 (1.073)
50	TX20A-50R-D2LT*-A1LH	TX20A-50R-D2LT*-A1H	30.48 (1.200)	39.37 (1.550)	43.18 (1.700)	48.48 (1.909)	40.88 (1.609)	36.14 (1.423)
68	TX20A-68R-D2LT*-A1LH	TX20A-68R-D2LT*-A1H	41.91 (1.650)	50.80 (2.000)	54.61 (2.150)	59.91 (2.359)	52.31 (2.059)	47.57 (1.873)

Note 1: \* Add PCB thickness code.

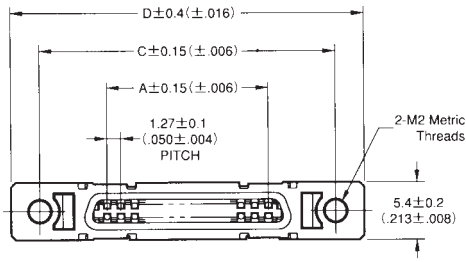
No letter: 1.2mm (.047"), 1: 1.6mm (.063")

Dimensions in mm (inches).

# TX20A SERIES CONNECTORS

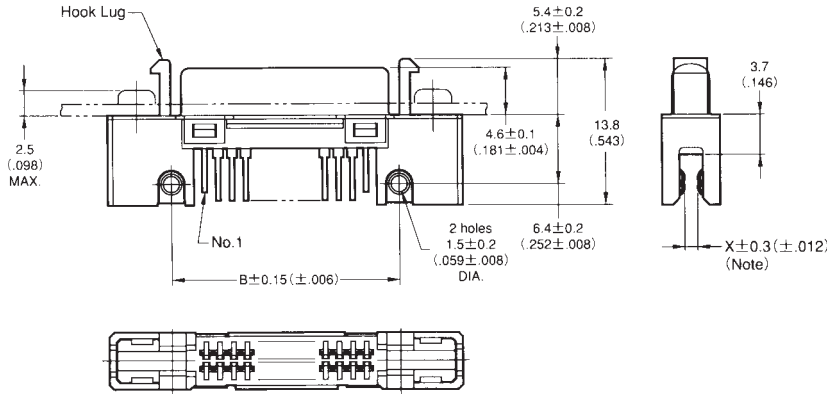
## 1.27mm (.050") Contact Spacing, PCB-to-Cable (IDC Type) Connectors

### RECEPTACLE • STRADDLE SURFACE MOUNT TECHNOLOGY

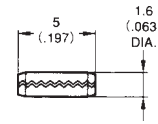


Note: Terminal Row-to-Row Distance

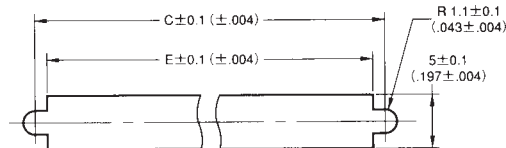
Code*	Dimension X
None	0.8 (.031)
1	1.2 (.047)



Spring Pin (Attachment)



*Panel Cut-Out (Ref.)*  
Panel thickness 1.2mm (.047") max.



Refer to PCB Mounting Dimension Page.

No. of Contacts	Part Number (Note 1)		A ± 0.15 (± .006)	B ± 0.15 (± .006)	C	D ± 0.4 (± .016)	E ± 0.1 (± .004)
	With Spring Pin	Without Spring Pin					
10	TX20A-10R-D2SF*-A1LP	TX20A-10R-D2SF*-A1L	5.08 (.200)	11.43 (.450)	17.78 (.700)	23.08 (.909)	15.48 (.609)
14	TX20A-14R-D2SF*-A1LP	TX20A-14R-D2SF*-A1L	7.62 (.300)	13.97 (.550)	20.32 (.800)	25.62 (1.009)	18.02 (.709)
26	TX20A-26R-D2SF*-A1LP	TX20A-26R-D2SF*-A1L	15.24 (.600)	21.59 (.850)	27.94 (1.100)	33.24 (1.309)	25.64 (1.009)
36	TX20A-36R-D2SF*-A1LP	TX20A-36R-D2SF*-A1L	21.59 (.850)	27.94 (1.100)	34.29 (1.350)	39.59 (1.559)	31.99 (1.259)

Note 1: \* Add PCB thickness code.

