

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

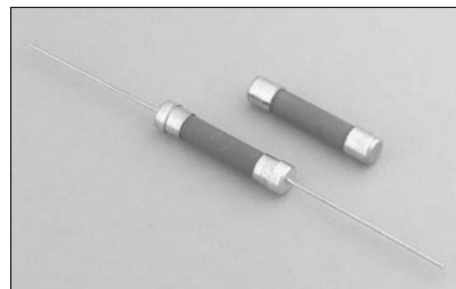
- UL Listed: Guide JDYX & File E19180.
- UL Recognition: Guide JDYX2 & File E19180.
- CSA Certification: Class 1422-01 & 1422-03, File 53787.

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)

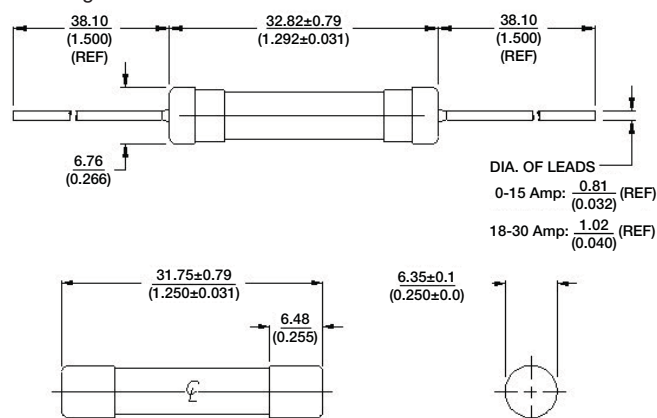
Ordering

- 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

Military Standard MIL-F-15160/01 1/4" x 1" Fuses F01A125V ¹ / ₁₀ A* F01A125V ³ / ₁₀ A F01A125V ¹ / ₁₀ A F01A125V1A F01A125V1 1/4A F01A125V1 1/2A F01A125V1 3/4A* F01A125V2A F01A125V2 1/2A F01A125V3A F01A125V3 1/10A F01A125V4A F01A125V5A F01A250V ¹ / ₂ A *** Commercial version is AGX Series. See Data Sheet 2041 for more information.	Military Standard MIL-F-15160/02 1/4" x 1 1/4" Fuses F02A32V15A F02A32V20A F02A32V25A F02A32V30A F02B32V8A F02B32V10A F02B32V12A F02B32V15A F02A125V8A F02A125V10A F02A250V ¹ / ₁₀ A F02A250V ⁹ / ₁₀ AS** F02A250V ³ / ₄ A F02A250V1A F02A250V1 1/4A F02A250V1 1/2A F02A250V1 3/4A F02A250V2A F02A250V2 1/2A F02A250V3A F02A250V4A F02A250V5A F02A250V6A *** Commercial version is AGC Series. See Data Sheet 2001 for more information.	Military Standard MIL-F-15160/02 1/4" x 1 1/4" Fuses F02B125V4A F02B125V5A F02B125V6 1/4A F02B125V7A F02B250V ¹⁵ / ₁₀₀ A F02B250V ³ / ₁₀ A F02B250V ² / ₁₀ A F02B250V ¹ / ₁₀ A F02B250V ³ / ₁₀ A F02B250V ¹ / ₁₀ A F02B250V ³ / ₁₀ A F02B250V ⁴ / ₁₀ A* F02B250V ¹ / ₂ A F02B250V ¹ / ₁₀ A F02B250V ¹ / ₁₀ A F02B250V1A F02B250V1 1/4A F02B250V1 1/2A F02B250V1 3/4A F02B250V2A F02B250V2 1/2A F02B250V2 3/10AS** F02B250V3A F02B250V3 1/10A* *** Commercial version is MDL Series. See Data Sheet 2004 for more information.	Military Standard MIL-F-15160/03 1/4" x 1 1/4" Fuses F03A125V20A F03A125V25A F03A125V30A F03A250V1A F03A250V1 1/4A F03A250V1 1/2A F03A250V2A F03A250V3A F03A250V4A F03A250V5A F03A250V6A F03A250V8A F03A250V10A F03A250V12A F03A250V15A *** Commercial version is ABC Series. See Data Sheet 2000 for more information.
Military Standard MIL-F-15160/03 1/4" x 1 1/4" Fuses F03B125V4A F03B125V5A F03B125V6 1/4A F03B125V7A F03B125V8A F03B125V10A F03B125V12A F03B125V15A F03B125V20A F03B125V25A F03B125V30A F03B250V ¹ / ₁₀ A F03B250V ¹ / ₁₀ A F03B250V ¹⁵ / ₁₀₀ A F03B250V ³ / ₁₀ A F03B250V ¹ / ₁₀ A F03B250V ³ / ₁₀ A* F03B250V ³ / ₁₀ A F03B250V ¹ / ₁₀ A F03B250V ¹ / ₁₀ A F03B250V ¹ / ₁₀ A F03B250V ¹ / ₁₀ A* F03B250V1A F03B250V1 1/4A F03B250V1 1/2A F03B250V1 3/10A F03B250V2A F03B250V2 1/2A* F03B250V2 3/10A* F03B250V3A F03B250V3 1/10A *** Commercial version is MDA Series. See Data Sheet 2002 for more information.	Military Standard MIL-F-15160/09 1 3/32" x 1 1/2" Fuses F09A250V1A F09A250V2A F09A250V3A F09A250V3 1/2A F09A250V4AS** F09A250V5A F09A250V6A F09A250V6 1/4AS** F09A250V7A F09A250V8A F09A250V10A F09A250V15A F09A250V20A F09A250V25A F09A250V30A *** Commercial version is BAN Series. See Data Sheet 2046 for more information.	Military Standard MIL-F-15160/05 F05A and F05B series cancelled without replacement on January 1976. Military Standard MIL-F-15160/06 F06A and F06B series are inactive for new design after January 1970. Non-military equivalent is ABS Series. Military Standard MIL-F-15160/07 F07A and F07B series are inactive for new design after January 1970. Non-military equivalent is AGU Series.	Military Standard MIL-F-15160/09 1 3/32" x 1 1/2" Fuses F09B32V20A* F09B32V25A F09B32V30A F09B125V15A F09B250V ¹ / ₁₀ A** F09B250V ¹⁵ / ₁₀₀ A F09B250V ² / ₁₀ A F09B250V ³ / ₁₀ A F09B250V ