



CERTIFICATION RECORD

The company named below has been authorized by CSA International to represent the products listed in this record as "CSA Certified" and to affix the CSA Mark to these products according to the terms and conditions of the CSA Service Agreement and applicable CSA program requirements (including additional Markings).

File No: 029862_0_000

Class No: 1422 30 FUSES Supplemental Fuses - Component Acceptance

SUBMITTOR

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FACTORIES

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- Type CCMR, 35-60A, 600V ac, IR600-200kA.
- Cat Nos 213/223, 613/623: 200mA-6.3A, 250V ac, IR 250-50A; Cat No 215/615: 0.5A-12A, 250V ac; IR 250-1500A; Cat Nos 216/226, 616/626: 0.05A-1.25A, 250V ac, IR 250-35A; 1.26A-10A, 250V ac, IR 250-1500A; 12.5-16.0A, 250V ac, IR 125V ac-750A, Cat Nos 217/227, 617/627: 0.032A-1.6A, 250V ac, IR 250-35A; 2A-6.3A, 250V ac, IR 250-50A; Cat Nos 218/228, 618/628: 0.032A-0.63A, 250V ac, IR 250-50A, 0.8A-6.3A,

- 250V ac, IR 250-65A; 8A-15A, 250V ac, IR 250-100A; Cat No 219/619: 0.8A-6.3A, 250V ac, IR 250-150A; Cat No 219xxxA, 0.125A-6.3A, 250V ac, IR 250-150A.
- Component accepted, special purpose fuses, Cat No L15S, 0-60A, 150V ac/dc, IR 150V ac - 100kA, IR150V dc-20kA; Cat No L15S, 61-1000A, 150V ac, 100V dc, IR150V ac - 100kA, IR150V dc - 20kA; Cat No L25S, 1-800A, 250V ac, IR 250V ac 200kA; Cat No L50S, 10-800A, 500V ac, 450V dc, IR 500V ac - 200kA, IR 450V dc - 20kA; Cat No L60S, 0-800A, 600V ac, IR 600V ac - 200kA; Cat No L70S, 10-800A, 700V ac, 650V dc, IR 700V ac - 200kA, IR 650V dc - 20kA.
 - Type 401, 0.18-10A, 125V ac, IR 125V ac - 100A and 60V dc, IR 60V dc -100A.
 - Type 401, 0.18-5A, 160V dc, IR 160V dc, IR 160V dc - 55A, IR 125V ac - 100A.
 - Type 481, 0.18-15A, 125V ac/dc, IR 125V ac/dc - 300A.
 - Type 481, 20A, 125V ac/dc, IR 125V ac - 300A, IR 125V dc - 200A, IR 60V dc - 450A.
 - Cat No L17T, 70-800A and 1200A, 170V dc, IR 170V dc - 100kA.
 - Microfuses, Series 434, 467, 494 rated 0.25-1A, followed by suffixes, 32V ac/dc, IR32V ac/dc - 50A, rated 1.25-5A, followed by suffixes, 32V ac/dc, IR32V ac/dc - 35A.
 - Cat Nos 4000008, 4000009, 4000010, 0.2A, 0.5A, 1A respectively, 32V ac/dc, IR 32V ac/dc - 50A.
 - Cat Nos 4000011, 4000012, 4000013, 1.25A, 1.4A, 2A respectively, 32V ac/dc, IR 32V ac/dc - 35A.
 - Component Acceptance – Miscellaneous Fuses, Series 586, followed by Suffix No 001, rated 1A, 1000V ac/dc ,IR 10kA at 1000Vac/dc and Cat No FLU.44A, rated 0.44A, 1000V ac/dc, IR 10kA at 1000Vac/dc ,Series 585, followed by Suffix No 015, rated 15A, 1000V ac/dc IR 17kA at 1000Vac/dc and Cat No FLU011A, rated 11A, 1000V ac/dc IR 20kA at 1000Vac/dc.
 - Microfuses, Cat Nos 420001, 1.0A; 420002, 1.5A; 420003, 2.0A; 420004, 2.5A; 420005, 3.0A; 420006, 3.5A; 420007, 4.0A; 420008, 5.0A; Pico-SMD, 250V ac, IR250V ac-35A.
 - Component Acceptance, special purpose fuses, Series Cat No 446/447, 2, 3, 4, 5 or 10A; 350V ac, IR350V ac-100A.
 - Component Accepted, microfuses, Cat No 4000004, rated 0.5A, 32V ac/dc, IR 32V ac/dc - 50A; Cat No 4000005, rated 2A, 32V ac/dc, IR 32V ac/dc - 35A; Cat No 4000007, rated 3/4A, 32V ac/dc, IR 32V ac/dc - 50A.
 - Component Accepted, microfuses, Series 461, Cat Nos 461.500 (F0500T), 4611.25 (F1250T), 461002(F1251T) 0.5-2A, 600V ac, IR 600-60A..
 - Cat No 4000008, 4000009, 4000010, 0.2A, 0.5A, 1A respectively, 32V ac/dc, IR 32V ac/dc - 50A; Cat Nos 4000011, 4000012, 4000013, 1.25A, 1.4A, 2A respectively, 32V ac/dc, IR 32 Vac/dc-35A
 - Fuses; Cat. No CNN, 10 - 800A, 125V ac, 48V dc, IR 132V ac-2500A, IR 48 V dc-2500A; Cat No CNL, 35-500A, 32 V ac/dc, IR 32 V ac/dc-2500A.
 - Component Accepted Microfuses, Series 437 rated 0.25-0.375A, 125V ac/dc, IR 125V ac/dc - 50A; 0.5-2A, 63V ac/dc, IR 63V ac/dc - 50A; 2.5-8A, 32V ac/dc, IR 32V ac/dc - 50A.
 - Component Accepted Microfuses, Series 438 rated 0.25-5.0A, 32V dc, IR 32V dc-50A; 6A, 24V dc, IR 24V dc - 50A.
 - Component Accepted Microfuses, Series 501 rated 15 and 20A, 24V dc, IR 24V dc - 150A.