No letter: 1.0mm (.039") or 1.2mm (.047"), 1: 1.6mm (.063")

Dimensions in mm (inches).

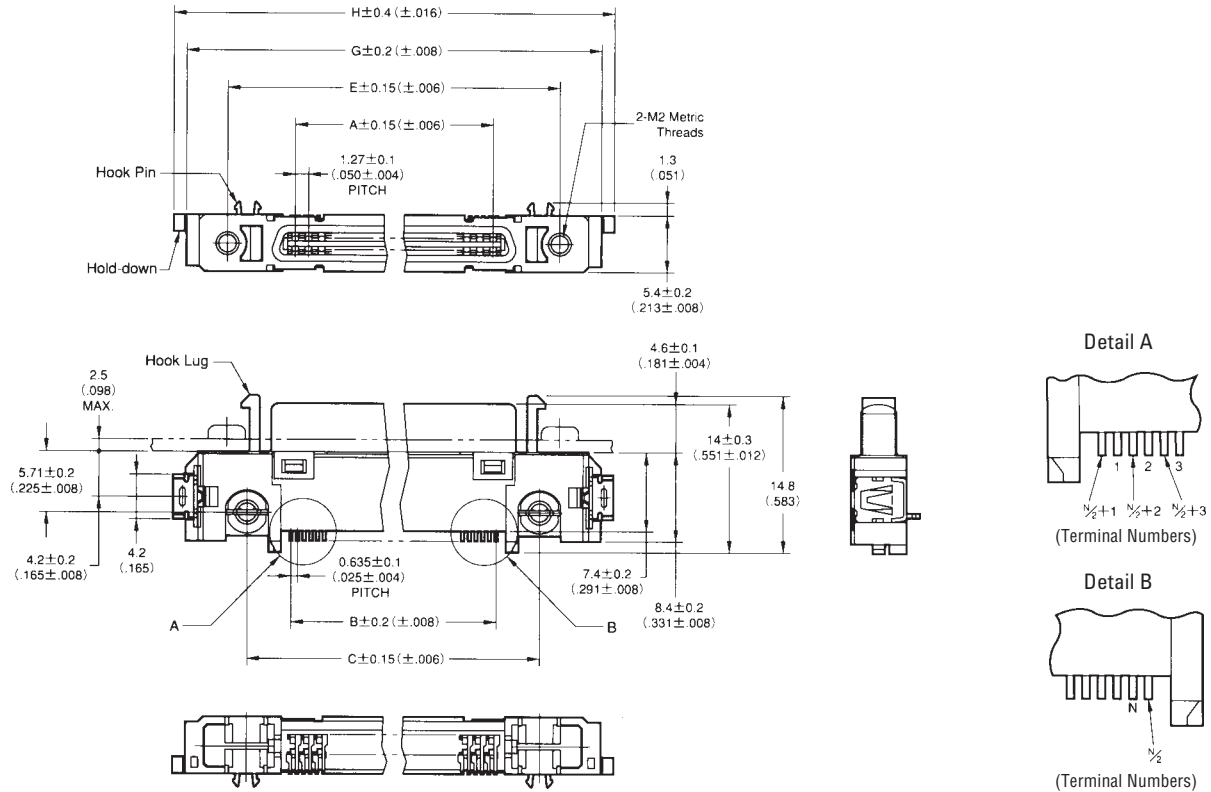


# TX20A SERIES CONNECTORS

## 1.27mm (.050") Contact Spacing, PCB-to-Cable (IDC Type) Connectors

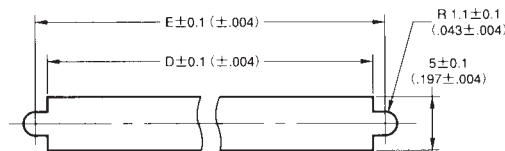
### RECEPTACLE • RIGHT ANGLE SURFACE MOUNT TECHNOLOGY • STANDARD (SCREW/HOOK PIN/HOLD-DOWN/HOOK PIN AND HOLD-DOWN OPTIONS)

Note : Shown with hook pins and a hold-down mechanism.



#### Panel Cut-Out (Ref.)

Panel thickness 1.2mm (.047") max.



Refer to PCB Mounting Dimension Page.

No. of Contacts	Part Number (Note 1)	A ± 0.15 (±.006)	B ± 0.2 (±.008)	C ± 0.15 (±.006)	D ± 0.1 (±.004)	E	G ± 0.2 (±.008)	H ± 0.4 (±.016)
10	TX20A-10R-D2GF1-A1L*	5.08 (.200)	5.715 (.225)	13.97 (.550)	15.48 (.609)	17.78 (.700)	25.48 (1.003)	27.88 (1.098)
14	TX20A-14R-D2GF1-A1L*	7.62 (.300)	8.255 (.325)	16.51 (.650)	18.02 (.709)	20.32 (.800)	28.02 (1.103)	30.32 (1.194)
26	TX20A-26R-D2GF1-A1L*	15.24 (.600)	15.875 (.625)	24.13 (.950)	25.64 (1.009)	27.94 (1.100)	35.64 (1.403)	37.94 (1.494)
36	TX20A-36R-D2GF1-A1L*	21.59 (.875)	22.225 (.875)	30.48 (1.200)	31.99 (1.259)	34.29 (1.350)	41.99 (1.653)	44.29 (1.744)
50	TX20A-50R-D2GF1-A1L*	30.48 (1.200)	31.115 (1.225)	39.37 (1.550)	40.88 (1.609)	43.18 (1.700)	50.88 (2.003)	53.18 (2.094)
68	TX20A-68R-D2GF1-A1L*	41.91 (1.650)	42.545 (1.675)	50.80 (2.000)	52.31 (2.059)	54.61 (2.150)	62.31 (2.453)	64.61 (2.544)

Note 1: \* Optional PCB mounting:

No letter: Screws, H: Hook pins, D: Hold-down mechanism, M: Hook pins and hold-down mechanism

Note 2: For hold-down mechanism version, screws are recommended to attach the connector on the board securely.

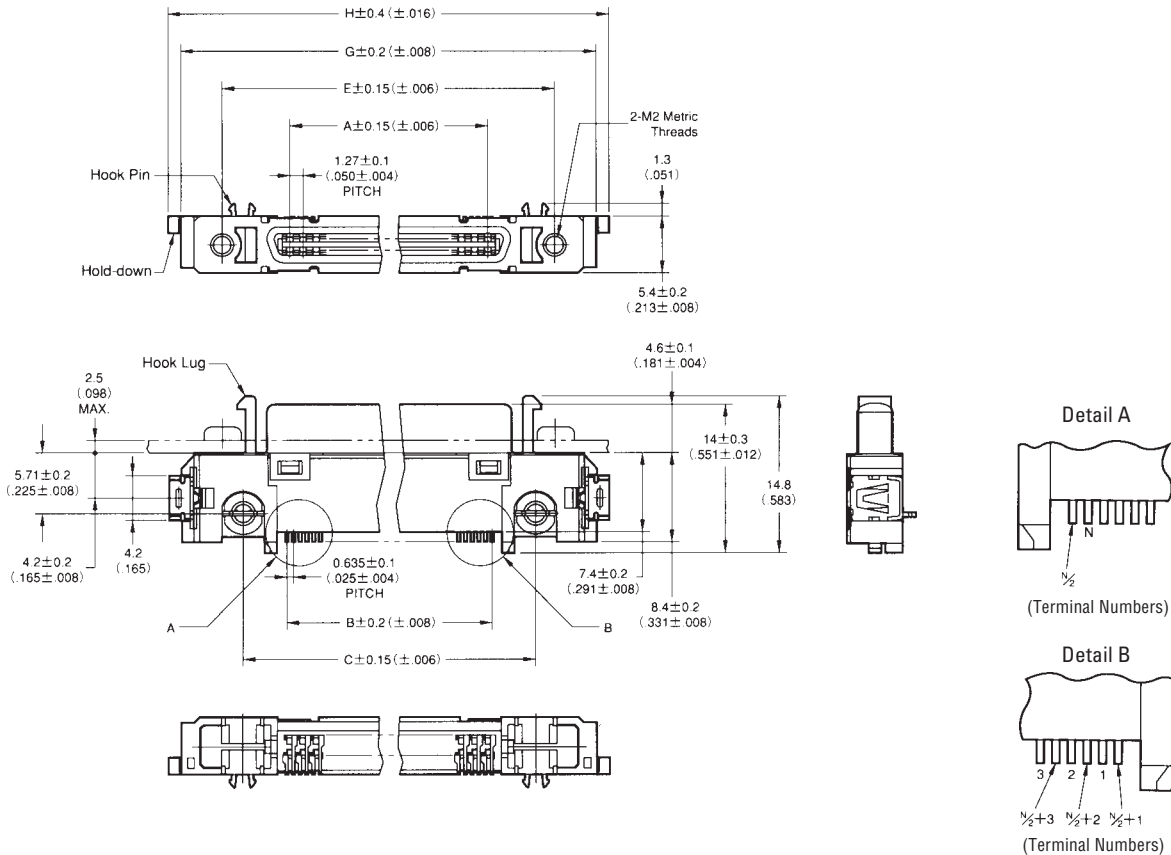
Dimensions in mm (inches).

# TX20A SERIES CONNECTORS

## 1.27mm (.050") Contact Spacing, PCB-to-Cable (IDC Type) Connectors

### RECEPTACLE • RIGHT ANGLE SURFACE MOUNT TECHNOLOGY • REVERSE (SCREW/HOOK PIN/HOLD-DOWN/HOOK PIN AND HOLD-DOWN OPTIONS)

Note : Shown with hook pins and a hold-down mechanism.



- Panel Cut-out: See Standard Version.
- Refer to PCB Mounting Dimension Page.

No. of Contacts	Part Number (Note 1)	A ±0.15 (±.006)	B ±0.2 (±.008)	C ±0.15 (±.006)	D ±0.1 (±.004)	E	G ±0.2 (±.008)	H ±0.4 (±.016)
10	TX20A-10RV-D2GF1-A1L*	5.08 (.200)	5.715 (.225)	13.97 (.550)	15.48 (.609)	17.78 (.700)	25.48 (1.003)	27.88 (1.098)
14	TX20A-14RV-D2GF1-A1L*	7.62 (.300)	8.255 (.325)	16.51 (.650)	18.02 (.709)	20.32 (.800)	28.02 (1.103)	30.32 (1.194)
26	TX20A-26RV-D2GF1-A1L*	15.24 (.600)	15.875 (.625)	24.13 (.950)	25.64 (1.009)	27.94 (1.100)	35.64 (1.403)	37.94 (1.494)
36	TX20A-36RV-D2GF1-A1L*	21.59 (.875)	22.225 (.875)	30.48 (1.200)	31.99 (1.259)	34.29 (1.350)	41.99 (1.653)	44.29 (1.744)
50	TX20A-50RV-D2GF1-A1L*	30.48 (1.200)	31.115 (1.225)	39.37 (1.550)	40.88 (1.609)	43.18 (1.700)	50.88 (2.003)	53.18 (2.094)
68	TX20A-68RV-D2GF1-A1L*	41.91 (1.650)	42.545 (1.675)	50.80 (2.000)	52.31 (2.059)	54.61 (2.150)	62.31 (2.453)	64.61 (2.544)

Note 1: \* Optional PCB mounting:

No letter: Screws, H: Hook pins, D: Hold-down mechanism, M: Hook pins and hold-down mechanism

Note 2: For hold-down mechanism version, screws are recommended to attach the connector on the board securely.

Dimensions in mm (inches).



