

		REVISIONS																
		LTR	DESCRIPTION						DATE				APPROVED					
		A	Drawing revised to reference MIL-G-83528.						22 Aug 1987				Randy Larson					
		B	Inactivate for new design materials contained herein which are qualified to MIL-G-83528. Add supersession table to section six.						4 Aug 1988				Randy Larson					
		C	Incorporated boilerplate updates.						19 Feb 2008				Michael A. Radecki					
		D	Incorporated boilerplate updates.						16 December 2013				Michael A. Radecki					
		E	Update Superseding (new) PIN to remove reference to MS835287 and replace with MS83528.						6 January 2015				Michael A. Radecki					
INACTIVE FOR NEW DESIGN Material types contained herein which have qualified MIL-DTL-83528 sources are inactive for new design. Gaskets made of materials not yet qualified to MIL-DTL-83528 may continue to be procured to this drawing. CURRENT DESIGN ACTIVITY CAGE CODE 037Z3 DEFENSE LOGISTICS AGENCY LAND AND MARITIME COLUMBUS, OHIO 43218-3990 																		
Prepared in accordance with ASME Y14.100																		
REV STATUS OF PAGES		REV	E	E	E	E	E	E	E	E	E	E	E	E	E			
		PAGES	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
PMIC N/A		PREPARED BY Frank A Crivello						DESIGN ACTIVITY DEFENSE ELECTRONICS SUPPLY CENTER DAYTON, OH 45444-5000										
Original date of drawing 26 Feb 1986		CHECKED BY Randy Larson						TITLE GASKET, SHIELDING, EMI/RFI, O-RING, CIRCULAR CROSS SECTION										
		APPROVED BY Ivan R. Jones																
		SIZE A	CODE IDENT. NO. 14933					DWG NO. 85105										
		REV E						PAGE 1 OF 14										

1. SCOPE

1.1 Scope. This drawing describes the requirements for a family of EMI/RFI gaskets, elastomer, solid circular strip.

1.2 Part or Identifying Number (PIN). The complete PIN shall be as follows:

85105
Drawing number

A
Material
(see 3.2)

-01
Dash number

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents in sections 3 and 4 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-DTL-83528 - Gasketing Material, Conductive, Shielding Gasket, Electronic Elastomer, EMI/RFI, General Specification for.

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-1285 - Marking of Electrical and Electronic Parts.

(Copies of these documents are available online at <http://quicksearch.dla.mil> or <https://assist.dla.mil> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

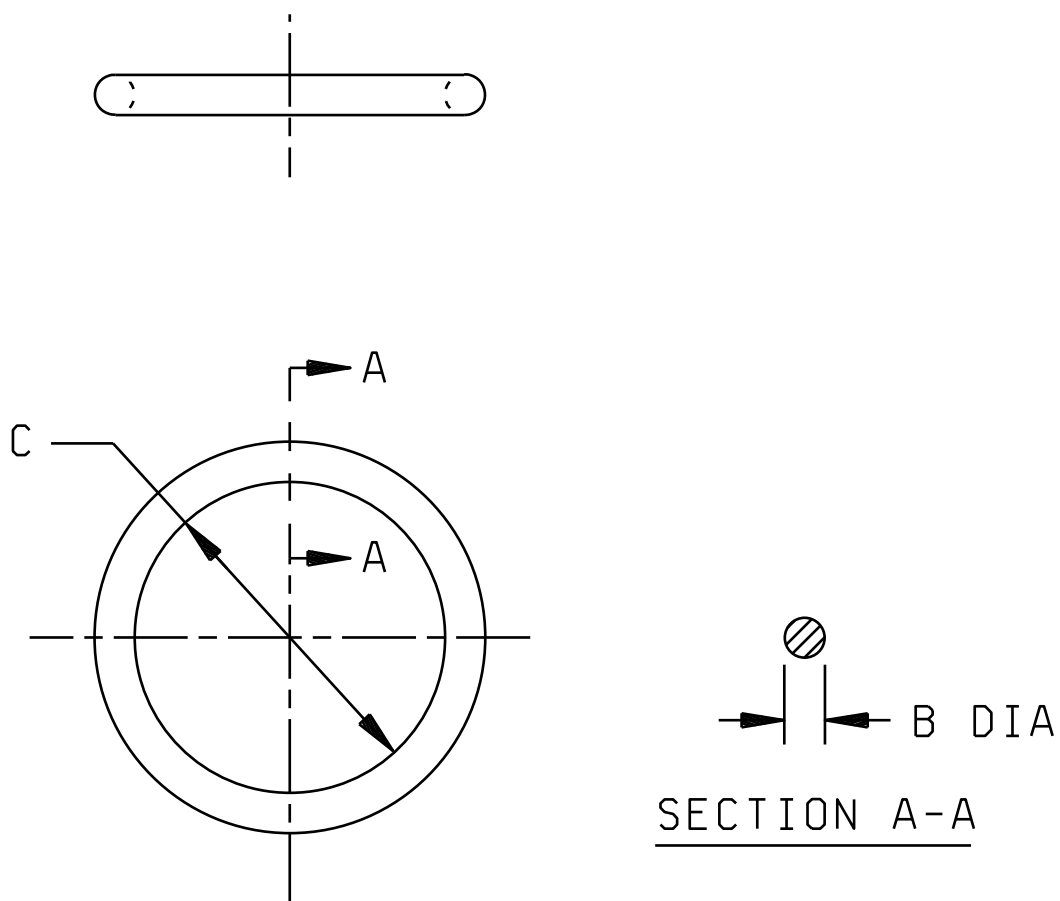
3.1 Interface and physical dimensions. See figure 1 and table I.

