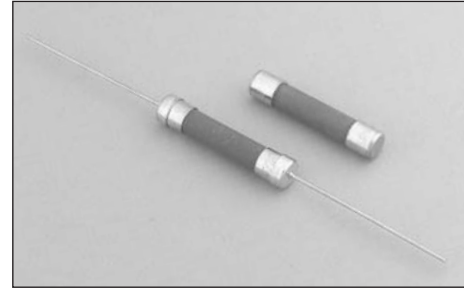


1/4" x 1 1/4" Fast-Acting Ceramic Tube Fuses

ABC Series

Description

- Fast-acting
- Optional axial leads available
- 1/4" x 1 1/4" (6.4 x 31.7mm) physical size
- Ceramic tube, nickel-plated brass endcap construction
- UL Listed product meets standard 248-14



Electrical Characteristics	
% of Amp Rating	Opening Time
100%	4 Hours Minimum
135%	60 Minutes maximum
200%	120 Seconds Maximum

Agency Information

- UL Listed: Guide JDYX & File E19180.
- UL Recognition: Guide JDYX2 & File E19180.
- CSA Certification: Class 1422-01 & 1422-03, File 53787.

Environmental Data

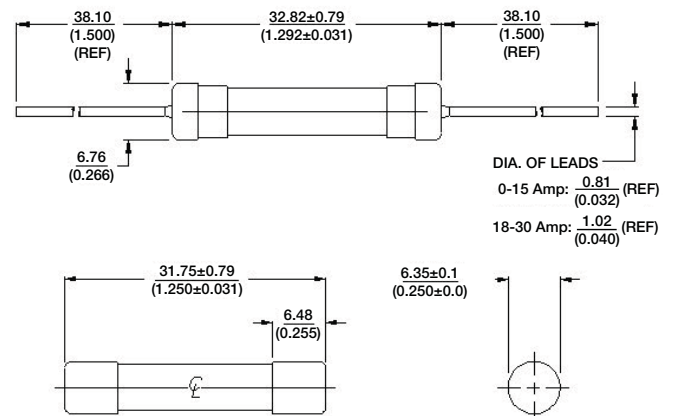
- Shock: 1/4-30A – MIL-STD-202, Method 213, Test Condition J
- Vibration: 1/4-30A – MIL-STD-202, Method 204, Test Condition C (Except 5g, 500HZ)

Ordering

- Specify packaging, product, and option code

Dimensions - mm (in)

Drawing Not to Scale



Specifications

Part Number	Voltage Ratings		Vac Interrupting Ratings* (amps)		Vdc Interrupting Ratings (amps)		Typical DC Cold Resistance (Ω)**	Typical Pre-Arc I ² t AC†	Typical Voltage Drop (mV)‡	Agency Approvals		
	Vac	Vdc	250	125	125	75				UL	UR	CSA
ABC-1/4-R	250	125	35	10,000	10,000	–	2.950	0.0020	0.35	X		X
ABC-1/2-R	250	125	35	10,000	10,000	–	0.587	0.0390	0.41	X		X
ABC-3/4-R	250	125	35	10,000	10,000	–	0.300	0.1450	0.32	X		X
ABC-1-R	250	125	35	10,000	10,000	–	0.1950	0.4310	0.3	X		X
ABC-1-1/2-R	250	125	100	10,000	10,000	–	0.131	1.1630	0.28	X		X
ABC-2-R	250	125	100	10,000	10,000	–	0.0890	2.1670	0.31	X		X
ABC-2-1/2-R	250	125	100	10,000	10,000	–	0.061	4.4670	0.23	X		X
ABC-3-R	250	125	100	10,000	10,000	–	0.047	6.55	0.14	X		X
ABC-4-R	250	125	200	10,000	10,000	–	0.031	22.28	0.17	X		X
ABC-5-R	250	125	200	10,000	10,000	–	0.026	32.83	0.22	X		X
ABC-6-R	250	125	200	10,000	10,000	–	0.021	58	0.19	X		X
ABC-7-R	250	125	200	10,000	10,000	–	0.016	109.33	0.17	X		X
ABC-8-R	250	125	200	10,000	10,000	–	0.014	116.5	0.19	X		X
ABC-10-R	250	125	200	10,000	10,000	–	0.011	208.8	0.15	X		X
ABC-12-R	250	125	750	10,000	10,000	–	0.0068	133.3	0.1	X		X
ABC-15-R	250	125	750	10,000	10,000	–	0.00553	200.2	0.1	X		X
ABC-18-R	250	–	400	1000	–	–	0.00465	400	0.1		X	X
ABC-20-R	250	125	400	1000	10,000	–	0.00366	550.8	0.1		X	X
ABC-25-R	250	125	200	1000	400	1000	0.0028	839.3	0.09		X	X††
ABC-30-R	250	125	200	1000	400	1000	0.002225	1429	0.09		X	X††