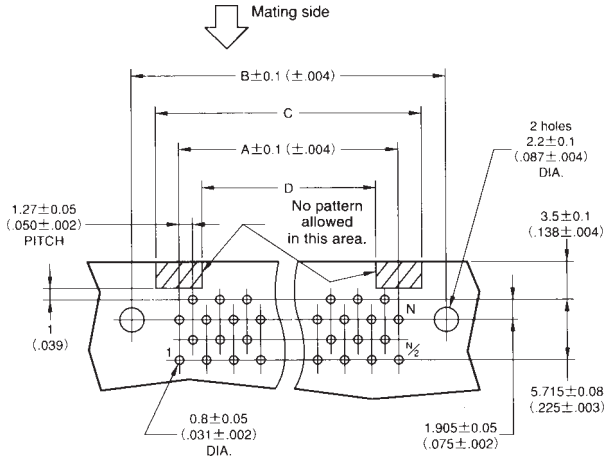
# TX20A SERIES CONNECTORS

## 1.27mm (.050") Contact Spacing, PCB-to-Cable (IDC Type) Connectors

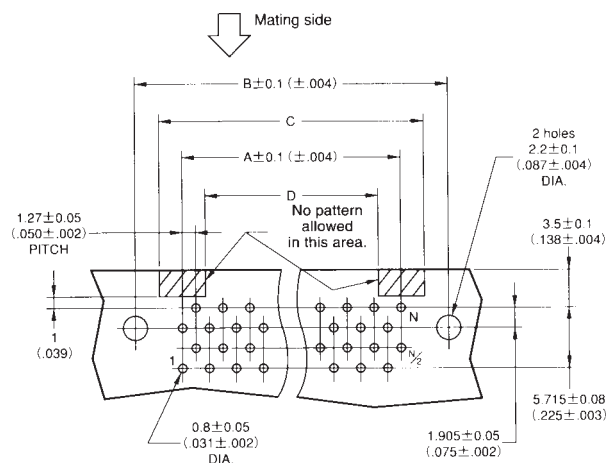
### PCB MOUNTING DIMENSIONS (REF.)

THROUGH HOLE TYPE/PCB thickness 1.2mm (.047") or 1.6mm (.063")

#### 10, 14, 26, 50 Contacts

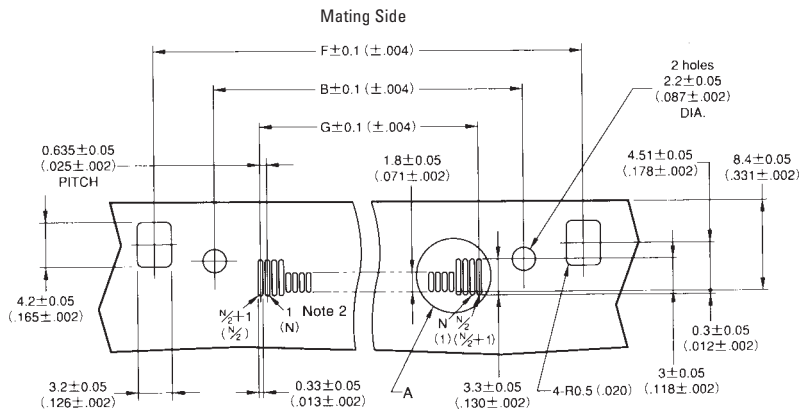


#### 36, 68 Contacts



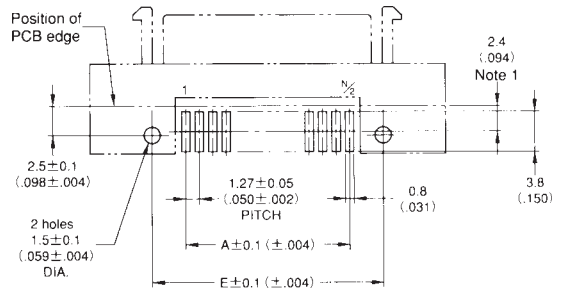
### SURFACE MOUNT TECHNOLOGY TYPE

Right-Angle SMT/PCB thickness 0.7mm (.028") min.



#### Straddle SMT

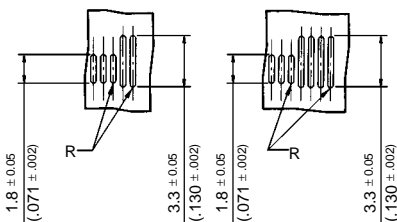
PCB thickness 1.0mm (.039")/1.2mm (.047")/1.6mm (.063")



Note 1: Dimension from the edge of PCB to the center of PCB pattern 3.8mm (.150")

Note 1: Shown with hook pins and a hold-down mechanism.  
Note 2: Terminal numbers for a reverse type are given in parentheses.