- Microfuses, Series 501S with or without one prefix and with or without additional suffix characters, rated 10, 12, 15 and 20A, 32V dc, IR 32Vdc-150A.
- Semiconductor Fuses, Cat Nos SPF001-012, 1-12A; SPF015-030, 15-30A; SPF001R-012R, 1-12A; SPF015R-030R, 15-30A; 1000V dc, IR1000V dc, 20kA.
Note: At the manufacturer's request additional test data addressing heat cycling for photo-voltaic applications was added to the report file for type SPF series fuses.
- Component Accepted Microfuses, Series 456, rated 20A, 125V ac, 100V dc, IR 125V ac - 100A, IR 65V ac - 300A, IR 32V dc - 1000A.
- Component Accepted Microfuses, Series 456, rated 25 and 30A, 125V ac, 32V dc, IR 125V ac - 100A, IR 65V ac - 300A, IR 32V dc - 1000A.
- Component Accepted Microfuses, Series 456, rated 40A, 60V dc, IR 60V dc - 600A.
- Semiconductor fuses, Cat No SPFR, 250-400A, 600V ac, 1000V dc, IR600V ac-10kA, IR 1000V dc-10kA.
- Component Accepted Microfuses, Cat No 469; 1.0 – 2A, 63Vdc, IR63-60A; 2.5-5.0A, 32Vdc, IR32-60A; 6.0-8.0A, 24Vdc, IR 24-60A.
- "Micro" fuses, Cat. No 4000014 rated 3A, 32Vac/dc, IR 35A at 32Vac/dc.
- "Micro" fuses, Cat. No 4000024 rated 1.5A, 32Vac/dc, IR 35A at 32Vac/dc.
- "Micro" fuses, Cat. No.04000022 with or without additional suffixes, rated 12A, 24Vdc, IR 24Vdc-100A.

Notes:

1. These fuses are components for use in other equipment where the suitability of the combination is determined by CSA International. NOT FOR BRANCH CIRCUIT PROTECTION.
2. Temperature and current carrying capacity and clearing time/overload characteristics must be evaluated in the end use equipment where appropriate.
3. The opening time at 350% of rated current is 5 sec maximum.
4. The opening times at 135% and 200% of rated current have not been established.

- Component Accepted microfuses, Series 449 (with or without suffixes or prefixes), rated 0.375-5 A, 125V ac/dc, non-time delay, IR 125V ac/dc - 50A.
- Component Accepted Microfuse, Cat No 441, **0.25-6.0A**, 32Vdc, IR32Vdc - 50A.

