

The Cannon Microstrips provide an extremely dense and reliable interconnection solution in a minimum profile package, giving great application flexibility. Available with latches or guide pins, Microstrips are frequently found in board-to-wire applications where high reliability is a primary concern.

Three termination styles are available: solder cup, pigtail, harness, or printed circuit leads. The MicroPin Contact System assures maximum performance in a minimum package.



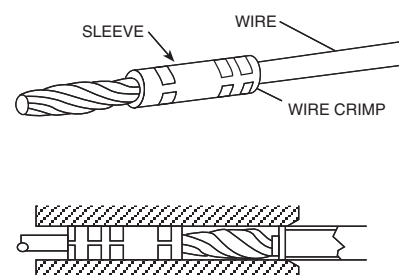
## Product Features

- High Performance MicroPin Contact System
- High-density .050" contact spacing
- Pre-wired for ease of installation
- Fully potted wire terminations
- Guide pins for alignment and polarizing
- Quick-disconnect latches
- 3 Amp current rating
- Precision crimp terminations
- Solder cup, pigtail or printed circuit terminations
- Surface mount leads

### MicroPin Contact System

The Cannon MicroPin Contact System offers uncompromised performance in downsized interconnects. The beryllium copper pin contact is fully recessed in the insulator, assuring positive contact alignment and robust performance. The socket contact is precision machined from high strength copper alloy and features a smooth lead-in chamfer.

The MicroPin features seven points of electrical contact. This contact system assures high normal force, excellent wipe and superior shock and vibration performance.



## Specifications

|                                 |                                                                                                                                                                                         |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Current Rating                  | 3 Amps max                                                                                                                                                                              |
| Dielectric Withstanding Voltage | 900 VAC @ sea level; 300 VAC @ 70,000 feet altitude                                                                                                                                     |
| Insulation Resistance           | 5000 megohms min.                                                                                                                                                                       |
| Contact Resistance              | 8 milliohms max.                                                                                                                                                                        |
| Operating Temperature           | MTV polyester -56°C to +125°C; MTB diallyl phthalate -55°C to +150°C                                                                                                                    |
| Durability                      | 500 cycles min.                                                                                                                                                                         |
| Shock/Vibration                 | 50 G's/20 G's                                                                                                                                                                           |
| Connector Mating Force          | (8 oz.) x (# of contacts)                                                                                                                                                               |
| Latch Retention                 | 5 lbs. min.                                                                                                                                                                             |
| Wire Size                       | #26 AWG insulated wire, #25 AWG uninsulated solid wire. MT strips will also accommodate #24 AWG through #32 AWG. For other wiring options contact the factory for ordering information. |
|                                 | General Performance requirements in accordance with MIL-DTL-83513                                                                                                                       |

## Materials and Finishes

|                                      |                                                                                               |
|--------------------------------------|-----------------------------------------------------------------------------------------------|
| Insulator                            | MTV: Glass-filled polyester per MIL-M-24519; MTB: Glass-filled diallyl phthalate per MIL-M-14 |
| Contact                              | Copper Alloy per MIL-C-83513                                                                  |
| Contact Finish                       | 50 Microinches Min. Gold Plated per MIL-G-45204                                               |
| Insulated Wire                       | #26 AWG. 19/38 Stranded, silver-plated copper, TFE Teflon insulation per MIL-W-16878/4        |
| Uninsulated Solid Wire               | #25 AWG gold-plated copper per QQ-W-343                                                       |
| Potting Material/Contact Encapsulant | Epoxy                                                                                         |
| Latch                                | 300 series stainless steel, passivated                                                        |

## How to Order



**RoHS Compliance**

### Series

MTB1 – High Temperature Diallyl Phthalate 150°C (Recommended for severe environments)  
MTV1 – Polyester 125°C (Recommended for general purpose use)

### Number of Cavities

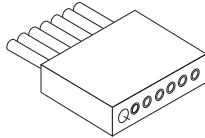
2 through 40.

This number is the total number of cavities including guide pins and latches. 40 positions is the maximum recommended size for standard strips, but sizes up to 120 positions are available on request.