#### Detail A 10, 14, 26, 36 Contacts      50, 68 Contacts



No. of Contacts	A ± 0.1 (± .004)	B ± 0.1 (± .004)	C	D	E ± 0.1 (± .004)	F ± 0.1 (± .004)	G ± 0.1 (± .004)
10	5.08 ( .200)	13.97 ( .550)	9.38 ( .369)	—	11.43 ( .450)	25.28 ( .995)	5.715 ( .225)
14	7.62 ( .300)	16.51 ( .650)	11.92 ( .469)	3.32 ( .131)	13.97 ( .550)	27.82 (1.095)	8.255 ( .325)
26	15.24 ( .600)	24.13 ( .950)	19.54 ( .769)	10.94 ( .431)	21.59 ( .850)	35.44 (1.395)	15.875 ( .625)
36	21.59 ( .875)	30.48 (1.200)	25.89 (1.019)	17.29 ( .681)	27.94 (1.100)	41.79 (1.645)	22.225 ( .875)
50	30.48 (1.200)	39.37 (1.550)	34.78 (1.369)	26.18 (1.031)	—	50.68 (1.995)	31.115 (1.225)
68	41.91 (1.650)	50.80 (2.000)	46.21 (1.819)	37.61 (1.481)	—	62.11 (2.445)	42.545 (1.675)

Dimensions in mm (inches).

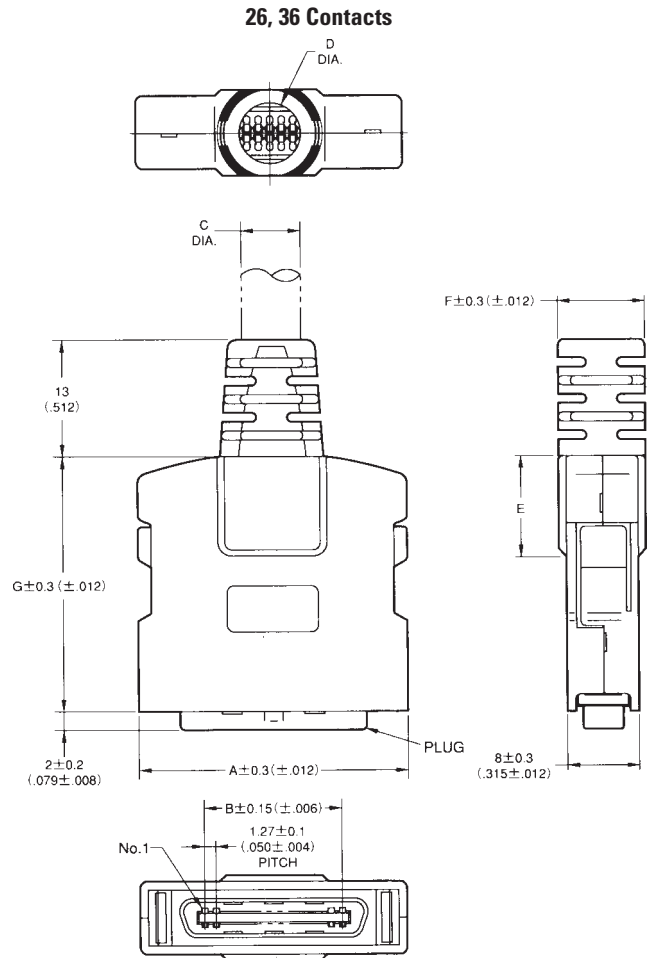
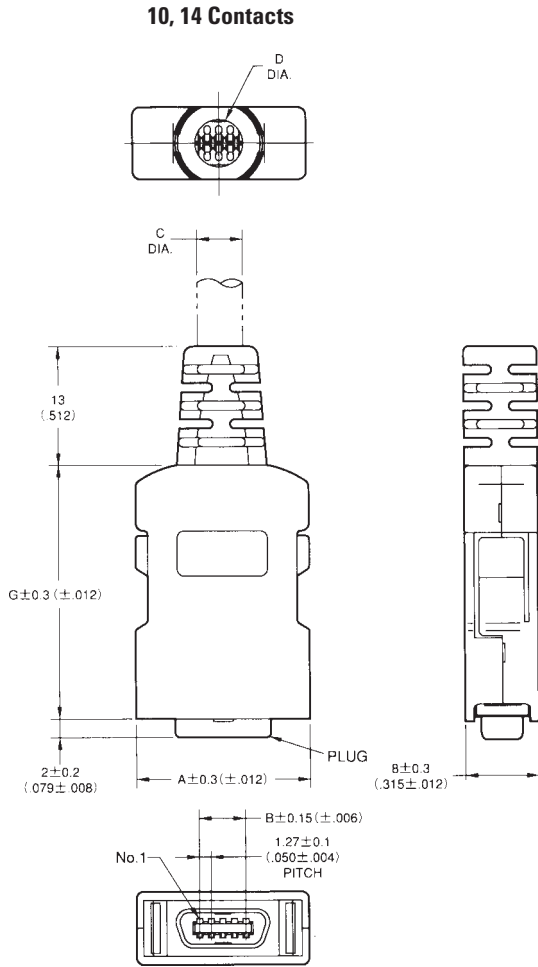
# TX20A SERIES CONNECTORS

