

SRC Power Blind Cavity Plug



1.0 SCOPE

This Product Specification covers the SRC Power Blind Cavity Plug (Part Number: 937320001)

2.0 PRODUCT DESCRIPTION

The SRC Power Blind Cavity Plug is a moulded-plastic cylindrical component designed to be used as a blanking plug in the power circuits only of SRC Mixed Power Female Receptacle Assemblies (85084 series) and in SRC Mixed Power Male Blade Housing Assemblies (93792 series)

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

| | |
|---------------|--|
| 850840700 PSD | SRC Mixed Power Female Receptacle Housing Assembly |
| 937921000 PSD | SRC Mixed Power Male Blade Housing Assembly |
| 850830010 PSP | SRC2 & SRC Mixed Power Product Specification |
| 850830010 PSA | SRC2 & SRC Mixed Power Application Specification |

4.0 SAMPLE DESCRIPTION

For the purposes of this test, any SRC Mixed Power Male assembly with its corresponding Female Receptacle counterpart may be used. The use of 0+20 options (Part Numbers: 937920020 & 850840020) is recommended as this will eliminate any requirement for assembly of cables.

5.0 RATINGS

5.1 TEMPERATURE

| | |
|----------------|-------------------|
| Operating: | - 40°C to + 125°C |
| Non-operating: | - 40°C to + 125°C |

| | | | |
|---|---|---|---|
| <u>REVISION:</u> A1 | <u>ECR/ECN INFORMATION:</u> ECM No: 102971 DATE: 2016/05/06 | <u>TITLE:</u> SRC POWER BLIND CAVITY PLUG | <u>SHEET No.</u> 1 of 3 |
| <u>DOCUMENT NUMBER:</u> 937320001 PSP | <u>CREATED / REVISED BY:</u> JDWALLACE | <u>CHECKED BY:</u> SMCGREEVY | <u>APPROVED BY:</u> JDWALLACE |

6.0 PERFORMANCE

6.1 MECHANICAL REQUIREMENTS

| ITEM | DESCRIPTION | TEST CONDITION | REQUIREMENT |
|------|--|---|---|
| 1 | Insertion Force (TPA Open) | Apply a load at a rate of 25 mm/min until the Blind Cavity Plug has engaged with the latch | 20 N MAXIMUM on unaged parts |
| 2 | Retention Force (TPA Closed) SAE/USCAR-2, 5.4.5.2 | Apply a pull force at a rate of 25 mm/min until the Blind Cavity Plug is fully disengaged from the latch and, document force and failure mechanism | 30 N MINIMUM on unaged parts 30 N MINIMUM on aged parts (after Thermal Shock) |

6.2 ENVIRONMENTAL REQUIREMENTS

| ITEM | DESCRIPTION | TEST CONDITION | REQUIREMENT |
|------|---|---|--|
| 3 | Shock (Thermal) SAE J2030, 6.13 | Mate connectors; expose to 10 cycles of: <u>Temperature (°C)</u> <u>Duration (Minutes)</u> -55 +0/-5 30 +125 +5/-0 30 | Retention Force meets minimum requirements (See 1 above) |
| 4 | IP 69K DIN 40050-9 IEC 60529 | IP 6X – expose mated connectors to suspended dust under pressure IP X9K – expose mated connectors to water from any direction at high temperature and pressure | According to ISO 20653 |

7.0 TEST SEQUENCES

Table 1: Test Sequences

| Test No. | Description | Test Group A | Test Group B | Test Group C |
|----------|------------------------------|---------------------|---------------------|---------------------|
| | | Qty: 2 [†] | Qty: 2 [†] | Qty: 5 [‡] |
| 1 | Insertion Force (TPA Open) | 1 | 1 | |
| 2 | Retention Force (TPA Closed) | 2 | 3 | |
| 3 | Shock (Thermal) | | 2 | 1 |
| 4 | IP 69K | | | 2 |

†: Quantity comprises 937920020 (x2) and 850840020 (x2) connectors. See Table 2 for details of how to populate the connectors

‡: Quantity comprises 937920020 (x5) mated with 850840020 (x5) connectors fully populated with 937320001 Blind Cavity plugs for IP X9K test.
Quantity comprises 937920020 (x5) mated with 850840020 (x5) connectors fully populated with 937320001 Blind Cavity plugs for IP 6X test.

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| 937320001 PSP | JDWALLACE | SMCGREEVY | JDWALLACE |

Table 2: Circuit order for populating test samples

| Sample Number | Test Group A (Power circuits A1 to G3) | | | | | | | | | | | | | |
|---------------|--|-------------|----|---|----|---|----|---|----|---|----|---|----|---|
| 1 | A1 | X | B1 | | C1 | X | D1 | X | E1 | X | F1 | | G1 | X |
| | A2 | | B2 | X | C2 | | D2 | | E2 | | F2 | X | G2 | |
| | A3 | X | B3 | | C3 | X | | | E3 | X | F3 | | G3 | X |
| 2 | A1 | | B1 | X | C1 | | D1 | | E1 | | F1 | X | G1 | |
| | A2 | X | B2 | | C2 | X | | | E2 | X | F2 | | G2 | X |
| | A3 | | B3 | X | C3 | | D2 | X | E3 | | F3 | X | G3 | |
| Sample Number | Test Group B (Power circuits A1 to G3) | | | | | | | | | | | | | |
| 1 | A1 | | B1 | X | C1 | | D1 | | E1 | | F1 | X | G1 | |
| | A2 | X | B2 | | C2 | X | | | E2 | X | F2 | | G2 | X |
| | A3 | | B3 | X | C3 | | D2 | X | E3 | | F3 | X | G3 | |
| 2 | A1 | X | B1 | | C1 | X | D1 | X | E1 | X | F1 | | G1 | X |
| | A2 | | B2 | X | C2 | | | | E2 | | F2 | X | G2 | |
| | A3 | X | B3 | | C3 | X | D2 | | E3 | X | F3 | | G3 | X |
| | X | Populated | | | | | | | | | | | | |
| | | Unpopulated | | | | | | | | | | | | |

8.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage. See 937320001 PSK for details.

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