* Interrupting ratings measured at 70% - 80% power factor on AC. The interrupting ratings for 18A and 20A were measured at 85% - 95% power factor on AC. The interrupting ratings for 25A and 30A were measured at 89% power factor on AC.

** Typical DC cold resistance measured at <10% of rated current.

† Typical melting I²t measured at listed interrupting rating and rated voltage.

‡ Typical voltage drop measured at 25°C±3°C ambient temperature at rated current.

†† CSA approvals for 25A and 30A are at 125Vac - IR 1000A and 125Vdc - IR 400A (IR 1000A at 75Vdc)

Military Qualified Product Listing

MIL-F-15160 Fuses - Instruments, Power and Telephone

<p>Military Standard MIL-F-15160/01 1/4" x 1" Fuses</p> <p>F01A125V^{1/10}A* F01A125V^{3/10}A F01A125V^{1/10}A F01A125V1A F01A125V1^{1/4}A F01A125V1^{1/2}A F01A125V1^{3/10}A* F01A125V2A F01A125V2^{1/2}A F01A125V3A F01A125V3^{1/10}A F01A125V4A F01A125V5A F01A250V^{1/2}A</p> <p>*** Commercial version is AGX Series. See Data Sheet 2041 for more information.</p>	<p>Military Standard MIL-F-15160/02 1/4" x 1 1/4" Fuses</p> <p>F02A32V15A F02A32V20A F02A32V25A F02A32V30A</p> <p>F02B32V8A F02B32V10A F02B32V12A F02B32V15A</p> <p>F02A125V8A F02A125V10A</p> <p>F02A250V^{1/2}A F02A250V^{3/10}AS** F02A250V^{3/10}A F02A250V1A F02A250V1^{1/4}A F02A250V1^{1/2}A F02A250V1^{3/10}A F02A250V2A F02A250V2^{1/2}A F02A250V3A F02A250V4A F02A250V5A F02A250V6A</p> <p>*** Commercial version is AGC Series. See Data Sheet 2001 for more information.</p>	<p>Military Standard MIL-F-15160/02 1/4" x 1 1/4" Fuses</p> <p>F02B125V4A F02B125V5A F02B125V6^{1/4}A F02B125V7A</p> <p>F02B250V^{1/100}A F02B250V^{3/100}A F02B250V^{2/100}A F02B250V^{1/100}A F02B250V^{3/100}A F02B250V^{1/100}A* F02B250V^{1/2}A F02B250V^{3/100}A F02B250V^{1/100}A F02B250V^{1/100}A F02B250V1A F02B250V1^{1/4}A F02B250V1^{1/2}A F02B250V1^{3/100}A F02B250V2A F02B250V2^{1/2}A F02B250V2^{3/100}S** F02B250V3A F02B250V3^{3/100}A*</p> <p>*** Commercial version is MDL Series. See Data Sheet 2004 for more information.</p>	<p>Military Standard MIL-F-15160/03 1/4" x 1 1/4" Fuses</p> <p>F03A125V20A F03A125V25A F03A125V30A</p> <p>F03A250V1A F03A250V1^{1/4}A F03A250V1^{1/2}A F03A250V2A F03A250V3A F03A250V4A F03A250V5A F03A250V6A F03A250V8A F03A250V10A F03A250V12A F03A250V15A</p> <p>*** Commercial version is ABC Series. See Data Sheet 2000 for more information.</p>
<p>Military Standard MIL-F-15160/03 1/4" x 1 1/4" Fuses</p> <p>F03B125V4A F03B125V5A F03B125V6^{1/4}A F03B125V7A F03B125V8A F03B125V10A F03B125V12A F03B125V15A F03B125V20A F03B125V25A F03B125V30A</p> <p>F03B250V^{1/100}A F03B250V^{1/100}A F03B250V^{1/100}A F03B250V^{3/100}A F03B250V^{1/100}A F03B250V^{3/100}A* F03B250V^{3/100}A F03B250V^{1/100}A F03B250V^{3/100}A F03B250V^{1/100}A F03B250V^{3/100}A* F03B250V1A F03B250V1^{1/4}A F03B250V1^{1/2}A F03B250V1^{3/100}A F03B250V2A F03B250V2^{1/2}A* F03B250V2^{3/100}A* F03B250V3A F03B250V3^{3/100}A</p> <p>*** Commercial version is MDA Series. See Data Sheet 2002 for more information.</p>	<p>Military Standard MIL-F-15160/09 1 3/32" x 1 1/2" Fuses</p> <p>F09A250V1A F09A250V2A F09A250V3A F09A250V3^{1/2}A F09A250V4AS** F09A250V5A F09A250V6A F09A250V6^{1/4}AS** F09A250V7A F09A250V8A F09A250V10A F09A250V15A F09A250V20A F09A250V25A F09A250V30A</p> <p>*** Commercial version is BAN Series. See Data Sheet 2046 for more information.</p>	<p>Military Standard MIL-F-15160/05</p> <p>F05A and F05B series cancelled without replacement on January 1976.</p> <p>Military Standard MIL-F-15160/06</p> <p>F06A and F06B series are inactive for new design after January 1970. Non-military equivalent is ABS Series.</p> <p>Military Standard MIL-F-15160/07</p> <p>F07A and F07B series are inactive for new design after January 1970. Non-military equivalent is AGU Series.</p>	<p>Military Standard MIL-F-15160/09 1 3/32" x 1 1/2" Fuses</p> <p>F09B32V20A* F09B32V25A F09B32V30A F09B125V15A</p> <p>F09B250V^{1/100}A** F09B250V^{1/100}A F09B250V^{3/100}A F09B250V^{1/100}A* F09B250V^{1/2}A* F09B250V^{3/100}A F09B250V1A F09B250V1^{1/4}A F09B250V1^{3/100}A F09B250V2A F09B250V2^{1/2}A F09B250V2^{3/100}S** F09B250V3^{3/100}A F09B250V3^{1/2}AS** F09B250V4A F09B250V5A F09B250V5^{3/100}A F09B250V6^{1/4}A F09B250V8A F09B250V10A</p> <p>*** Commercial version is FNM Series. See Data Sheet 2028 for more information.</p>

Note: When silver-plated fuse caps are required, simply suffix the letter "S" to the Type Designation Number; i.e., "F02A250V^{1/2}AS."

*Indicates a product not available with silver-plated caps.

**Indicates a product available only with silver-plated caps.

*** Commercial equivalent part number is for basic design reference only. Not intended to be used as a substitute for the military part number.

Military Qualified Product Listing

MIL-F-15160 Fuses - Instruments, Power and Telephone

<p>Military Standard MIL-F-15160/10 1³/₃₂" x 1¹/₂" Fuses</p> <p>F10A250V1A F10A250V2A F10A250V3A F10A250V4AS** F10A250V5A F10A250V6AS** F10A250V8AS** F10A250V10A F10A250V15A F10A125V20AS** F10A125V30A*</p> <p>*** Commercial version is MIN Series. See Data Sheet 2047 for more information.</p>	<p>Military Standard MIL-F-15160/15 9¹/₁₆" x 2" Fuses</p> <p>F15A250V1A F15A250V3A F15A250V6A F15A250V10A F15A250V15A F15A250V20A F15A250V25A F15A250V30A</p>	<p>Military Standard MIL-F-15160/15 9¹/₁₆" x 2" Fuses</p> <p>F15BR250V1A F15BR250V1⁹/₁₆A F15BR250V2A F15BR250V2¹/₂A F15BR250V3³/₁₆AS** F15BR250V4AS** F15BR250V5A F15BR250V6¹/₄A* F15BR250V8A F15BR250V10A F15BR250V12A F15BR250V20A F15BR250V25A F15BR250V30A</p> <p>F15BR replaced F15B in October 1990.</p> <p>*** Commercial version is FRN-R Series. See Data Sheet 1019 for more information.</p>	<p>Military Standard MIL-F-15160/16 1³/₁₆" x 3" Fuses</p> <p>F16A250V35A F16A250V40A F16A250V45A* F16A250V50A F16A250V60A</p>
<p>Military Standard MIL-F-15160/16 1³/₁₆" x 3" Fuses</p> <p>F16BR250V35A F16BR250V40A F16BR250V45A F16BR250V50A F16BR250V60A</p> <p>F16BR replaced F16B in October 1990.</p> <p>*** Commercial version is FRN-R Series. See Data Sheet 1019 for more information.</p>	<p>Military Standard MIL-F-15160/19 1" x 5¹/₈" Fuses</p> <p>F19BR250V70A F19BR250V80A F19BR250V90A F19BR250V100A</p> <p>F19BR replaced F19B in October 1990.</p> <p>*** Commercial version is FRN-R Series. See Data Sheet 1020 for more information.</p>	<p>Military Standard MIL-F-15160/20 1¹/₂" x 7¹/₈" Fuses</p> <p>F20BR250V110A F20BR250V125A F20BR250V150A F20BR250V175A F20BR250V200A</p> <p>F20BR replaced F20B in October 1990.</p> <p>*** Commercial version is FRN-R Series. See Data Sheet 1020 for more information.</p>	<p>Military Standard MIL-F-15160/27</p> <p>F27A Series is inactive for new design after December 1990.</p> <p>Military Standard MIL-F-15160/28</p> <p>F28A Series is inactive for new design after December 1990.</p> <p>Military Standard MIL-F-15160/29</p> <p>F29A Series is inactive for new design after December 1990.</p> <p>Military Standard MIL-F-15160/30</p> <p>F30A Series is inactive for new design after December 1990.</p> <p>Military Standard MIL-F-15160/36</p> <p>F36A and F36B Series are inactive for new design after December 1990.</p> <p>Military Standard MIL-F-15160/37</p> <p>F37A and F37B Series are inactive for new design after December 1990.</p> <p>Military Standard MIL-F-15160/38</p> <p>F38A and F38B Series are inactive for new design after December 1990.</p>

Note: When silver-plated fuse caps are required, simply suffix the letter "S" to the Type Designation Number; i.e., "F02A250V¹/₂AS."

*Indicates a product not available with silver-plated caps.

**Indicates a product available only with silver-plated caps.

*** Commercial equivalent part number is for basic design reference only. Not intended to be used as a substitute for the military part number.

Military Qualified Product Listing

MIL-F-15160 Fuses - Instruments, Power and Telephone

Military Standard MIL-F-15160/39

F39A and F39B Series are inactive for new design after December 1990.

Military Standard MIL-F-15160/40

F40A and F40B Series are inactive for new design after December 1990.

Military Standard MIL-F-15160/50

F50A Series was cancelled without replacement on June 2000.

Military Standard MIL-F-15160/52

F52A Series was cancelled without replacement on January 1990.

Military Standard MIL-F-15160/60 1³/₃₂" x 1¹/₂" Fuses

F60C500V¹/₈A
F60C500V¹/₄A
F60C500V³/₈A
F60C500V¹/₂A
F60C500V³/₄A
F60C500V1A
F60C500V2A
F60C500V3A
F60C500V5A
F60C500V6A
F60C500V8A
F60C500V10A
F60C500V15A
F60C500V20A
F60C500V25A
F60C500V30A

*** Commercial version is KLM Series. See Data Sheet 2020 for more information.

Military Standard MIL-F-15160/61 9/₁₆" x 2" Fuses

F61C500V1A
F61C500V2A
F61C500V3A
F61C500V5A
F61C500V6A
F61C500V8A
F61C500V10A
F61C500V15A
F61C500V20A
F61C500V25A
F61C500V30A

*** Commercial version is KLC Series.

Military Standard MIL-F-15160/62 13/16" x 3" Fuses

F62C500V35A
F62C500V40A
F62C500V45A
F62C500V50A
F62C500V60A

*** Commercial version is KLC Series.

Military Standard MIL-F-15160/63 1" x 5⁷/₈" Fuses

F63C500V70A
F63C500V80A
F63C500V90A
F63C500V100A

Military Standard MIL-F-15160/64 1¹/₂" x 7⁷/₈" Fuses

F64C500V110A
F64C500V125A
F64C500V150A
F64C500V175A
F64C500V200A

Military Standard MIL-F-15160/65 2" x 8⁵/₈" Fuses

F65C500V225A
F65C500V250A
F65C500V300A
F65C500V350A
F65C500V400A

Military Standard MIL-F-15160/66 2¹/₂" x 11⁵/₈" Fuses

F66C500V450A
F66C500V500A
F66C500V600A

Military Standard MIL-F-15160/67

F67A Series was cancelled without replacement on October 1986.