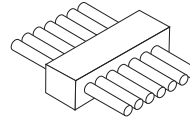
### Contact Type

P- Pin

S – Socket



Pin Strip



Socket Strip

### Termination Style

**Solder Cup** contacts for customer termination

S

### Pre-wired Pigtails

H067 – Pre-wired pigtail with 18" of insulated Teflon wire per M22759/11, #26 AWG, 19 strand, yellow

HY01 – Pre-wired pigtail with 18" of insulated Teflon wire per M22759/11, #26 AWG, 19 strand, 10 color repeating

### Straight Terminals .018" diameter, gold-plated

L1 – 5" extension

L2 – 1" extension

L57 – .190" extension

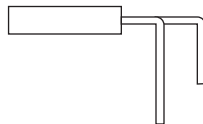
L61 – .125" extension



### Right Angle Terminals staggered footprint .018" diameter, gold plated

AL57 – .190" extension

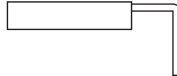
AL61 – .125" extension



### Right Angle Terminals .050" in-line footprint .018" diameter, gold plated

BL57 – .190" extension

BL61 – .125" extension



### Surface Mount .018" diameter, gold-plated

CL1



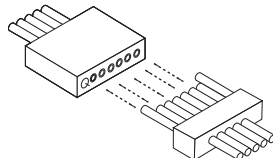
### Guide Pin and Latch Options

01 – Guide pin installed in end cavities of socket strip. Blank holes in end cavities of pin strip.

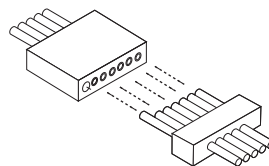
02 – Guide pin installed in cavity #1 of socket Strip. Blank holes in cavity #1 of pin strip.

03 – Spring latches installed in end cavities of socket strip. Latch clips installed in end cavities of pin strip. For use with MTV1 only.

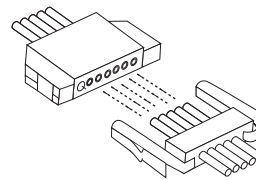
04 – Spring latch installed in center cavity of socket strip. Spring latch installed in center cavity of pin strip. For use with MTV1 only.



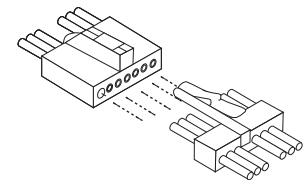
01  
Guide Pins In End Cavities



02  
Guide Pins In Cavity #1



03  
End Latches



04  
Center Latch

Dimensions shown in inch (mm)

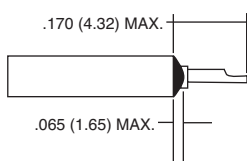
Specifications and dimensions subject to change

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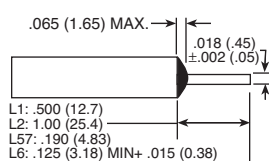
## Connector Weights

|                                          |                 |        |           |
|------------------------------------------|-----------------|--------|-----------|
| Contact (with std. 1/2" copper pigtails) |                 |        | .040 gms. |
|                                          | MTB             | pin    | .021 gms. |
| Insulator (per contact cavity)           |                 | socket | .006 gms. |
|                                          | MTV             | pin    | .014 gms. |
|                                          |                 | socket | .004 gms. |
| Guide Post                               | Stainless Steel |        | .035 gms. |
|                                          | Male            |        | .035 gms. |
| Latch                                    | Female          |        | .074 gms. |

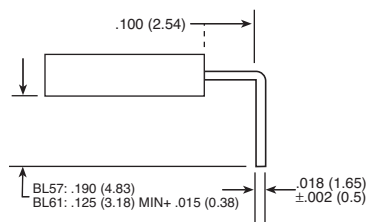
## Terminal Dimensions



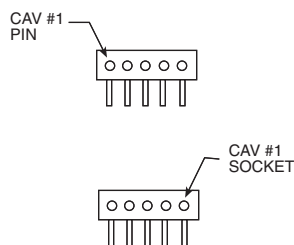
**Solder Cup**



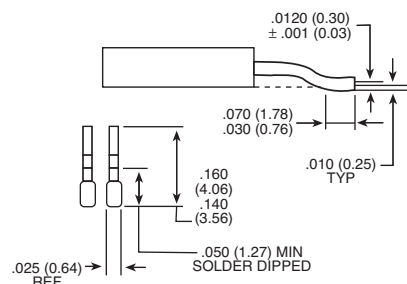
**Straight Terminals**



**Right Angle Terminals  
.050" Centers**

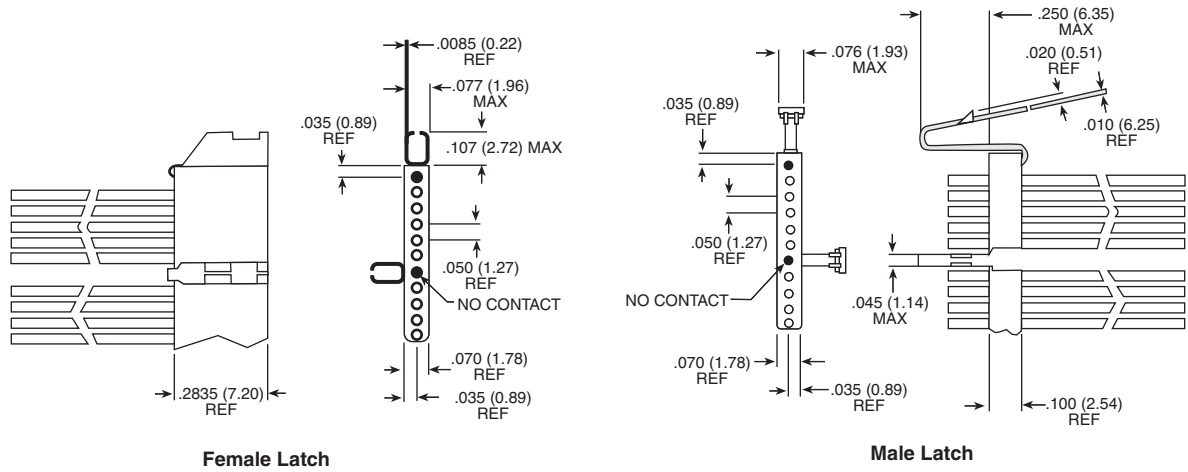


**Right Angle Terminals  
.100" Spacing Staggered**

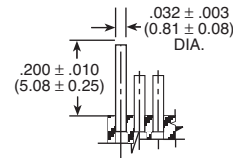


**Surface Mount Terminals**

## Latch Dimensions



## Guide Pin Dimensions



## Standard Wire Termination Codes

The following termination codes are listed for your information. For additional codes please refer to Appendix on page 79 and 81. **All wire lengths are minimum.**

### Harness Type - (H)

#26 AWG per MIL-W-16878 Type E; Teflon Stranded

| Length       | All Yellow | Color Coded |
|--------------|------------|-------------|
| 3 (76.2)     | H020       | H027        |
| 6 (152.4)    | H019       | H016        |
| 8 (203.2)    | H026       | H034        |
| 10 (254.0)   | H029       | H025        |
| 12 (304.8)   | H028       | H002        |
| 18 (457.2)   | H001       | H003        |
| 20 (508.0)   | H033       | H023        |
| 24 (609.6)   | H009       | H004        |
| 30 (762.0)   | H010       | H005        |
| 36 (914.4)   | H011       | H006        |
| 48 (1219.2)  | H013       | H048        |
| 72 (1828.5)  | H017       | H046        |
| 120 (3048.0) | H042       | H041        |

### Solid Uninsulated Type - (L)

#25 AWG Gold Plated Copper

| Termination Code | Length        |
|------------------|---------------|
| L61              | .125 (3.18)   |
| L56              | .150 (3.81)   |
| L57              | .190 (4.83)   |
| L39              | .250 (6.35)   |
| L58              | .375 (9.52)   |
| L1               | .500 (12.70)  |
| L14              | .750 (19.05)  |
| L2               | 1.000 (25.40) |
| L7               | 1.500 (38.10) |
| L6               | 2.000 (50.80) |
| L16              | 2.500 (63.50) |
| L10              | 3.000 (76.20) |