## 1.27mm (.050") Contact Spacing, PCB-to-Cable (IDC Type) Connectors

### PLUG WITH HOOD (IDC TERMINATION TYPE)

#### 10, 14, 26, 36 Contacts

Note : The figures below show the plug assembled with the hood.  
When items listed below are ordered, the plug and the hood are unassembled at delivery.



No. of Contacts	Part Number	A ± 0.3 (± .012)	B ± 0.15 (± .006)	C	D ± 0.4 (± .016)	E	F	G ± 0.3 (± .012)
10	TX20A-10PH1-D2P1-D1	19.08 ( .751)	5.08 ( .200)	5 ( .197)	5.3 ( .209)	—	—	28 (1.102)
14	TX20A-14PH1-D2P1-D1	21.62 ( .851)	7.62 ( .300)	5.5 ( .217)	5.8 ( .228)	—	—	28 (1.102)
26	TX20A-26PH1-D2P1-D1	29.24 (1.151)	15.24 ( .600)	6.5 ( .256)	6.8 ( .268)	11 ( .433)	9.5 ( .374)	28 (1.102)
36	TX20A-36PH1-D2P1-D1	35.59 (1.401)	21.59 ( .850)	7.2 ( .283)	7.5 ( .295)	11.5 ( .453)	10.2 ( .402)	28 (1.102)

Dimensions in mm (inches).