3.2 Characteristics. Characteristics shall be in accordance with **MIL-DTL-83528**.

3.3 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible, provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs.

3.4 Manufacturer eligibility. To be eligible for listing as an approved source of supply, a manufacturer shall be listed on the **MIL-DTL-83528** Qualified Product List for at least one part, or perform the group A inspection specified herein on a sample of parts agreed upon by the manufacturer and DLA Land and Maritime-VA.

DEFENSE ELECTRONICS SUPPLY CENTER DAYTON, OHIO	SIZE A	CODE IDENT NO. 14933	DWG NO. 85105
		REV E	SHEET 2



NOTES:

1. Dimensions are in inches.
2. Metric equivalent are for information only.
3. Metric equivalents are in parentheses.
4. Molding flash of .035 inch width maximum is allowed.

FIGURE I. Interface and physical dimensions.

DEFENSE ELECTRONICS SUPPLY CENTER DAYTON, OHIO	SIZE A	CODE IDENT NO. 14933	DWG NO. 85105
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Dash number	Dimensions		Dash number	Dimensions		Dash number	Dimensions		Dash number	Dimensions	
	B +.005 (0.13)	C +.005 (0.13)		B +.005 (0.13)	C +.005 (0.13)		B +.005 (0.13)	C +.005 (0.13)		B +.005 (0.13)	C +.005 (0.13)
001	.030 (0.76)	.442 (11.23)	022	.070 (1.78)	.610 (15.49)	043	.070 (1.78)	1.485 (37.72)	064	.101 (2.57)	3.153 (80.07)
002	.030 (0.76)	.557 (14.66)	023	.070 (1.78)	.635 (16.13)	044	.070 (1.78)	1.609 (40.87)	065	.101 (2.57)	3.613 (91.77)
003	.030 (0.76)	.692 (17.58)	024	.070 (1.78)	.677 (16.94)	045	.070 (1.78)	1.614 (41.00)	066	.103 (2.62)	.612 (15.54)
004	.030 (0.76)	.817 (20.75)	025	.070 (1.78)	.676 (17.17)	046	.070 (1.78)	1.674 (42.52)	067	.103 (2.62)	.799 (20.29)
005	.039 (0.99)	.425 (10.80)	026	.070 (1.78)	.738 (18.75)	047	.070 (1.78)	1.735 (44.07)	068	.103 (2.62)	1.040 (26.42)
006	.048 (1.22)	.295 (7.49)	027	.070 (1.78)	.735 (18.67)	048	.070 (1.78)	1.864 (47.35)	069	.103 (2.62)	1.240 (31.50)
007	.050 (1.27)	.533 (13.54)	028	.070 (1.78)	.739 (18.77)	049	.070 (1.78)	1.980 (50.29)	070	.103 (2.62)	1.362 (34.59)
008	.051 (1.30)	.446 (11.33)	029	.070 (1.78)	.801 (20.35)	050	.070 (1.78)	3.009 (76.43)	071	.103 (2.62)	1.487 (37.77)
009	.057 (1.45)	.415 (10.54)	030	.070 (1.78)	.860 (21.85)	051	.070 (1.78)	3.170 (80.52)	072	.103 (2.62)	1.612 (40.94)
010	.063 (1.60)	.541 (13.74)	031	.070 (1.78)	.864 (21.95)	052	.070 (1.78)	3.489 (88.62)	073	.103 (2.62)	1.737 (44.12)