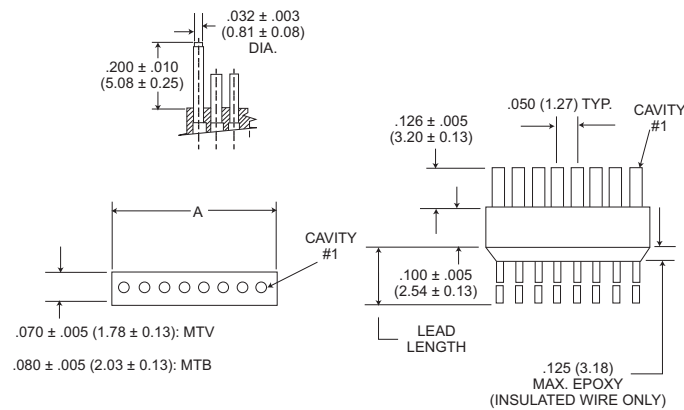
## Polarization



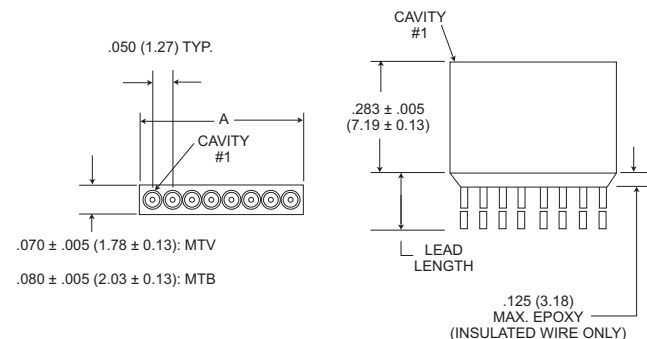
Modification code "-01" in the part number refers to guide posts located on both ends of the socket side of the 50-MIL STRIP connector and empty cavities on the pin side to accept the guide posts.

Although in many cases it is not necessary to polarize 50-MIL STRIP connectors, there are several ways to prevent cross plugging. One method is the use of guide posts that can be located in specified cavities to assure that the contacts will align when these post are positioned before mating.

## MTB1 and MTV1 - .050 (1.27) Contact Centers



Receptacle

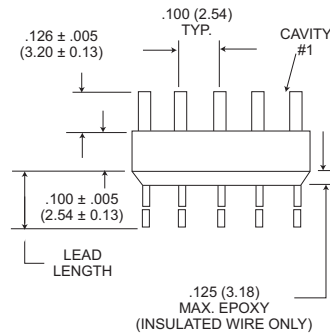
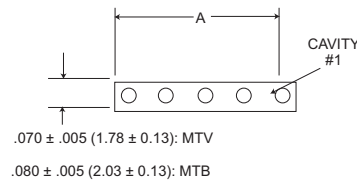
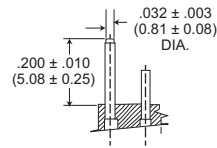


