

RATIONALE

REVISE TO IMPROVE DRAWING/DIMENSION QUALITY, UPDATE REFERENCES, REMOVE COMMERCIAL CABLE PART NUMBERS, ALIGN SPECIFICATION WITH SAE GUIDELINES, AND REVIEW SPECIFICATION FOR KNOWN TECHNICAL PROBLEMS.

NOTICE

THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS39029.

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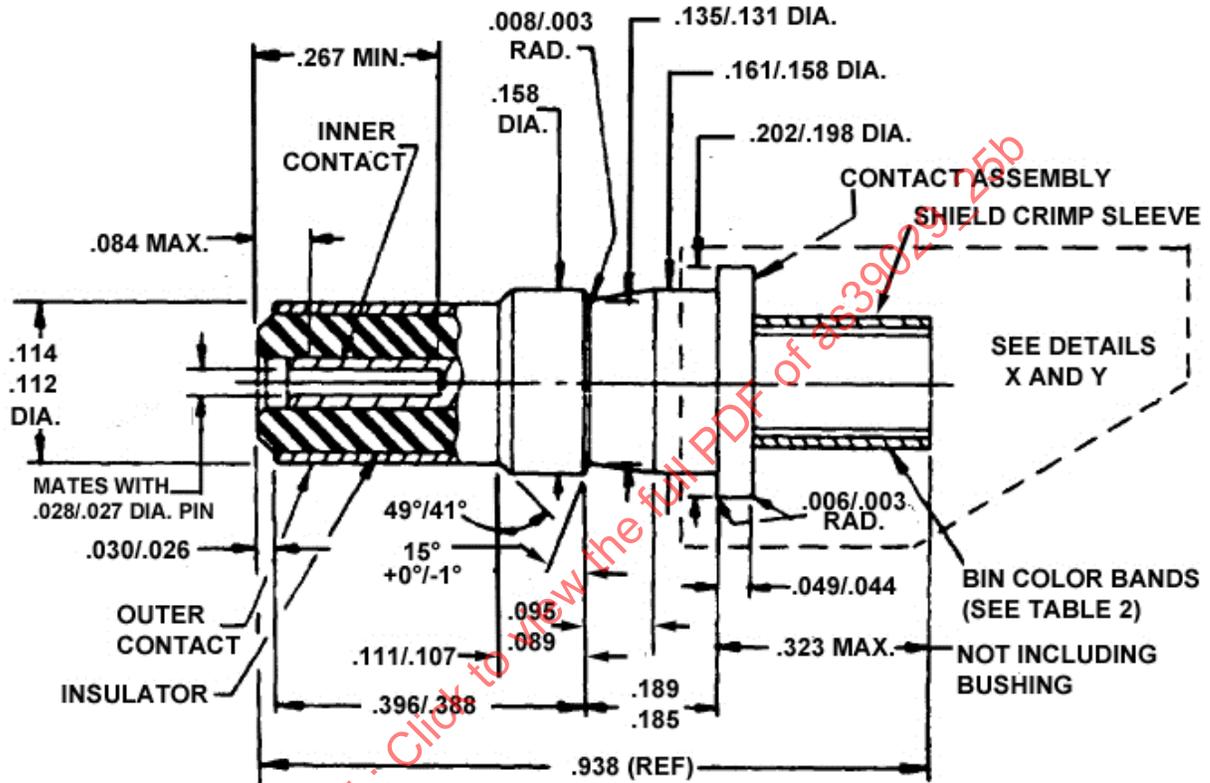
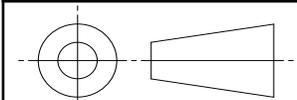