Military Standard MIL-F-15160/70

F70A Series was cancelled without replacement on October 1990.

Military Standard MIL-F-15160/71

F71A Series was cancelled without replacement on October 1990.

Military Standard MIL-F-15160/72

F72A Series was cancelled without replacement on January 1990.

Military Standard MIL-F-15160/73

F73A Series was cancelled without replacement on January 1990.

Military Standard MIL-F-15160/74

F74A Series was cancelled without replacement on January 1990.

Military Standard MIL-F-15160/76

F76A Series was cancelled without replacement on January 1990.

Military Standard MIL-F-15160/77

F77A Series was cancelled without replacement on June 2000.

Note: When silver-plated fuse caps are required, simply suffix the letter "S" to the Type Designation Number; i.e., "F02A250V¹/₈AS."

*Indicates a product not available with silver-plated caps.

**Indicates a product available only with silver-plated caps.

*** Commercial equivalent part number is for basic design reference only. Not intended to be used as a substitute for the military part number.

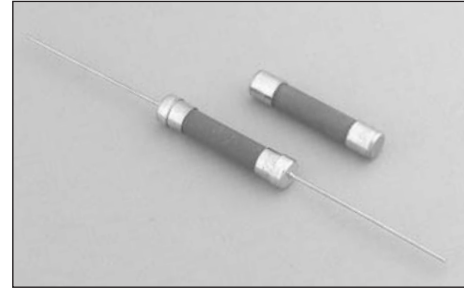
The only controlled copy of this Data Sheet is the electronic read-only version located on the Cooper Bussmann Network Drive. All other copies of this document are by definition uncontrolled. This bulletin is intended to clearly present comprehensive product data and provide technical information that will help the end user with design applications. Cooper Bussmann reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Cooper Bussmann also reserves the right to change or update, without notice, any technical information contained in this bulletin. Once a product has been selected, it should be tested by the user in all possible applications.

1/4" x 1 1/4" Fast-Acting Ceramic Tube Fuses

ABC Series

Description

- Fast-acting
- Optional axial leads available
- 1/4" x 1 1/4" (6.4 x 31.7mm) physical size
- Ceramic tube, nickel-plated brass endcap construction
- UL Listed product meets standard 248-14



Electrical Characteristics	
% of Amp Rating	Opening Time
100%	4 Hours Minimum
135%	60 Minutes maximum
200%	120 Seconds Maximum

Agency Information

- UL Listed: Guide JDYX & File E19180.
- UL Recognition: Guide JDYX2 & File E19180.
- CSA Certification: Class 1422-01 & 1422-03, File 53787.

Environmental Data

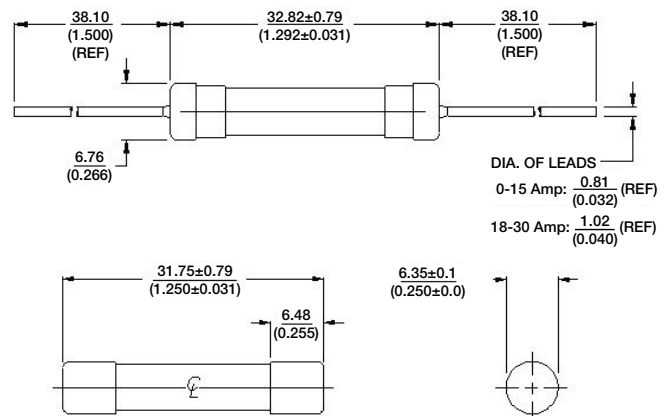
- Shock: 1/4-30A – MIL-STD-202, Method 213, Test Condition J
- Vibration: 1/4-30A – MIL-STD-202, Method 204, Test Condition C (Except 5g, 500HZ)

Ordering

- Specify packaging, product, and option code

Dimensions - mm (in)