Plug

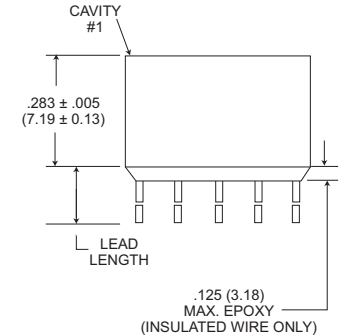
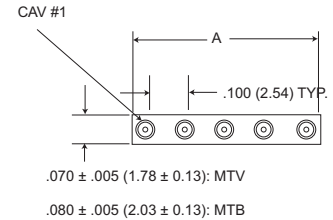
| Part Number by Size | A<br>±.015 (0.38) | Part Number by Size | A<br>±.015 (0.38) | Part Number by Size | A<br>±.015 (0.38) | Part Number by Size | A<br>±.015 (0.38) | Part Number by Size | A<br>±.015 (0.38) | Part Number by Size | A<br>±.015 (0.38) |
|---------------------|-------------------|---------------------|-------------------|---------------------|-------------------|---------------------|-------------------|---------------------|-------------------|---------------------|-------------------|
| MT*1-1**            | .070 (1.78)       | MT*1-21**           | 1.070 (27.18)     | MT*1-41**           | 2.070 (52.58)     | MT*1-61**           | 3.070 (77.98)     | MT*1-81**           | 4.070 (103.38)    | MT*1-101**          | 5.070 (128.78)    |
| MT*1-2**            | .120 (3.05)       | MT*1-22**           | 1.120 (28.45)     | MT*1-42**           | 2.120 (53.85)     | MT*1-62**           | 3.120 (79.25)     | MT*1-82**           | 4.120 (104.65)    | MT*1-102**          | 5.120 (130.05)    |
| MT*1-3**            | .170 (4.32)       | MT*1-23**           | 1.170 (29.72)     | MT*1-43**           | 2.170 (55.12)     | MT*1-63**           | 3.170 (80.52)     | MT*1-83**           | 4.170 (105.92)    | MT*1-103**          | 5.170 (131.32)    |
| MT*1-4**            | .220 (5.59)       | MT*1-24**           | 1.220 (30.99)     | MT*1-44**           | 2.220 (56.39)     | MT*1-64**           | 3.220 (81.79)     | MT*1-84**           | 4.220 (107.19)    | MT*1-104**          | 5.220 (132.59)    |
| MT*1-5**            | .270 (6.85)       | MT*1-25**           | 1.270 (32.36)     | MT*1-45**           | 2.270 (57.66)     | MT*1-65**           | 3.270 (83.06)     | MT*1-85**           | 4.270 (108.46)    | MT*1-105**          | 5.270 (133.86)    |
| MT*1-6**            | .320 (8.13)       | MT*1-26**           | 1.320 (33.53)     | MT*1-46**           | 2.320 (58.93)     | MT*1-66**           | 3.320 (84.33)     | MT*1-86**           | 4.320 (109.73)    | MT*1-106**          | 5.320 (135.13)    |
| MT*1-7**            | .370 (9.40)       | MT*1-27**           | 1.370 (34.80)     | MT*1-47**           | 2.370 (60.20)     | MT*1-67**           | 3.370 (85.60)     | MT*1-87**           | 4.370 (111.00)    | MT*1-107**          | 5.370 (136.40)    |
| MT*1-8**            | .420 (10.67)      | MT*1-28**           | 1.420 (36.07)     | MT*1-48**           | 2.420 (61.47)     | MT*1-68**           | 3.420 (86.87)     | MT*1-88**           | 4.420 (112.27)    | MT*1-108**          | 5.420 (137.67)    |
| MT*1-9**            | .470 (11.94)      | MT*1-29**           | 1.470 (37.34)     | MT*1-49**           | 2.470 (62.74)     | MT*1-69**           | 3.470 (88.14)     | MT*1-89**           | 4.470 (113.54)    | MT*1-109**          | 5.470 (138.94)    |
| MT*1-10**           | .520 (13.60)      | MT*1-30**           | 1.520 (38.61)     | MT*1-50**           | 2.520 (64.01)     | MT*1-70**           | 3.520 (89.41)     | MT*1-90**           | 4.520 (114.81)    | MT*1-110**          | 5.520 (140.21)    |
| MT*1-11**           | .570 (14.48)      | MT*1-31**           | 1.570 (39.88)     | MT*1-51**           | 2.570 (65.28)     | MT*1-71**           | 3.570 (90.68)     | MT*1-91**           | 4.570 (116.08)    | MT*1-111**          | 5.570 (141.48)    |
| MT*1-12**           | .620 (15.75)      | MT*1-32**           | 1.620 (41.15)     | MT*1-52**           | 2.620 (66.55)     | MT*1-72**           | 3.620 (91.95)     | MT*1-92**           | 4.620 (117.35)    | MT*1-112**          | 5.620 (142.75)    |
| MT*1-13**           | .670 (17.02)      | MT*1-33**           | 1.670 (42.42)     | MT*1-53**           | 2.670 (67.82)     | MT*1-73**           | 3.670 (93.22)     | MT*1-93**           | 4.670 (118.62)    | MT*1-113**          | 5.670 (144.02)    |
| MT*1-14**           | .720 (18.29)      | MT*1-34**           | 1.720 (43.69)     | MT*1-54**           | 2.720 (69.09)     | MT*1-74**           | 3.720 (94.49)     | MT*1-94**           | 4.720 (119.89)    | MT*1-114**          | 5.720 (145.29)    |
| MT*1-15**           | .770 (19.56)      | MT*1-35**           | 1.770 (44.96)     | MT*1-55**           | 2.770 (70.36)     | MT*1-75**           | 3.770 (95.76)     | MT*1-95**           | 4.770 (121.16)    | MT*1-115**          | 5.770 (146.56)    |
| MT*1-16**           | .820 (20.83)      | MT*1-36**           | 1.820 (46.23)     | MT*1-56**           | 2.820 (71.63)     | MT*1-76**           | 3.820 (97.03)     | MT*1-96**           | 4.820 (122.43)    | MT*1-116**          | 5.820 (147.83)    |
| MT*1-17**           | .870 (22.10)      | MT*1-37**           | 1.870 (47.50)     | MT*1-57**           | 2.870 (72.90)     | MT*1-77**           | 3.870 (98.30)     | MT*1-97**           | 4.870 (123.70)    | MT*1-117**          | 5.870 (149.10)    |
| MT*1-18**           | .920 (23.37)      | MT*1-38**           | 1.920 (48.77)     | MT*1-58**           | 2.920 (74.17)     | MT*1-78**           | 3.920 (99.57)     | MT*1-98**           | 4.920 (124.97)    | MT*1-118**          | 5.920 (150.37)    |
| MT*1-19**           | .970 (24.64)      | MT*1-39**           | 1.970 (50.04)     | MT*1-59**           | 2.970 (75.44)     | MT*1-79**           | 3.970 (100.84)    | MT*1-99**           | 4.970 (126.24)    | MT*1-119**          | 5.970 (151.64)    |
| MT*1-20**           | 1.020 (25.91)     | MT*1-40**           | 2.020 (51.31)     | MT*1-60**           | 3.020 (76.71)     | MT*1-80**           | 4.020 (102.11)    | MT*1-100**          | 5.020 (127.50)    | MT*1-120**          | 6.020 (152.91)    |