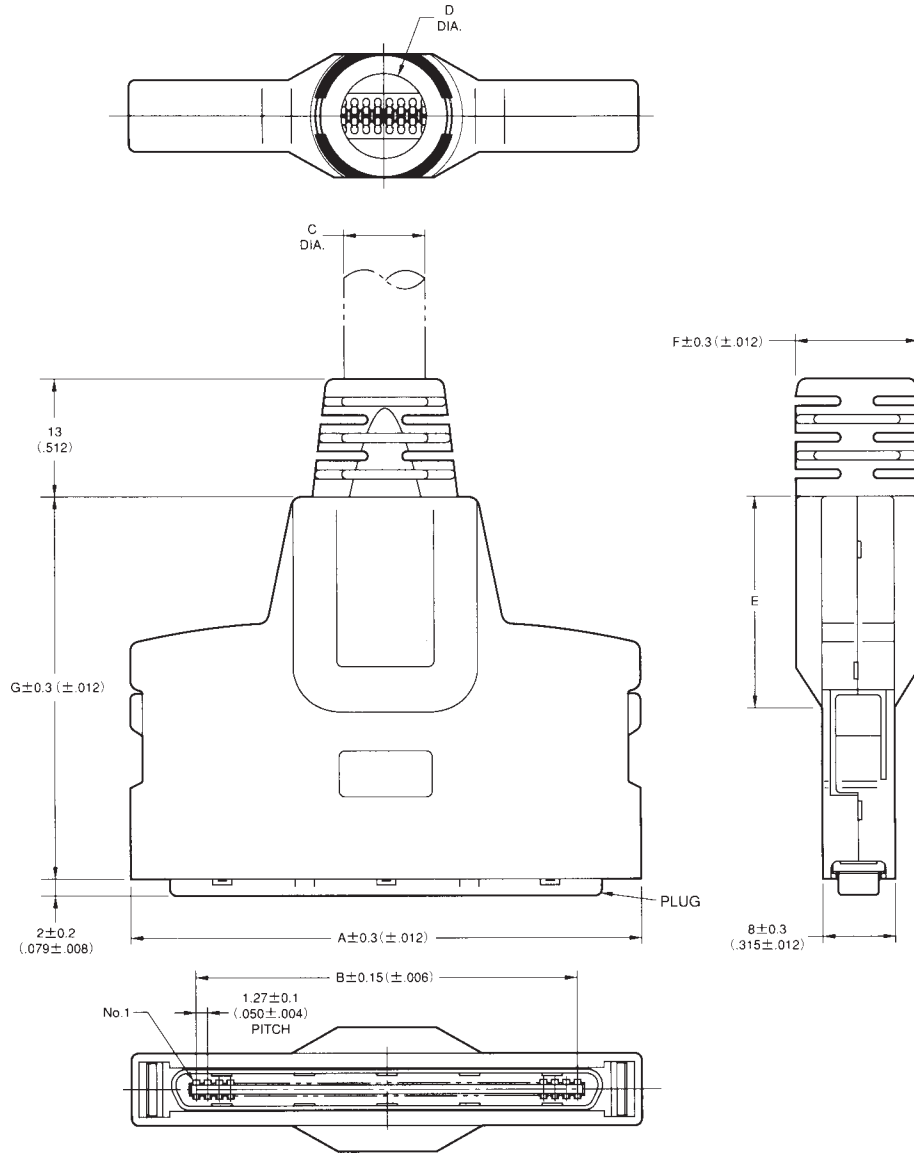
# TX20A SERIES CONNECTORS

## 1.27mm (.050") Contact Spacing, PCB-to-Cable (IDC Type) Connectors

### PLUG WITH HOOD (IDC TERMINATION TYPE)

#### 50, 68 Contacts

Note : The figures below show the plug assembled with the hood.  
When items listed below are ordered, the plug and the hood are unassembled at delivery.



No. of Contacts	Part Number	A ± 0.3 (± .012)	B ± 0.15 (± .006)	C	D ± 0.4 (± .016)	E	F	G ± 0.3 (± .012)
50	TX20A-50PH1-D2P1-D1	44.48 (1.751)	30.48 (1.200)	8 ( .315)	8.3 ( .327)	21.5 ( .846)	11 ( .433)	36 (1.417)
68	TX20A-68PH1-D2P1-D1	55.91 (2.201)	41.91 (1.650)	8.8 ( .346)	9.1 ( .358)	23.5 ( .925)	13.6 ( .535)	42 (1.654)

Dimensions in mm (inches).

# TX20A SERIES CONNECTORS

## 1.27mm (.050") Contact Spacing, PCB-to-Cable (IDC Type) Connectors

### TERMINATION TOOLING

#### ■ IDC MACHINE

##### Semi-Automatic IDC Machine (With Wire Number Detecting Device)

Part Numbers:

Main Unit: SP350-2-TX20A

Attachment: AT3\*\*-TX20A-2

(Use a specific attachment depending on the number of contacts.)

Note 1: This machine is composed of two parts: the main unit and attachment.

Note 2: When ordering, enter the number of contacts in place of the two asterisks (\*\*) on the Part No. of attachment.

- Semi-automatic IDC termination machine to terminate discrete wires to IDC type plug connectors.
- The wire No. detector avoids error in wiring.

##### Table-Top Hand IDC Machine

Part Numbers:

Press: CP110-3

Applicator: MT250-TX20A-2B

Attachment: AT2\*\*-TX20A-2

(Use a specific attachment depending on the number of contacts.)

Note 1: This machine is composed of three parts: press, applicator and attachment.

Note 2: When ordering, enter the number of contacts in place of the two asterisks (\*\*) of the Part No. of attachment.

- Table-top IDC termination machine to easily terminate discrete wires to IDC type plug connectors.
- By changing the attachment (option), you can terminate any number of contacts.

##### Table-Top Sheath Crimping Machine

Part Number: HT205-2-TX20A-\*\*-\*\*

Note : When ordering, enter the number of contacts in place of the two asterisks (\*\*) of the part No.

- The wire-terminated plug is housed in the backshell. The sheath of the shielded cable is then crimped by this machine.

\* Please consult JAE for details including IDC termination machines and operation manuals.

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