011	.063 (1.60)	.648 (16.46)	032	.070 (1.78)	.926 (23.52)	053	.076 (1.93)	.656 (16.66)	074	.103 (2.62)	1.790 (45.47)
012	.068 (1.73)	.847 (21.51)	033	.070 (1.78)	.989 (25.12)	054	.076 (1.93)	.779 (19.79)	075	.103 (2.62)	2.362 (59.99)
013	.068 (1.73)	1.182 (30.02)	034	.070 (1.78)	1.046 (26.57)	055	.084 (2.13)	.852 (21.64)	076	.103 (2.62)	3.987 (101.27)
014	.068 (1.73)	3.1;65 (80.39)	035	.070 (1.78)	1.110 (28.19)	056	.084 (2.13)	2.678 (68.02)	077	.115 (2.92)	2.876 (73.05)
015	.070 (1.78)	.145 (3.68)	036	.070 (1.78)	1.114 (28.30)	057	.084 (2.13)	1.250 (31.75)	078	.147 (3.73)	2.265 (57.53)
016	.070 (1.78)	.301 (7.65)	037	.070 (1.78)	1.176 (29.87)	058	.087 (2.21)	2.360 (59.94)	079	.147 (3.73)	3.690 (93.73)
017	.070 (1.78)	.364 (9.25)	038	.070 (1.78)	1.230 (31.24)	059	.094 (2.39)	.750 (19.05)	080	.188 (4.78)	.673 (17.09)
018	.070 (1.78)	.426 (10.82)	039	.070 (1.78)	1.239 (31.47)	060	.095 (2.41)	.897 (22.78)	081	.210 (5.33)	3.475 (12.07)
019	.070 (1.78)	.489 (12.42)	040	.070 (1.78)	1.296 (32.92)	061	.095 (2.41)	1.074 (27.28)	082	.243 (6.17)	3.409 (86.59)
020	.070 (1.78)	.495 (12.57)	041	.070 (1.78)	1.362 (34.59)	062	.100 (2.54)	1.005 (25.53)	083	.394 (10.01)	3.464 (87.99)
021	.070 (1.78)	.551 (14.00)	042	.070 (1.78)	1.364 (34.65)	063	.101 (2.57)	2.805 (71.25)	084	.138 (3.51)	2.011 (51.08)
									085	.115 (2.92)	2.683 (68.15)

FIGURE 1. Interface and physical dimensions - Continued.

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TABLE I. Cross section area.

Dash number PIN	Cross section area (cm ²) *	Dash number PIN	Cross section area (cm ²) *	Dash number PIN	Cross section area (cm ²) *	Dash number PIN	Cross section area (cm ²) *
001	0.0046	023	0.0248	045	0.0248	067	0.0538
002	"	024	"	046	"	068	"
003	"	025	"	047	"	069	"
004	"	026	"	048	"	070	"
005	0.0077	027	"	049	"	071	"
006	0.0117	028	"	050	"	072	"
007	0.0127	029	"	051	"	073	"
008	0.0132	030	"	052	"	074	"
009	0.0165	031	"	053	0.0293	075	"
010	0.0201	032	"	054	0.0293	076	"
011	0.0201	033	"	055	0.0358	077	0.0670
012	0.0234	034	"	056	0.0358	078	0.1095
013	"	035	"	057	0.0384	079	0.1095
014	"	036	"	058	0.0384	080	0.1791
015	0.0248	037	"	059	0.0448	081	0.2235
016	"	038	"	060	0.0457	082	0.2992
017	"	039	"	061	0.0457	083	0.7866
018	"	040	"	062	0.0507	084	0.0965
019	"	041	"	063	0.0517	085	0.0670
020	"	042	"	064	0.0517		
021	"	043	"	065	0.0538		
022	"	044	"	066	0.0538		

* For volume resistivity (surface probe) calculation.

