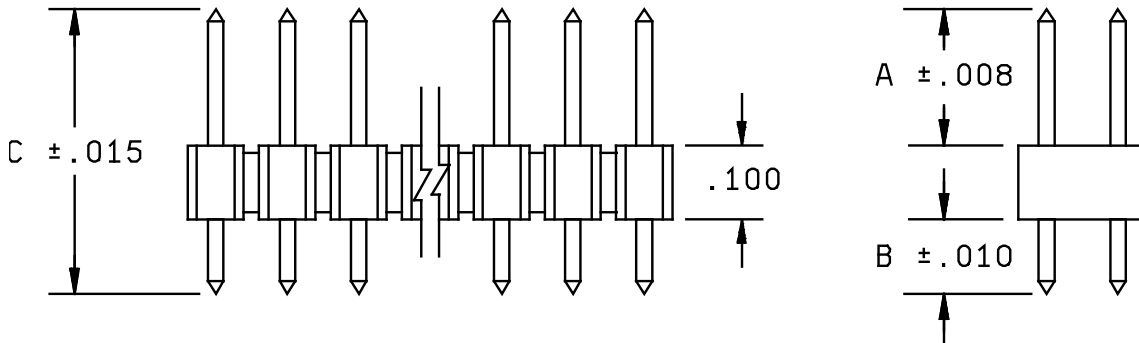
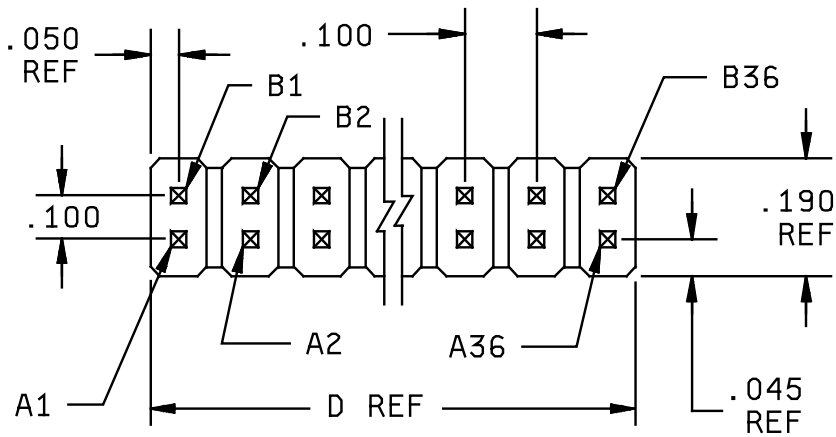


REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	Page 2, add tolerance to dimension C. Page 3, change dimension C on dash 14. Add additional pin length configurations. Page 6, add vendor CAGE numbers OAKZ5 and 95238.	1/19/88	Richard Marbais
B	Change marking requirement. Change current rating. Add caution note. Dimensional changes to figure 1. Inactive for new design as of date of rev B.	5/15/90	Richard Marbais
C	Change CAGE 14933 to 037Z3. Added wrappost geometry requirements. Update material call-outs.	04/18/02	Robert Heber
D	Updated source CAGE OAKZ5 manufacture's name and location address. Editorial changes throughout.	6 June 2011	Howard Jenkins
E	Add option for selective plating to plating code "A".	17 October 2012	Abdo Abdouni
F	Change of source CAGE 95238 manufacture's name and location address. Removed source CAGE 8N187. Replace ASTM B488 with MIL-DTL-45204. Removed ASME Y14.100 and source control drawing.	22 January 2014	Abdo Abdouni

CURRENT DESIGN ACTIVITY CAGE CODE 037Z3
HAS CHANGED NAMES:
DLA LAND AND MARITIME
COLUMBUS, OH 43218-3990

REV																			
PAGE																			
REV STATUS OF PAGES	REV	F	D	D	E	F	D	F	F	F									
	PAGE	1	2	3	4	5	6	7	8	9									
PMIC N/A	PREPARED BY Gail Willis						DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OHIO 43216-5000												
Original date of drawing 7 Nov 1986	CHECKED BY Carl Dello-Stritto						TITLE CONNECTORS, ELECTRICAL, UNSHROUDED HEADERS, PWB TERMINATION, .025, DOUBLE ROW, STRAIGHT THRU												
	APPROVED BY Richard Marbais																		
	SIZE A	CAGE CODE 037Z3						DWG. NO.			86099								
	REV F						PAGE 1			OF			9						



Inches	mm
.008	0.20
.010	0.25
.015	0.38
.045	1.14
.050	1.27
.100	2.54
.190	4.83

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified all tolerances are ±.005 (0.13 mm).