Drawing Not to Scale



Specifications

Part Number	Voltage Ratings		Vac Interrupting Ratings* (amps)		Vdc Interrupting Ratings (amps)		Typical DC Cold Resistance (Ω)**	Typical Pre-Arc I ² t AC†	Typical Voltage Drop (mV)‡	Agency Approvals		
	Vac	Vdc	250	125	125	75				UL	UR	CSA
ABC-1/4-R	250	125	35	10,000	10,000	–	2.950	0.0020	0.35	X		X
ABC-1/2-R	250	125	35	10,000	10,000	–	0.587	0.0390	0.41	X		X
ABC-3/4-R	250	125	35	10,000	10,000	–	0.300	0.1450	0.32	X		X
ABC-1-R	250	125	35	10,000	10,000	–	0.1950	0.4310	0.3	X		X
ABC-1-1/2-R	250	125	100	10,000	10,000	–	0.131	1.1630	0.28	X		X
ABC-2-R	250	125	100	10,000	10,000	–	0.0890	2.1670	0.31	X		X
ABC-2-1/2-R	250	125	100	10,000	10,000	–	0.061	4.4670	0.23	X		X
ABC-3-R	250	125	100	10,000	10,000	–	0.047	6.55	0.14	X		X
ABC-4-R	250	125	200	10,000	10,000	–	0.031	22.28	0.17	X		X
ABC-5-R	250	125	200	10,000	10,000	–	0.026	32.83	0.22	X		X