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3.5 Certificate of compliance. A certificate of compliance shall be required from manufacturers requesting to be an approved source of supply.

3.6 Pure tin. The use of pure tin, as an underplate or final finish is prohibited both internally and externally. Tin content of gasket components and solder shall not exceed 97 percent, by mass. Tin shall be alloyed with a minimum of 3 percent lead, by mass (see 6.5).

3.7 Material. The material shall be as specified in the PIN according to designations A, B, C, D, E, F, H, J, or K. These designations shall be in accordance with MIL-DTL-83528.

3.8 Marking. Marking shall be in accordance with MIL-STD-1285, except the delay line shall be marked with the PIN as specified herein (see 1.2), the manufacturer's name or Commercial and Government Entity (CAGE) code and date lot codes.

3.9 Workmanship. The gasket shall be uniform in quality and free from any defects that will affect life, serviceability, or appearance.

4. VERIFICATION

4.1 Sampling and inspection. Unless otherwise specified, sampling and inspection procedures shall be performed in accordance with MIL-DTL-83528.

4.2 In-process inspection. In-process inspection shall be in accordance with MIL-DTL-83528.

4.3 Conformance inspection. Conformance inspection shall consist of the group A inspection.

4.4 Inspection of product for delivery. Inspection of product for delivery shall consist of the group A inspection.

4.5 Group A inspection. Group A inspection shall be in accordance with MIL-DTL-83528.

4.6 Methods of inspection. Methods of inspection shall be in accordance with MIL-DTL-83528.

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When packaging of materiel is to be performed by DoD or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activities within the Military Service or Defense Agency, or within the military service's system commands. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES

(This section contains information of a general or explanatory nature which may be helpful, but is not mandatory.)

6.1 Intended use. Gaskets conforming to this drawing are intended for use when military specifications do not exist and qualified military devices that will perform the required function are not available for the OEM application.

6.2 Ordering data. The contract or purchase order should specify the following:

- a. Complete PIN (see 1.2).
- b. Requirements for delivery, and one copy of the conformance inspection data or the certificate of compliance that parts have passed conformance inspection with each shipment of parts by the manufacturer.
- c. Requirements for packaging and packing.

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6.3 Replaceability. Devices covered by this drawing will replace the commercial device covered by a contractor prepared specification or drawing.

6.4 Tin whisker growth. The use of alloys with tin content greater than 97 percent, by mass, may exhibit tin whisker growth problems after manufacture. Tin whiskers may occur anytime from a day to years after manufacture and can develop under typical operating conditions, on products that use such materials. Conformal coatings applied over top of a whisker-prone surface will not prevent the formation of tin whiskers. Alloys of 3 percent lead, by mass, have shown to inhibit the growth of tin whiskers. For additional information on this matter, refer to ASTM-B545 (Standard Specification for Electrodeposited Coatings of Tin).

6.5 Users of record. Coordination of this document for future revisions is coordinated only with the approved source(s) of supply and the users of record of this document. Requests to be added as a recorded user of this drawing may be achieved online at <mailto:relay@dla.mil> or if in writing to: DLA Land and Maritime, ATTN: DLA Land and Maritime/VAT, Post Office Box 3990, Columbus, OH 43218-3990 or by telephone (614) 692-4481 or DSN 850-4481.

6.6 Approved source(s) of supply. Approved source(s) of supply are listed herein. Additional sources will be added as they become available. Assistance in the use of this drawing may be obtained online at <mailto:relay@dla.mil>, or by contacting DLA Land and Maritime, ATTN: DLA Land and Maritime-VAT, Post Office Box 3990, Columbus, OH 43218-3990 or by telephone (614) 692-4481 or DSN 850-4481.