FIGURE 1. Dimensions and configuration.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43216-5000	SIZE A	CAGE CODE 037Z3	DWG NO. 86099
		REV D	PAGE 2

TABLE I. Pin length. 1/ 2/ 3/

Dash number	Dimension A Length above plastic		Dimension B Length below plastic		Dimension C Overall length	
01	.200	(5.08)	.110	(2.79)	.410	(10.41)
02	.230	(5.84)	.045	(1.14)	.375	(9.53)
03	.230	(5.84)	.095	(2.41)	.425	(10.80)
04	.230	(5.84)	.100	(2.54)	.430	(10.92)
05	.230	(5.84)	.110	(2.79)	.440	(11.18)
06	.230	(5.84)	.150	(3.81)	.480	(12.19)
07	.230	(5.84)	.120	(3.05)	.450	(11.43)
08	.230	(5.84)	.156	(3.96)	.486	(12.34)
09	.230	(5.84)	.225	(5.72)	.555	(14.10)
10	.230	(5.84)	.285	(7.24)	.615	(15.62)
11	.230	(5.84)	.595	(15.11)	.925	(23.50)
12	.255	(6.48)	.120	(3.05)	.475	(12.07)
13	.285	(7.24)	.095	(2.41)	.480	(12.19)
14	.285	(7.24)	.230	(5.84)	.615	(15.62)
15	.318	(8.08)	.107	(2.72)	.525	(13.34)
16	.318	(8.08)	.115	(2.92)	.533	(13.54)
17	.318	(8.08)	.120	(3.05)	.538	(13.67)
18	.318	(8.08)	.130	(3.30)	.548	(13.92)
19	.318	(8.08)	.220	(5.59)	.638	(16.21)
20	.318	(8.08)	.318	(8.08)	.736	(18.69)
21	.318	(8.08)	.410	(10.41)	.828	(21.03)
22	.318	(8.08)	.420	(10.67)	.838	(21.29)
23	.318	(8.08)	.520	(13.21)	.983	(24.97)
24	.400	(10.16)	.115	(2.92)	.615	(15.62)
25	.400	(10.16)	.120	(3.05)	.620	(15.75)
26	.430	(10.92)	.120	(3.05)	.650	(16.51)
27	.500	(12.70)	.120	(3.05)	.720	(18.29)
28	.520	(13.21)	.318	(8.08)	.938	(23.83)
29	.540	(13.72)	.120	(3.05)	.760	(19.30)
30	.610	(15.49)	.115	(2.92)	.825	(20.96)

1/ Dimensions are in inches.

2/ Metric equivalents are given for general information.

3/ Metric equivalents are in parentheses.

**DEFENSE SUPPLY CENTER, COLUMBUS
COLUMBUS, OH 43216-5000**

SIZE

A

CAGE CODE

037Z3

DWG NO.

86099

REV

D

PAGE

3

TABLE II. Plating.

Plating	Contact area "A"	Termination area "B"
A <u>1/</u>	Gold	Gold
B	Tin-lead plated	Tin-lead plated
D	Gold	Tin dipped <u>2/</u>
E	Tin-lead plated	Solder dipped

- 1/ Selective gold plating applicable to contact pin lengths .230 inch (5.84 mm) and longer. Measured from tip of contact pin, remainder of contact post to be plated with nickel in accordance with SAE AMS-QQ-N-290, class 2, 50 microinch (1.27 μ m) minimum.
- 2/ The use of pure tin is prohibited. Tin content used in connector materials shall not exceed 97 percent, and an alloy material shall be chosen to inhibit the growth of tin whiskers.