ABC-6-R	250	125	200	10,000	10,000	–	0.021	58	0.19	X		X
ABC-7-R	250	125	200	10,000	10,000	–	0.016	109.33	0.17	X		X
ABC-8-R	250	125	200	10,000	10,000	–	0.014	116.5	0.19	X		X
ABC-10-R	250	125	200	10,000	10,000	–	0.011	208.8	0.15	X		X
ABC-12-R	250	125	750	10,000	10,000	–	0.0068	133.3	0.1	X		X
ABC-15-R	250	125	750	10,000	10,000	–	0.00553	200.2	0.1	X		X
ABC-18-R	250	–	400	1000	–	–	0.00465	400	0.1		X	X
ABC-20-R	250	125	400	1000	10,000	–	0.00366	550.8	0.1		X	X
ABC-25-R	250	125	200	1000	400	1000	0.0028	839.3	0.09		X	X††
ABC-30-R	250	125	200	1000	400	1000	0.002225	1429	0.09		X	X††

* Interrupting ratings measured at 70% - 80% power factor on AC. The interrupting ratings for 18A and 20A were measured at 85% - 95% power factor on AC. The interrupting ratings for 25A and 30A were measured at 89% power factor on AC.

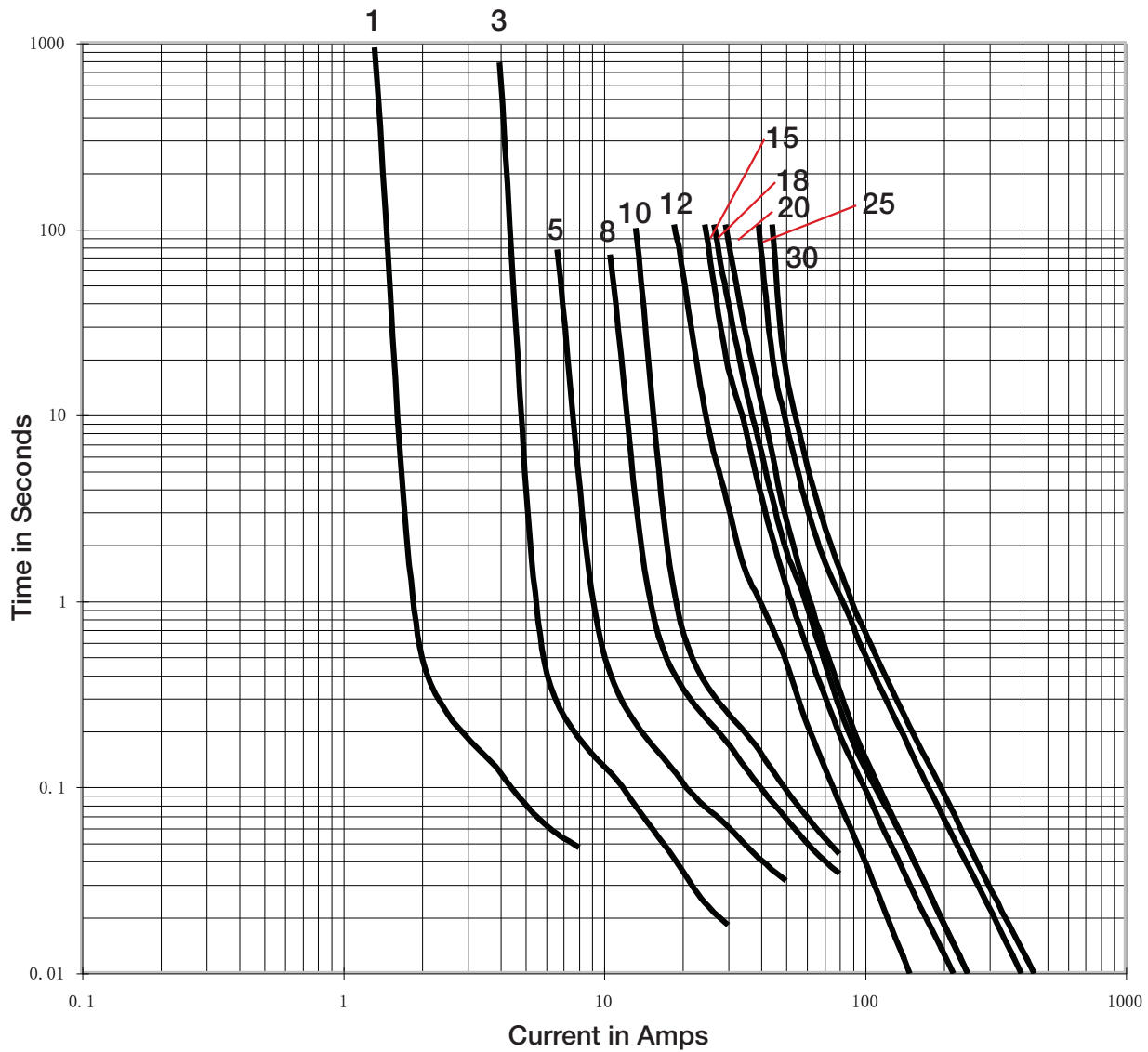
** Typical DC cold resistance measured at <10% of rated current.