FIGURE 1 - AS39029/25 SHIELDED PIN CONTACT

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THIRD ANGLE PROJECTION



CUSTODIAN: AE-8/AE-8C1

PROCUREMENT SPECIFICATION: AS39029

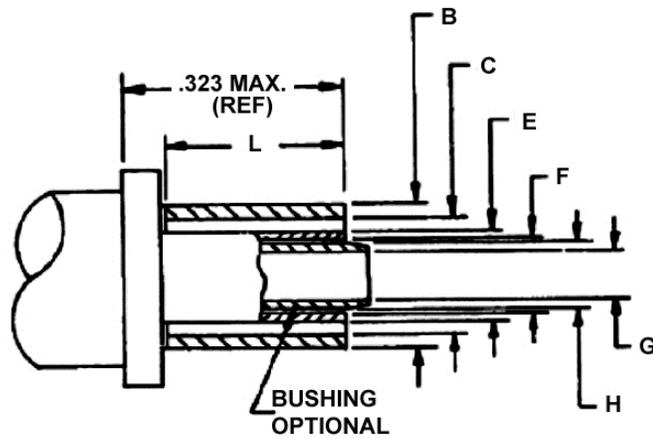


AEROSPACE STANDARD

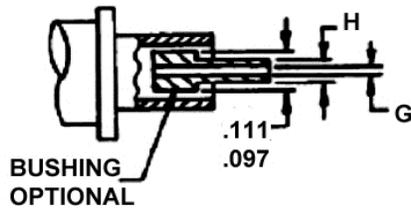
(R) CONTACTS, ELECTRICAL CONNECTOR, PIN, CRIMP REMOVABLE, SHIELDED (FOR MIL-DTL-26482 SERIES 1 CONNECTORS)

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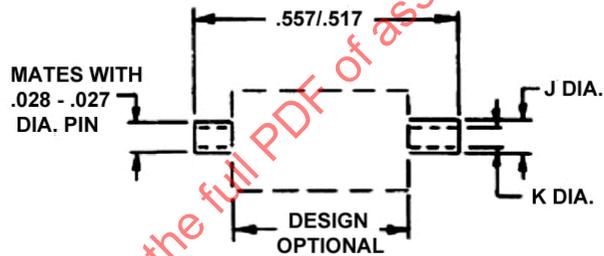
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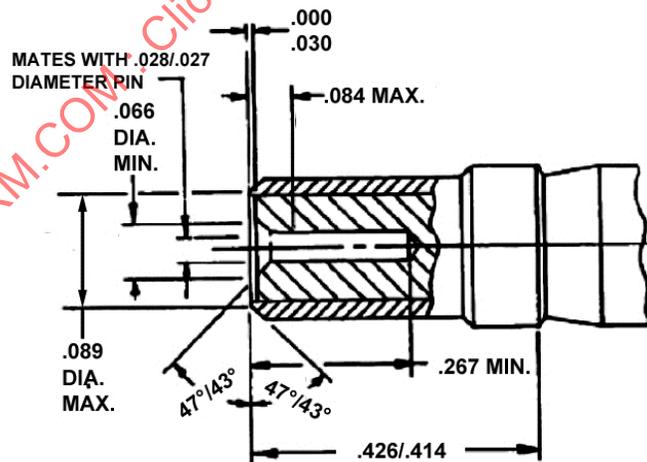
DETAIL X – WIRE TERMINATION END
(BIN CODES 204 AND 206)



DETAIL Y – WIRE TERMINATION END
(BIN CODE 205)



INNER CONTACT



PIN END OPTIONAL DESIGN

FIGURE 1 - AS39029/25 SHIELDED PIN CONTACT (CONTINUED)



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(R) CONTACTS, ELECTRICAL CONNECTOR, PIN,
CRIMP REMOVABLE, SHIELDED
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TABLE 1 - FIGURE 1 DIMENSIONS (METRIC EQUIVALENTS)

| INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM |
|--------|-------|--------|-------|--------|------|--------|------|--------|------|--------|-------|--------|-------|
| .003 | 0.076 | .030 | 0.762 | .084 | 2.13 | .112 | 2.84 | .185 | 4.70 | .388 | 9.86 | .938 | 23.83 |
| .006 | 0.152 | .031 | 0.787 | .089 | 2.26 | .114 | 2.90 | .189 | 4.80 | .396 | 10.06 | | |
| .008 | 0.203 | .034 | 0.864 | .095 | 2.41 | .131 | 3.33 | .198 | 5.03 | .414 | 10.52 | | |
| .026 | 0.660 | .044 | 1.12 | .097 | 2.46 | .135 | 3.43 | .202 | 5.13 | .426 | 10.82 | | |
| .027 | 0.686 | .049 | 1.24 | .107 | 2.72 | .158 | 4.01 | .267 | 6.78 | .517 | 13.13 | | |
| .028 | 0.711 | .066 | 1.68 | .111 | 2.82 | .161 | 4.09 | .323 | 8.20 | .557 | 14.15 | | |