Notes:

1. These fuses are components for use in other equipment where the suitability of the combination is determined by CSA International. NOT FOR BRANCH CIRCUIT PROTECTION.
2. Temperature and current carrying capacity and clearing time/overload characteristics must be evaluated in the end use equipment where appropriate.
3. The opening time at 200% of rated current is 60 sec maximum.
4. The opening time at 135% of rated current has not been established.

5. For the 441 fuses rated less than 2.0A the opening time at 200% of rated current has not been established. For these fuses the opening time at 350% of rated current is 5 sec.

Component Accepted Fuses, Cat No 325 (pigtail version)/326, 12-20A, 125V ac/dc, 250V ac, IR 125 V ac -10kA, IR 125V dc - 600A, IR 250V ac - 400A.

Component Accepted Fuses, Cat No 325 (pigtail version)/326, 25-30A, 125V ac, 60V dc, IR 125V ac - 400A, IR 60V dc - 10kA.

Component Accepted Fuses, Cat No 325 (pigtail version)/ 326, 25-30A, 250V ac, 125V dc, IR 250V ac - 400A IR 125V dc - 600A.

Component Accepted Fuses, Cat No 325D (pigtail version)/326D, 12-20A, 250V ac, IR 250V ac – 1500A.

Notes:

1. Cat No WP91769 followed by List No 135, 136, 137, 138, 139 are identical to Cat No 326012, 326015, 326020, 326025, 326030 respectively.
 2. Cat No WP91769 followed by List No 35, 36, 37, 38, 39 are identical to Cat No 325012, 325015, 325020, 325025, 325030 respectively.
- Microfuses Series 440 (with or without suffixes or prefixes), rated 0.25-8A, non time delay, with different voltage ratings and IR(Interrupting Ratings) as following:
 - a) 0.25-0.375A, 125Vac/dc, IR 125Vac/dc - 50A at p.f.=1 or resistive Time Constant.
 - b) 0.5A, 63Vac/dc, IR 63Vac/dc - 50A at p.f.=1 or resistive Time Constant.
 - c) 0.75A, 63Vac/dc, IR 63Vac/dc - 50A at p.f.=1 or resistive Time Constant.
 - d) 1-1.5A, 50Vac/dc, IR 50Vac - 50A at p.f.=1 or resistive Time Constant.
 - e) 1.75-8.0 A, 32V ac/dc, non-time delay, IR 32V ac/dc – 50A.

Notes:

1. These fuses are components for use in other equipment where the suitability of the combination is determined by CSA International. NOT FOR BRANCH CIRCUIT PROTECTION.
 2. Temperature and current carrying capacity and clearing time/overload characteristics must be evaluated in the end use equipment where appropriate.
 3. The opening time at 350% of rated current is 5 sec. maximum.
 4. The opening times at 135% and 200% of rated current have not been established.
- Series 485 supplemental fuses followed by suffix Nos. 001, 01.5, 002, 02.5, 3.15 with or without one prefix and with and without up to three additional suffix letters, rated 1A-3.15A , 250Vac and 600Vdc with IR=100A at 250Vac with p.f.=1 circuit and IR=100A at 600Vdc with TC=0.16ms circuit.

Conditions of Acceptability:

- 1) These fuses are supplemental fuses intended for use where branch circuit protection is not required.
- 2) These fuses are not current limiting.
- 3) These products are intended for surface mount installation on printed circuit boards
- 4) The max. clearing time at 200% of rated current is 10 sec.
- 5) The maximum temperature rise recorded for these fuses was 36.8°C on 3.15A rating.
- 6) Suitability shall be determined in the end-use application.

Supplemental fuses, Cat. Series 229 and 230(with pigtail) with or without one or two additional suffix letters. May be followed by "P", rated 4 through 7A, 125Vac/dc, IR 125ac/dc-400A at p.f.=1/resistive.

Notes:

- 1) These fuses are to be used as supplementary protection and are not suitable to be used for branch circuits protection.
- 2) The optional one or two suffix letters are indicating options such as color coding, leads length and radial length do not affect the electrical characteristics.
- 3) The clearing time of these fuses is 1h at 135% of the rated current and 2min. at 200% of the rated current.
- 4) The products covered have an interrupting capacity of 400A at their rated ac/dc voltage at p.f.=1.
- 5) Suitability shall be determined in the end-use application.

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