

**REV.  
G**

**AS85049™/128**

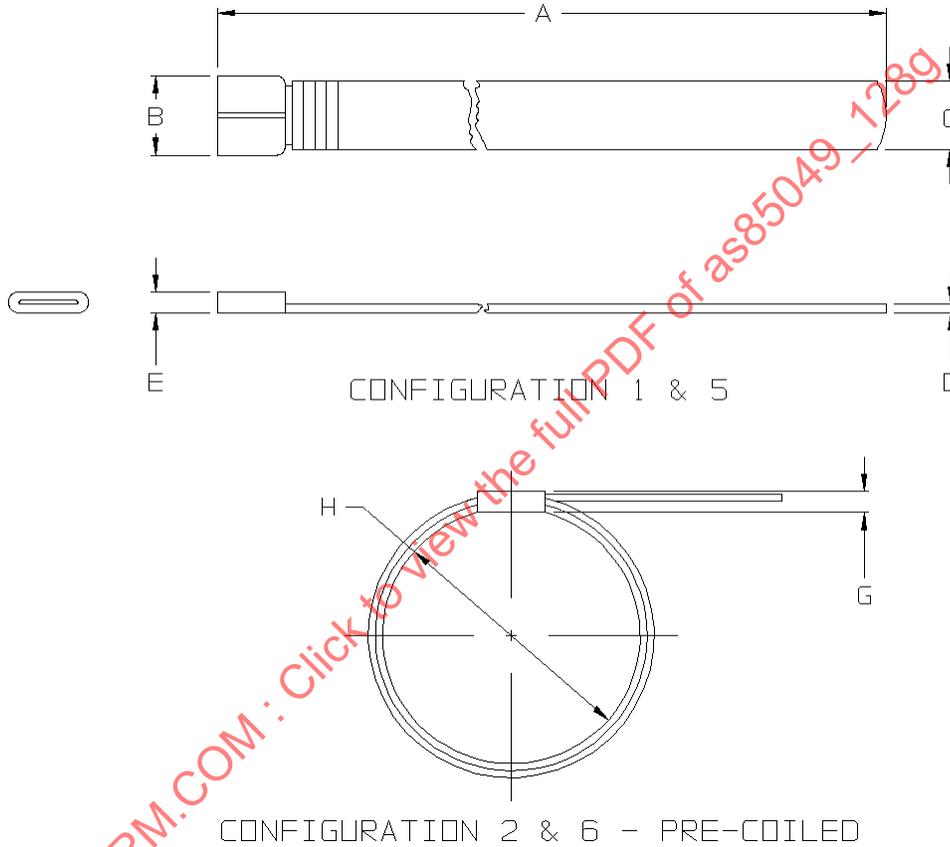
**RATIONALE**

PARA 2B AND 3B CITE THE ELECTRICAL RESISTANCE REQUIREMENT OF 1.0MΩ. 1.0MΩ = 1.0 MEG OHM = 1,000,000 Ω; IS THE INCORRECT VALUE. USING "UPPER CASE" IN THIS INSTANCE IS INCORRECT. THE CORRECT VALUE IS 1.0m, SINCE 1.0m Ω = 1 MILLIOHM = .001 Ω. TASK IS TO REPLACE THE UPPER CASE "M" WITH THE LOWER CASE "m" UNIT IN BOTH PLACES.

AS85049/128G HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE FIVE-YEAR REVIEW POLICY.

**NOTICE**

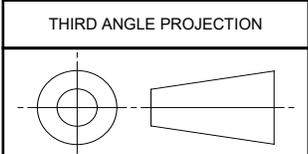
THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS85049.



**FIGURE 1 - CONFIGURATION**

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**For more information on this standard, visit**  
<https://www.sae.org/standards/content/AS85049/128G/>