TABLE 2 - CONTACT DIMENSIONS

| BIN CODE | B | C | E | F | G | H | J | K | L |
|----------|--------|--------|--------|--------|--------|--------|---------|---------|--------|
| 204 | .201 | .161 | .136 | .1150 | .069 | .106 | .055 | .030 | .270 |
| | (5.11) | (4.09) | (3.45) | (2.92) | (1.75) | (2.69) | (1.40) | (0.762) | (6.86) |
| | .189 | .151 | .126 | .1065 | .065 | .102 | .045 | .020 | .230 |
| | (4.80) | (3.84) | (3.20) | (2.71) | (1.65) | (2.59) | (1.14) | (0.508) | (5.84) |
| 205 | N/A | N/A | .136 | .1150 | .047 | .076 | .055 | .030 | .330 |
| | | | (3.45) | (2.92) | (1.19) | (1.93) | (1.40) | (0.762) | (8.38) |
| | | | .126 | .1065 | .037 | .066 | .045 | .020 | .290 |
| | | (3.20) | (2.71) | (.94) | (1.68) | (1.14) | (0.508) | (7.37) | |
| 206 | .201 | .161 | .136 | .1150 | .058 | .106 | .067 | .044 | .270 |
| | (5.11) | (4.09) | (3.45) | (2.92) | (1.47) | (2.69) | (1.70) | (1.12) | (6.86) |
| | .189 | .151 | .126 | .1065 | .055 | .102 | .057 | .034 | .230 |
| | (4.80) | (3.84) | (3.20) | (2.71) | (1.40) | (2.59) | (1.45) | (0.864) | (5.84) |

TABLE 3 - MARKING AND DESIGN CHARACTERISTICS

| BIN CODE | COLOR BANDS | | | CONTACT CAVITY SIZE | TYPE | CLASS |
|----------|-------------|-------|--------|---------------------|------|-------|
| | 1ST | 2ND | 3RD | | | |
| 204 | RED | BLACK | YELLOW | 12 | D | A |
| 205 | RED | BLACK | GREEN | 12 | | |
| 206 | RED | BLACK | BLUE | 12 | | |

TABLE 4 - TOOL REQUIREMENTS

| BIN CODE | INNER CONTACT | | SHIELD CRIMP SLEEVE | | INSTALLING TOOL | REMOVAL TOOL |
|----------|---------------------|-------------|---------------------|-------------|-----------------|--------------|
| | BASIC CRIMPING TOOL | POSITIONER | BASIC CRIMPING TOOL | DIES | | |
| 204 | M22520/2-01 | M22520/2-32 | M22520/5-01 | M22520/5-10 | M81969/17-05 | M81969/19-09 |
| 205 | M22520/2-01 | M22520/2-32 | N/A | N/A | M81969/17-05 | M81969/19-09 |
| 206 | M22520/2-01 | M22520/2-32 | M22520/5-01 | M22520/5-10 | M81969/17-05 | M81969/19-09 |



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(R) CONTACTS, ELECTRICAL CONNECTOR, PIN, CRIMP REMOVABLE, SHIELDED (FOR MIL-DTL-26482 SERIES 1 CONNECTORS)

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TABLE 5 - PART NUMBERS

| AS39029 PART NUMBER | BIN CODE | SUPERSEDED PART NUMBER(S) |
|------------------------|-------------|------------------------------|
| M39029/25-204 | 204 | M39029/25-01 |
| M39029/25-205 | 205 | M39029/25-02 |
| M39029/25-206 | 206 | M39029/25-03 |

TABLE 6 - DIMENSIONS (METRIC EQUIVALENTS) - CONTACT ENGAGEMENT AND SEPARATION FORCES

| TEST PIN DIAMETER (INCHES) | SOCKET CONTACT ONLY | | | | | |
|----------------------------------|--|---|--|--|---|--|
| | INITIAL | | | AFTER CONDITIONING | | |
| | MINIMUM SEPARATION FORCE (OZ) | MAXIMUM AVERAGE ENGAGEMENT FORCE (OZ) | MAXIMUM ENGAGEMENT FORCE (OZ) | MINIMUM SEPARATION FORCE (OZ) | MAXIMUM AVERAGE ENGAGEMENT FORCE (OZ) | MAXIMUM ENGAGEMENT FORCE (OZ) |
| .0280 +.0002 -.0000 | N/A | N/A | 16 | N/A | N/A | 20 |
| .0270 +.0000 -.0002 | .5 | N/A | N/A | .4 | N/A | N/A |

TABLE 7 - CONTACT TENSILE STRENGTH (INNER AND OUTER CRIMP JOINT)

| BIN CODE | CABLE ACCOMMODATION | AXIAL LOAD (POUND MINIMUM) | |
|-------------|------------------------|-------------------------------|---------------|
| | | INNER CONTACT | OUTER CONTACT |
| 204 | M17/119-RG174 1/ | 15 | 15 |
| | M17/94-RG179 | 3.5 | 15 |
| | M17/113-RG316 | 10 | 10 |
| 205 | M17/93-RG178 | 3.5 | 10 |
| 206 3/ | 2/ | | |