DEFENSE ELECTRONICS SUPPLY CENTER DAYTON, OHIO	SIZE A	CODE IDENT NO. 14933	DWG NO. 85105
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DLA Land and Maritime drawing PIN	Vendor similar designation or type number 1/ 2/ 3/	Vendor CAGE	Vendor name and address
001 002 003 004 005 006 007 008 009 010 011 012 013 014 015 016 017 018 019 020 021 022 023 024 025 026 027 028 029 030 031 032 033 034 035 036 037 038 039 040 041 042 043 044 045 046 047 048	10-00-2231-XXXX 10-00-2232-XXXX 10-00-2259-XXXX 10-00-2233-XXXX 10-00-1413-XXXX 10-00-2777-XXXX 10-00-1406-XXXX 10-00-1405-XXXX 10-00-1407-XXXX 10-00-1376-XXXX 10-00-1342-XXXX 10-00-1631-XXXX 10-00-1770-XXXX 10-00-1478-XXXX 10-00-3811-XXXX 10-00-2226-XXXX 10-00-5983-XXXX 10-00-2227-XXXX 10-00-1980-XXXX 10-00-0008-XXXX 10-00-2065-XXXX 10-00-0010-XXXX 10-00-2085-XXXX 10-00-1689-XXXX 10-00-2066-XXXX 10-00-1690-XXXX 10-00-0012-XXXX 10-00-2075-XXXX 10-00-1981-XXXX 10-00-0014-XXXX 10-00-2076-XXXX 10-00-1843-XXXX 10-00-2068-XXXX 10-00-2536-XXXX 10-00-2029-XXXX 10-00-2069-XXXX 10-00-1844-XXXX 10-00-2084-XXXX 10-00-2070-XXXX 10-00-2535-XXXX 10-00-2228-XXXX 10-00-2071-XXXX 10-00-0024-XXXX 10-00-2677-XXXX 10-00-4123-XXXX 10-00-2229-XXXX 10-00-0028-XXXX 10-00-4124-XXXX	18565	Parker Hannifin Corporation Chomerics Division 77 Dragon Court Woburn, MA 01801-1039 Phone: (781) 935-4850

See footnotes at end of table.

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DLA Land and Maritime drawing PIN	Vendor similar designation or type number 1/ 2/ 3/	Vendor CAGE	Vendor name and address
049 050 051 052 053 054 055 056 057 058 059 060 061 062 063 064 065 066 067 068 069 070 071 072 073 074 075 076 077 078 079 080 081 082 083 084 085	10-00-0032-XXXX 10-00-2230-XXXX 10-00-0052-XXXX 10-00-2040-XXXX 10-00-2320-XXXX 10-00-2321-XXXX 10-00-1827-XXXX 10-00-0044-XXXX 10-00-0020-XXXX 10-00-0028-XXXX 10-00-3550-XXXX 10-00-1459-XXXX 10-00-1378-XXXX 10-00-4452-XXXX 10-00-1754-XXXX 10-00-1359-XXXX 10-00-1360-XXXX 10-00-1921-XXXX 10-00-1847-XXXX 10-00-4645-XXXX 10-00-2086-XXXX 10-00-1845-XXXX 10-00-2072-XXXX 10-00-1846-XXXX 10-00-2031-XXXX 10-00-2087-XXXX 10-00-2030-XXXX 10-00-1691-XXXX 10-00-1573-XXXX 10-00-1608-XXXX 10-00-1607-XXXX 10-00-1782-XXXX 10-00-1746-XXXX 10-00-1354-XXXX 10-00-1747-XXXX 10-00-6545-XXXX 10-00-6555-XXXX	18565	Parker Hannifin Corporation Chomerics Division 77 Dragon Court Woburn, MA 01801-1039 Phone: (781) 935-4850

See footnotes at end of table.