TABLE III. Dimensions D. 1/ 2/ 3/

Number of positions	Dimensions	Number of positions	Dimensions
02	.100 (2.54)	38	1.900 (48.26)
04	.200 (5.08)	40	2.000 (50.80)
06	.300 (7.62)	42	2.100 (53.34)
08	.400 (10.16)	44	2.200 (55.88)
10	.500 (12.70)	46	2.300 (58.42)
12	.600 (15.24)	48	2.400 (60.96)
14	.700 (17.78)	50	2.500 (63.50)
16	.800 (20.32)	52	2.600 (66.04)
18	.900 (22.86)	54	2.700 (68.58)
20	1.000 (25.40)	56	2.800 (71.12)
22	1.100 (27.94)	58	2.900 (73.66)
24	1.200 (30.48)	60	3.000 (76.20)
26	1.300 (33.02)	62	3.100 (78.74)
28	1.400 (35.56)	64	3.200 (81.28)
30	1.500 (38.10)	66	3.300 (83.82)
32	1.600 (40.64)	68	3.400 (86.36)
34	1.700 (43.18)	70	3.500 (88.90)
36	1.800 (45.72)	72	3.600 (91.44)

- 1/ Dimensions are in inches.
- 2/ Metric equivalents are given for general information.
- 3/ Metric equivalents are in parentheses.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43216-5000	SIZE	CAGE CODE	DWG NO.
	A	037Z3	86099
		REV E	PAGE 4

REQUIREMENTS:

Shall meet the requirements of drawing 86100, except as specified herein.

Dimensions and configuration: See figure 1 and tables I, II, III.

Temperature range: -40°C to +105°C.

Dielectric withstanding voltage: 1,000 volts rms (sea level).

Current rating: 3 amperes continuous to 5 amperes maximum.

Insulation resistance: 5,000 megohms.

Pin retention: 2 pounds (0.91 kg) minimum either direction.

Materials:

Contact: Three-fourth hard phosphor bronze in accordance with ASTM B139/B139M.

Contact plating: Contact plating shall be 50 microinches (1.27 μm) gold in accordance with MIL-DTL-45204 or equivalent as approved by the qualifying and preparing activities, type II, grade C, class 1, or 100 microinches (2.54 μm) minimum tin-lead in accordance with SAE AMS-P-81728 over 50 microinches (1.27 μm) minimum nickel in accordance with SAE AMS-QQ-N-290, class 2. Plated solder posts may be hot tin-lead dipped.

Solderless wrappost: The solderless wrappost termination shall be in accordance with figures 2 and 3.

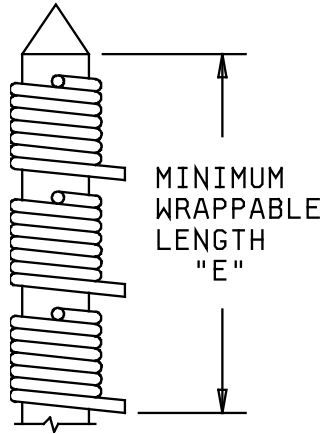
Insulator: The insulator shall be one of the following types of plastic. All plastic material shall be rated V-0 in accordance with UL-94.

- a. Glass-or mineral-filled nylon in accordance with ASTM D4066.
- b. Glass filled thermoplastic in accordance with MIL-M-24519.
- c. Thermoplastic polyphenylene sulfide type GST-40F in accordance with ASTM D4067.

Interface: See drawings 86038 and 86103.

Printed wiring board (PWB) hole size: .040 inch (1.02 mm) ± .003 (0.08 mm).

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43216-5000	SIZE	CAGE CODE	DWG NO.
	A	037Z3	86099
		REV F	PAGE 5