- 1/ NOT RECOMMENDED FOR USE. THE MAXIMUM OPERATING TEMPERATURE OF THE RG174 CABLE IS 85° +3°/-0°C
- 2/ NO KNOWN STANDARD CABLE IS AVAILABLE FOR THIS BIN CODE TO REPLACE THE PREVIOUSLY RECOMMENDED COMMERCIAL CABLE OR THE CABLES ARE NO LONGER MANUFACTURED. STANDARD TOOLS MAY NOT APPLY. FOLLOW CONTACT SUPPLIERS INSTRUCTIONS.
- 3/ NOT RECOMMENDED FOR USE.

TABLE 8 - CONTACT RESISTANCE

| BIN CODE | CONTACT | CABLE ACCOMMODATED | TEST CURRENT (AMPERES) | MAXIMUM VOLTAGE DROP (MILLIVOLTS) | | | | | |
|---------------|----------------|-------------------------|------------------------|-----------------------------------|-----------|--------------------|-----------|---------------------|-----------|
| | | | | 25 °C +3 °C, -0 °C | | 25 °C +3 °C, -0 °C | | 150 °C +3 °C, -0 °C | |
| | | | | MAX | MAX. AVG. | MAX | MAX. AVG. | MAX | MAX. AVG. |
| 204 | INNER OUTER | M17/119-RG174 <u>1/</u> | 1 12 | 55 85 | N/A | 66 102 | N/A | 88 136 | |
| | INNER OUTER | M17/94-RG179 | 1 12 | 120 70 | | 144 84 | | 192 112 | |
| | INNER OUTER | M17/113-RG316 | 1 12 | 55 75 | | 66 90 | | 88 120 | |
| 205 | INNER OUTER | M17/93-RG178 | 1 12 | 120 110 | | 144 132 | | 192 176 | |
| 206 <u>3/</u> | INNER OUTER | <u>2/</u> | 1 12 | 10 60 | | 12 72 | | 16 96 | |

- 1/ NOT RECOMMENDED FOR USE. THE MAXIMUM OPERATING TEMPERATURE OF THE RG174 CABLE IS 85° +3°/-0°C
2/ NO KNOWN STANDARD CABLE IS AVAILABLE FOR THIS BIN CODE TO REPLACE THE PREVIOUSLY RECOMMENDED COMMERCIAL CABLE OR THE CABLES ARE NO LONGER MANUFACTURED. STANDARD TOOLS MAY NOT APPLY. FOLLOW CONTACT SUPPLIERS INSTRUCTIONS.
3/ NOT RECOMMENDED FOR USE.

TABLE 9 - LOW SIGNAL CONTACT RESISTANCE (INTER CONTACT ONLY)

| BIN CODE | CABLE ACCOMMODATION | MAXIMUM CONTACT RESISTANCE (MILLIOHMS) | |
|---------------|-------------------------|--|--------------------|
| | | INITIAL | AFTER CONDITIONING |
| 204 | M17/119-RG174 <u>1/</u> | 55 | 66 |
| | M17/94-RG179 | 120 | 144 |
| | M17/113-RG316 | 55 | 66 |
| 205 | M17/93-RG178 | 120 | 144 |
| 206 <u>3/</u> | <u>2/</u> | 10 | 12 |

- 1/ NOT RECOMMENDED FOR USE. THE MAXIMUM OPERATING TEMPERATURE OF THE RG174 CABLE IS 85° +3°/-0°C
2/ NO KNOWN STANDARD CABLE IS AVAILABLE FOR THIS BIN CODE TO REPLACE THE PREVIOUSLY RECOMMENDED COMMERCIAL CABLE OR THE CABLES ARE NO LONGER MANUFACTURED. STANDARD TOOLS MAY NOT APPLY. FOLLOW CONTACT SUPPLIERS INSTRUCTIONS.
3/ NOT RECOMMENDED FOR USE.

TABLE 10 - DIELECTRIC WITHSTAND VOLTAGE (BETWEEN INNER AND OUTER CONTACT)

| ALTITUDE (FEET) | TEST VOLTAGE (AC RMS) |
|-----------------|-----------------------|
| SEA LEVEL | 1000 |
| 50 000 | 250 |