CUSTODIAN: AE-8C1

PROCUREMENT SPECIFICATION: AS85049



**AEROSPACE STANDARD**

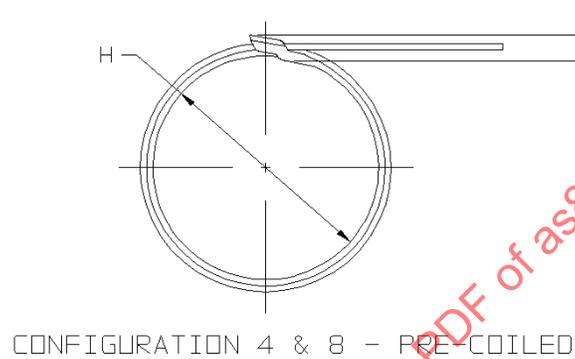
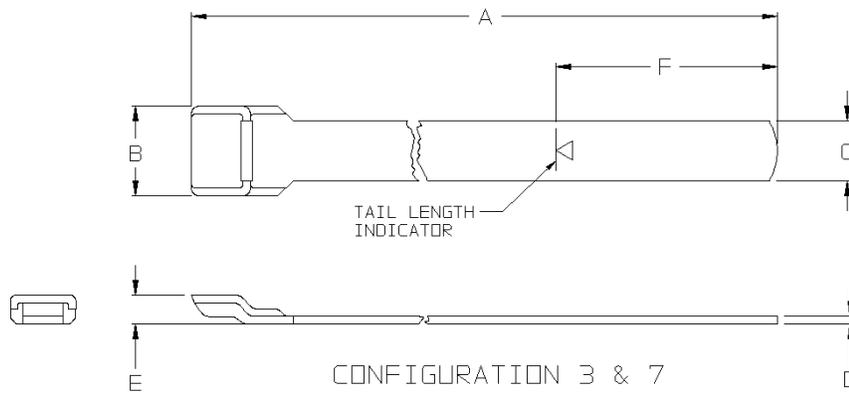
SHIELD BAND, CONNECTOR ACCESSORIES,  
ELECTRICAL BACKSHELL, CATEGORY 7  
(FOR AS85048/82 - /90, /93, /109 - /117 ACCESSORIES)

**AS85049™/128**  
SHEET 1 OF 5

**REV.  
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ISSUED 2003-06 REVISED 2019-02 REAFFIRMED 2025-02



**FIGURE 2 - CONFIGURATION AND DIMENSIONS**

**TABLE 1 - FIGURE 1 AND 2 CONFIGURATIONS AND DIMENSIONS**

CONFIG	FIGURE	A	B	C	D	E	F REF	G MAX	H REF
			±.030 (0.76)	±.010 (0.25)	±.003 (0.08)	±.015 (0.38)			
1	1	13.94 (354.08)	.328 (8.33)	.245 (6.22)	.019 (0.48)	.100 (2.54)	---	---	---
2		---	---	---	---	---	.140 (3.56)	1.750 (44.45)	
3	2	14.19 (360.42)	.350 (8.89)	.245 (6.22)	.019 (0.48)	.074 (1.88)	2.031 (51.59)	---	---
4		---	---	---	---	---	.150 (3.81)	1.750 (44.45)	
5	1	9.44 (239.77)	.198 (5.03)	.118 (3.00)	.015 (0.38)	.080 (2.03)	---	---	---
6		---	---	---	---	---	.120 (3.05)	1.12 (28.45)	
7	2	8.06 (204.72)	.195 (4.95)	.115 (2.92)	.015 (0.38)	.053 (1.35)	2.031 (51.59)	---	---
8		---	---	---	---	---	.073 (1.85)	1.12 (28.45)	

NOTES:

1. THE INSTALLATION BAND SHALL BE PRE-COILED (DOUBLE WRAPPED) AND PROVIDED AS SHOWN. DIMENSIONS OF THE PRE-COILED VERSION (-2, -4, -6, AND -8) SHALL BE THE SAME AS THE UNCOILED VERSION (-1, -3, -5, AND -7), RESPECTIVELY. THE PRE-COILED VERSION PROVIDES THE INSTALLATION HEIGHT OF THE BAND.
2. DIMENSIONS ARE IN INCHES.
3. UNLESS OTHERWISE SPECIFIED, TOLERANCES SHALL BE .XX = ±.03, .XXX = ±.015.
4. METRIC EQUIVALENTS ARE GIVEN FOR GENERAL INFORMATION ONLY AND ARE BASED UPON 1.00 INCH (25.4 MM).
5. MILLIMETERS ARE IN PARENTHESES.
6. A BAND OVER 8 INCHES LONG MAY BE A TWO PIECE WELDED CONSTRUCTION.
7. BANDS TO BE BULK PACKAGED AND IDENTIFIED PER MIL-STD-1285, BAG AND TAG (INDIVIDUAL BAND IDENTIFICATION AT MANUFACTURER'S OPTION).