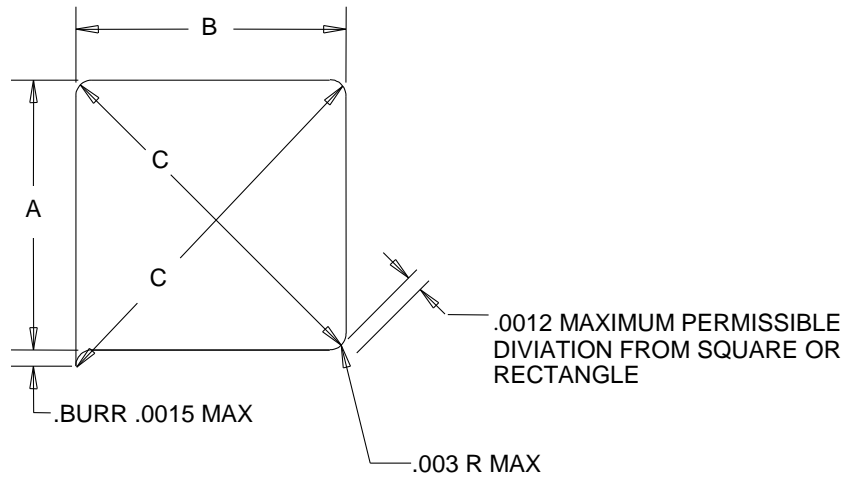
Number of wrapped connections	E length						
	Wire gage 30 (mm)	Wire gage 28 (mm)	Wire gage 26 (mm)	Wire gage 24 (mm)	Wire gage 22 (mm)	Wire gage 20 (mm)	Wire gage 18 (mm)
1	.185 (4.70)	.219 (5.56)	.226 (5.74)	.258 (6.55)	.303 (7.70)	.327 (8.31)	.391 (9.93)
2	.320 (8.13)	.388 (9.86)	.402 (10.21)	.466 (11.84)	.556 (14.12)	.604 (15.34)	.732 (18.59)
3	.455 (11.56)	.557 (14.15)	.578 (14.68)	.674 (17.12)	.809 (20.55)	.881 (22.38)	1.073 (27.25)

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.

FIGURE 2. Wrappable length (typical connection).

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43216-5000	SIZE	CAGE CODE	DWG NO.
	A	037Z3	86099
		REV D	PAGE 6



Inches	mm
.0012	0.030
.0015	0.038
.003	0.076

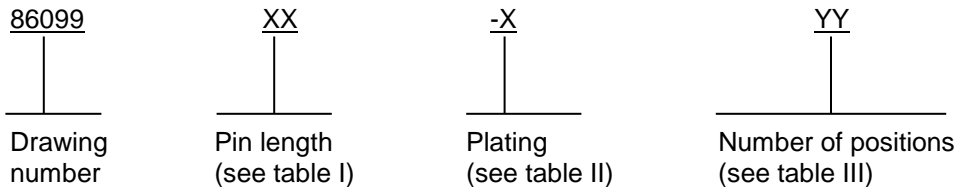
A (mm)	B (mm)	C (mm)	Parallelism (mm)	Straightness Inch/inch (mm)
.025 (0.64) nominal	.025 (0.64) nominal	.0355 (0.902) max	.002 (0.05)	.005 (0.13)
.022 (0.56) min	.022 (0.56) min	.0325 (0.826) min		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.

FIGURE 3. Wrappost geometry.

Marking: The Part or Identifying Number (PIN) shall be marked on the housing and package in accordance with MIL-STD-1285. If size, surface condition, or other design considerations don't allow for full marking on the part, marking on the package is only required. The PIN shall include the complete DLA Land and Maritime PIN, manufacturer's name or CAGE code, and date code. The marking shall be permanent and legible in accordance with method 215 of MIL-STD-202. The PIN shall be constructed using the following format:



DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43216-5000	SIZE	CAGE CODE	DWG NO.
	A	037Z3	86099
		REV F	PAGE 7

Approved source of supply: An approved source of supply is listed herein. Additional sources will be added as they become available. The vendor listed on the requirements drawing has agreed to this drawing and a certificate of compliance has been submitted to DLA Land and Maritime-VAI.