DEFENSE ELECTRONICS SUPPLY CENTER DAYTON, OHIO	SIZE A	CODE IDENT NO. 14933	DWG NO. 85105
		REV E	SHEET 9

DLA Land and Maritime drawing PIN	Vendor similar designation or type number 1/ 4/ 5/	Vendor CAGE	Vendor name and address
001 002 003 004 005 006 007 008 009 010 011 012 013 014 015 016 017 018 019 020 021 022 023 024 025 026 027 028 029 030 031 032 033 034 035 036 037 038 039 040 041 042 043 044 045 046 047 048	87-10824 87-10825 87-10826 87-10827 87-10828 87-10829 87-10830 87-10831 87-10832 87-10833 87-10834 87-10835 87-10836 87-10837 87-10838 87-10839 87-10840 87-10841 87-10842 87-10843 87-10844 87-10845 87-10846 87-10847 87-10848 87-10849 87-10850 87-10851 87-10852 87-10853 87-10854 87-10855 87-10856 87-10857 87-10858 87-10859 87-10860 87-10861 87-10862 87-10863 87-10864 87-10865 87-10866 87-10867 87-10868 87-10869 87-10870 87-10871	53TQ8	Parker Hannifin Corp. Chomerics Division, Tecknit Business Unit 135 Bryant Avenue Cranford, NJ 07016-3217 Phone: (781) 935-4850

See footnotes at end of tables.

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		REV E	SHEET 10

DLA Land and Maritime drawing PIN	Vendor similar designation or type number <u>1/</u> <u>4/</u> <u>5/</u>	Vendor CAGE	Vendor name and address
049 050 051 052 053 054 055 056 057 058 059 060 061 062 063 064 065 066 067 068 069 070 071 072 073 074 075 076 077 078 079 080 081 082 083 084 085	87-10872 87-10873 87-10874 87-10875 87-10876 87-10877 87-10878 87-10879 87-10880 87-10881 87-10882 87-10883 87-10884 87-10885 87-10886 87-10887 87-10888 87-10889 87-10890 87-10891 87-10892 87-10893 87-10894 87-10895 87-10896 87-10897 87-10898 87-10899 87-10900 87-10901 87-10902 87-10903 87-10904 87-10905 87-10906 87-10907 87-10908	53TQ8	Parker Hannifin Corp. Chomerics Division, Tecknit Business Unit 135 Bryant Avenue Cranford, NJ 07016-3217 Phone: (781) 935-4850

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

2/ X designates material type.

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3/ Vendor CAGE 18565 will manufacture in all materials. The last four digits designate the following material types:

<u>Material type</u>	<u>XXXX</u>
A	1215
B	1285
C	1217
D	1287
E	1224
F	1221
H	1240
K	1212

4/ These PINs represent material A only. Vendor CAGE 07700 will also manufacture in materials B, C and D and assign PINs in the future.

5/ XXXX designates material type.

<u>Material type</u>	<u>XXXX</u>
A	HPS3
C	HPF2
E	HPS1
F	HPF1
H	HPS2
J	HPS5
K	HPS6

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6.7 Supersession data. Superseded PINs are listed below:

Superseding (new) PIN	Superseded (old) PIN
M83528/005*001	85105*001
M83528/005*002	85105*002
M83528/005*003	85105*003
M83528/005*004	85105*004
M83528/005*005	85105*005
M83528/005*006	85105*006
M83528/005*007	85105*007
M83528/005*008	85105*008
M83528/005*009	85105*009
M83528/005*010	85105*010
M83528/005*011	85105*011
M83528/005*012	85105*012
M83528/005*013	85105*013
M83528/005*014	85105*014
M83528/002*007	85105*015
M83528/002*011	85105*016
M83528/002*012	85105*017

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Superseding (new) PIN	Superseded (old) PIN
M83528/002*013	85105*018
M83528/002*014	85105*019
M83528/005*015	85105*020
M83528/002*015	85105*021
M83528/005*016	85105*022
M83528/005*017	85105*023
M83528/005*018 +	85105*024
M83528/002*017	85105*025
M83528/002*018	85105*028
M83528/002*019	85105*029
M83528/005*019	85105*030
M83528/002*020	85105*031
M83528/002*021	85105*032
M83528/002*022	85105*033
M83528/002*024	85105*036
M83528/005*020	85105*038
M83528/002*028	85105*042
M83528/002*114	85105*066
M83528/002*117	85105*067
M83528/005*021	85105*068
M83528/002*126	85105*070
M83528/002*128	85105*071
M83528/005*022	85105*072
M83528/002*132	85105*073
M83528/005*023	85105*074
M83528/002*142	85105*075
M83528/002*155	85105*076

* Denotes material type and will be replaced by a letter (see 3.2)

+ Not interchangeable but substitutes.

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