† Typical melting I²t measured at listed interrupting rating and rated voltage.

‡ Typical voltage drop measured at 25°C±3°C ambient temperature at rated current.

†† CSA approvals for 25A and 30A are at 125Vac - IR 1000A and 125Vdc - IR 400A (IR 1000A at 75Vdc)

Time-Current Curve



Packaging Code	
Packaging Code	Description
BK	100 fuses packed into a cardboard carton
BK1	1,000 fuses packed into a cardboard carton
BK8	8,000 fuses packed into a cardboard carton

Option Code	
Option Code	Description
V	Axial leads - copper tinned wire with nickel plated brass overcaps

The only controlled copy of this Data Sheet is the electronic read-only version located on the Cooper Bussmann Network Drive. All other copies of this document are by definition uncontrolled. This bulletin is intended to clearly present comprehensive product data and provide technical information that will help the end user with design applications. Cooper Bussmann reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Cooper Bussmann also reserves the right to change or update, without notice, any technical information contained in this bulletin. Once a product has been selected, it should be tested by the user in all possible applications.

Life Support Policy: Cooper Bussmann does not authorize the use of any of its products for use in life support devices or systems without the express written approval of an officer of the Company. Life support systems are devices which support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Cartridge Fuses](#) category:

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

Other Similar products are found below :

[5TT3A-R](#) [MBO-20](#) [MDM-4/10](#) [MDQ-V-15/100](#) [MDX-1-6/10](#) [MDX-2](#) [MDX-3-2/10](#) [MDX-6-1/4](#) [FLSR-15](#) [FLSR-30](#) [FRS-1-1/4](#) [FRS-1-6/10](#) [FRS-4/10](#) [H362003](#) [ABC-2](#) [1/2A](#) [AGC-1-1/2RX](#) [AGC-15EX](#) [AGC-V-3-12-R](#) [AGY-50](#) [15019-G](#) [MSL-1-1/2](#) [MSL-1-1/4](#) [MSL-1/2](#) [MSL-1/4](#) [MSL-3](#) [MSL-3/4](#) [MSL-4](#) [MSL-5](#) [BK1/C436-2A](#) [BK1-GMA-1-6-R](#) [BK1-S505-1-R](#) [BK1-S506-3-15-R](#) [BK/MDM-15](#) [BK/MDM-3/4](#) [S501-V-10A](#) [S505-V-500MA](#) [SEF-1697-1-002](#) [301030](#) [303030](#) [FLA10](#) [FLA-4/10](#) [FLNR-5](#) [20.0M6.3X32F](#) [GBB-17-1/2](#) [301001](#)
[301020](#) [311008](#) [313.25](#) [313.75](#)