DLA Land and Maritime drawing PIN	Vendor CAGE number	
	OAKZ5 <u>1/</u>	95238 <u>1/</u>
86099-01-X-YY	SPEG099-01-XYYMIL	H211-YY-01-X
86099-02-X-YY	SPEG099-02-XYYMIL	H211-YY-02-X
86099-03-X-YY	SPEG099-03-XYYMIL	H211-YY-03-X
86099-04-X-YY	SPEG099-04-XYYMIL	H211-YY-04-X
86099-05-X-YY	SPEG099-05-XYYMIL	H211-YY-05-X
86099-06-X-YY	SPEG099-06-XYYMIL	H211-YY-06-X
86099-07-X-YY	SPEG099-07-XYYMIL	H211-YY-07-X
86099-08-X-YY	SPEG099-08-XYYMIL	H211-YY-08-X
86099-09-X-YY	SPEG099-09-XYYMIL	H211-YY-09-X
86099-10-X-YY	SPEG099-10-XYYMIL	H211-YY-10-X
86099-11-X-YY	SPEG099-11-XYYMIL	H211-YY-11-X
86099-12-X-YY	SPEG099-12-XYYMIL	H211-YY-12-X
86099-13-X-YY	SPEG099-13-XYYMIL	H211-YY-13-X
86099-14-X-YY	SPEG099-14-XYYMIL	H211-YY-14-X
86099-15-X-YY	SPEG099-15-XYYMIL	H211-YY-15-X
86099-16-X-YY	SPEG099-16-XYYMIL	H211-YY-16-X
86099-17-X-YY	SPEG099-17-XYYMIL	H211-YY-17-X
86099-18-X-YY	SPEG099-18-XYYMIL	H211-YY-18-X
86099-19-X-YY	SPEG099-19-XYYMIL	H211-YY-19-X
86099-20-X-YY	SPEG099-20-XYYMIL	H211-YY-20-X
86099-21-X-YY	SPEG099-21-XYYMIL	H211-YY-21-X
86099-22-X-YY	SPEG099-22-XYYMIL	H211-YY-22-X
86099-23-X-YY	SPEG099-23-XYYMIL	H211-YY-23-X
86099-24-X-YY	SPEG099-24-XYYMIL	H211-YY-24-X
86099-25-X-YY	SPEG099-25-XYYMIL	H211-YY-25-X
86099-26-X-YY	SPEG099-26-XYYMIL	H211-YY-26-X
86099-27-X-YY	SPEG099-27-XYYMIL	H211-YY-27-X
86099-28-X-YY	SPEG099-28-XYYMIL	H211-YY-28-X
86099-29-X-YY	SPEG099-29-XYYMIL	H211-YY-29-X
86099-30-X-YY	SPEG099-30-XYYMIL	H211-YY-30-X

1/ Parts must be purchased to this DLA Land and Maritime PIN to assure that all performance requirements and tests are meet.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43216-5000	SIZE	CAGE CODE	DWG NO.
	A	037Z3	86099
	REV	F	PAGE 8

Vendor CAGE
number

OAKZ5

95238

Vendor name
and address

Muller-Crane
1208 Massillon Road
Building G Suite 1500n
Akron, OH 44306

Winchester Electronics Corp.
199 Park Road Extension
Suite 104
Middlebury, CT 06762

DEFENSE SUPPLY CENTER, COLUMBUS
COLUMBUS, OH 43216-5000

SIZE

A

CAGE CODE

037Z3

REV

F

DWG NO.

86099

PAGE

9

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Headers & Wire Housings](#) category:

Click to view products by [Mueller](#) manufacturer:

Other Similar products are found below :

[892-18-020-10-001101](#) [58102-G61-06LF](#) [582553-1](#) [0009485154](#) [009176003701906](#) [0050291907](#) [LY20-4P-DT1-P1E-BR](#) [02.125.8002.8](#)
[609-3404](#) [61062-3](#) [622-0430](#) [622-3653LF](#) [63453-116](#) [636-1030](#) [636-1427](#) [636-3427](#) [636-4007](#) [641938-9](#) [641991-4](#) [644827-2](#) [65817-010LF](#)
[65817-015LF](#) [65863-015LF](#) [66207-023LF](#) [67095-007LF](#) [67601157](#) [68648-049](#) [70.362.1628.0](#) [70-4210](#) [70-4226B](#) [70-4853B](#) [707-5020](#) [707-5028](#) [71.350.2428.0](#) [71918-208LF](#) [71961-016LF](#) [733-134](#) [733-162](#) [754199-000](#) [760-3052](#) [787-8014-00](#) [79531-3000](#) [FCN-360C032-B](#) [FCN-367T-T012/H](#) [FCN-723D010/2](#) [80.063.4001.1](#) [800-90-001-10-001000](#) [800-90-010-10-002000](#) [801-43-002-10-013000](#) [801-43-006-10-002000](#)