REQUIREMENTS:

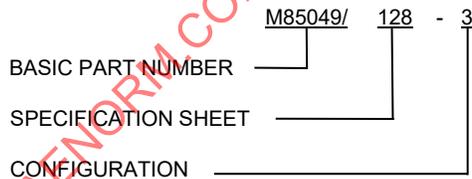
1. DESIGN AND CONSTRUCTION.
2. DIMENSION AND CONFIGURATION: FIGURES 1 AND 2 AND TABLE 1.
3. MATERIAL AND FINISH: BAND SHALL BE CORROSION RESISTANT STEEL AS SPECIFIED IN ASTM A240/A240M (S30400) AND PASSIVATED IN ACCORDANCE WITH AMS-QQ-P-35, AMS2700, OR ASTM A967.
4. TOOL: TOOL USED TO ATTACH THE BAND TO A CONNECTOR ACCESSORY SHALL BE IN ACCORDANCE WITH TABLE 2.

**TABLE 2 - BAND INSTALLATION TOOL DATA**

CONFIGURATION	FIGURE	BAND INSTALLATION TOOL REQUIREMENT	
		ONE STEP METHOD	TWO-STEP METHOD
1	1		M81306/2-01
2			
3	2	M81306/1-01	
4			
5	1		M81306/2-02
6			
7	2	M81306/1-02	
8			

5. PART OR IDENTIFYING NUMBER (PIN):

EXAMPLE:



QUALIFICATION: AS85049 CATEGORY 7 AND AS STATED HEREIN.

1. INSTALLATION TEST: INSTALL TWO UNCOILED BANDS AS FOLLOWS:

- a. A TOTAL OF FOUR BANDS IN EACH CONFIGURATION BEING QUALIFIED WILL BE NECESSARY TO CONDUCT THIS PARTICULAR TEST.

SPECIMEN PREPARATION: FOLD TWO OF THE SAME BAND CONFIGURATIONS IN THE CENTER SO THE CENTER FOLD IS AS FLAT AS POSSIBLE. THE TWO REMAINING FLAT BANDS WILL BE USED AS IS. INSERT THE END OF THE FOLDED BAND OPPOSITE OF THE BUCKLE THROUGH THE BUCKLE OF THE FLAT BAND UNTIL THE CENTER FOLD IS POSITIONED WITHIN THE BAND BUCKLE. REPEAT THIS PROCESS UNTIL TWO SETS OF THE BAND SPECIMENS FOR EACH CONFIGURATION BEING QUALIFIED ARE TEST READY.

BAND BUCKLE STRENGTH AND STABILITY: ATTACH A 1.00 INCH ± .125 INCH ROUND MANDREL IN A HORIZONTAL POSITION TO THE TOP MEMBER OF A SUITABLE PULL TESTER. FORM THE TEST SPECIMEN OVER THE MANDREL AS SUCH SO THAT THE BUCKLE OF THE FLAT BAND IS POSITIONED ON THE TOP OF THE MANDREL. ATTACH ALL OF THE BAND ENDS OPPOSITE OF THE BUCKLE UNDER TEST TO THE LOWER MEMBER FIXTURE OF THE PULL TESTER IN A WAY THAT EQUAL PRESSURE WILL BE APPLIED WHEN THE TWO MEMBERS MOVE IN OPPOSING DIRECTIONS. APPLY A LINEAR FORCE AT A RATE OF 1.00 INCH ± .25 INCH PER MINUTE UNTIL A 210 POUND MINIMUM LINEAR FORCE IS ACHIEVED FOR THE 1 AND 3 CONFIGURATIONS AND A 105 POUND MINIMUM LINEAR FORCE IS ACHIEVED FOR THE 5 AND 7 CONFIGURATIONS. HOLD FOR 1 MINUTE MINIMUM AND THEN RELEASE THE TENSION. REMOVE THE TEST SPECIMEN FROM THE TEST FIXTURES AND DISCARD THE FOLDED BAND. THE BAND BUCKLE SHALL NOT BE BROKEN, TORN, CRACKED, SEPARATED, OR DISTORTED MORE THAN 20% OF ITS ORIGINAL CONFIGURATION WHEN VISUALLY EXAMINED WITH THE UNAIDED EYE.