NOTE: MTB1 available in up to 120 contacts.

MTB2 and MTV2 - .100 (2.54) Contact Centers



Receptacle



Plug

| Part Number by Size | A<br>±.015 (0.38) | Part Number by Size | A<br>±.015 (0.38) |
|---------------------|-------------------|---------------------|-------------------|
| MT*2-1**            | .070 (1.78)       | MT*2-31**           | 3.070 (77.98)     |
| MT*2-2**            | .170 (4.32)       | MT*2-32**           | 3.170 (80.52)     |
| MT*2-3**            | .270 (6.86)       | MT*2-33**           | 3.270 (83.06)     |
| MT*2-4**            | .370 (9.40)       | MT*2-34**           | 3.370 (85.60)     |
| MT*2-5**            | .470 (11.94)      | MT*2-35**           | 3.470 (88.14)     |
| MT*2-6**            | .570 (14.48)      | MT*2-36**           | 3.570 (90.68)     |
| MT*2-7**            | .670 (17.02)      | MT*2-37**           | 3.670 (93.22)     |
| MT*2-8**            | .770 (19.56)      | MT*2-38**           | 3.770 (95.76)     |
| MT*2-9**            | .870 (22.10)      | MT*2-39**           | 3.870 (98.30)     |
| MT*2-10**           | .970 (24.64)      | MT*2-40**           | 3.970 (100.84)    |
| MT*2-11**           | 1.070 (27.18)     | MT*2-41**           | 4.070 (103.38)    |
| MT*2-12**           | 1.170 (29.72)     | MT*2-42**           | 4.170 (105.92)    |
| MT*2-13**           | 1.270 (32.26)     | MT*2-43**           | 4.270 (108.46)    |
| MT*2-14**           | 1.370 (34.80)     | MT*2-44**           | 4.370 (111.00)    |
| MT*2-15**           | 1.470 (37.34)     | MT*2-45**           | 4.470 (113.54)    |
| MT*2-16**           | 1.570 (39.88)     | MT*2-46**           | 4.570 (116.08)    |
| MT*2-17**           | 1.670 (42.42)     | MT*2-47**           | 4.670 (118.62)    |
| MT*2-18**           | 1.770 (44.96)     | MT*2-48**           | 4.770 (121.16)    |
| MT*2-19**           | 1.870 (47.50)     | MT*2-49**           | 4.870 (123.70)    |
| MT*2-20**           | 1.970 (50.04)     | MT*2-50**           | 4.970 (126.24)    |
| MT*2-21**           | 2.070 (52.58)     | MT*2-51**           | 5.070 (128.78)    |
| MT*2-22**           | 2.170 (55.12)     | MT*2-52**           | 5.170 (131.32)    |
| MT*2-23**           | 2.270 (57.66)     | MT*2-53**           | 5.270 (133.86)    |
| MT*2-24**           | 2.370 (60.20)     | MT*2-54**           | 5.370 (136.40)    |
| MT*2-25**           | 2.470 (62.74)     | MT*2-55**           | 5.470 (138.94)    |
| MT*2-26**           | 2.570 (65.28)     | MT*2-56**           | 5.570 (141.48)    |
| MT*2-27**           | 2.670 (67.82)     | MT*2-57**           | 5.670 (144.02)    |
| MT*2-28**           | 2.770 (70.36)     | MT*2-58**           | 5.770 (146.56)    |
| MT*2-29**           | 2.870 (72.90)     | MT*2-59**           | 5.870 (149.10)    |
| MT*2-30**           | 2.970 (75.44)     | MT*2-60**           | 5.970 (151.64)    |

Dimensions shown in inch (mm)

Specifications and dimensions subject to change

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