- b. ATTACH THE APPLICABLE AS81306/\*-\*\* TOOL (SEE TABLE 2) TO THE END OF THE BAND. MEASURE THE TOOL'S LINEAR PULL FORCE ON THE BAND. THE FORCE SHALL BE 138 POUNDS MINIMUM TO 160 POUNDS MAXIMUM FOR CONFIGURATIONS 1 AND 3 AND 70 POUNDS MINIMUM TO 90 POUNDS MAXIMUM FOR CONFIGURATIONS 5 AND 7.
- c. MOUNT THE BAND ON A .20-INCH MANDREL. SLIDE THE BAND THROUGH THE BUCKLE TWO TIMES WHILE PULLING ON THE END WITH A FORCE GAGE. THE FORCE REQUIRED TO SLIDE THE BAND THROUGH THE BUCKLE SHALL NOT EXCEED 7 POUNDS.
- d. SECURE THE BAND TO A .25-INCH MANDREL WITH THE BAND INSTALLATION TOOL IN ACCORDANCE WITH TABLE 2 AS DEFINED IN THE QUALIFIED MANUFACTURER'S TOOL INSTRUCTIONS.

EXAMINE THE MANDREL FOR VOIDS BETWEEN THE BAND AND THE MANDREL. THERE SHALL BE NO MORE THAN ONE VOID AREA GREATER THAN .03 INCH WHEN TRANSITIONING FROM THE BUCKLE EDGE TO THE MANDREL.

- e. EXAMINE THE BAND LOCKING MECHANISM. THE END OF THE BAND SHALL BE LOCKED OVER THE BUCKLE WITH A 45° MINIMUM BEND.

2. BAND TERMINATION TEST (CONFIGURATION 2 AND 4 ONLY): FOR EACH DASH NUMBER TO BE QUALIFIED, PERFORM THE FOLLOWING TESTS ON TWO BAND SPECIMENS FOR EACH ACCESSORY SHELL SIZE FOR A TOTAL OF SIX SPECIMENS. A 6-INCH BRAID SHALL BE CLAMPED BY EACH SPECIMEN TO THE ACCESSORY. THE BRAID SHALL BE TIN COATED COPPER IN ACCORDANCE WITH A-A-59569 WITH A 90% COVERAGE. TWO SPECIMENS EACH SHALL BE CLAMPED TO AN M85049/82-10\*03, M85049/82-18\*03, AND M85049/82-28\*03 ACCESSORY, RESPECTIVELY. THE BAND SHALL BE ASSEMBLED TO THE ACCESSORY WITH THE APPLICABLE BAND INSTALLATION TOOL IN ACCORDANCE WITH TABLE 2.

- a. BRAID RETENTION: WITH ACCESSORY SUITABLY ASSEMBLED WITH BRAID, PULL THE BRAID AT A RATE OF 1 INCH PER MINUTE TO A FORCE OF 100 POUNDS MINIMUM FOR BRAID .50 INCH AND UNDER AND 150 POUNDS MINIMUM FOR BRAID OVER .50 INCH. THE BRAID SHALL NOT PULL OUT. BAND SLIPPAGE SHALL NOT EXCEED .025 INCH WHEN MEASURED FROM A FIXED POINT ON THE ADAPTER. BRAID BREAKAGE DUE TO TENSILE LOAD WILL NOT BE VIEWED AS A FAILURE.
- b. THERMAL AGING: THERMALLY EXPOSE THE ACCESSORY TO 150 °C FOR 168 HOURS FOLLOWED BY AN ELECTRICAL RESISTANCE MEASUREMENT AT ROOM TEMPERATURE. THE APPLIED CURRENT SHALL BE 100 mA ± 10 mA AT A MAXIMUM OF 1.50 VDC. THE MEASUREMENT SHALL BE TAKEN FROM A POINT ON THE BRAID, WITHIN 1.0 INCH +.00 INCH/- .50 INCH BEYOND THE END OF THE ADAPTER, AND A POINT ON THE ADAPTER AT THE OPPOSITE SIDE OF THE BAND. THE ELECTRICAL RESISTANCE SHALL NOT EXCEED 1.0 mΩ (MILLIOHM).

	<b>AEROSPACE STANDARD</b>	<b>AS85049™/128</b> SHEET 4 OF 5	<b>REV.</b> <b>G</b>
	SHIELD BAND, CONNECTOR ACCESSORIES, ELECTRICAL BACKSHELL, CATEGORY 7 (FOR AS85048/82 - /90, /93, /109 - /117 ACCESSORIES)		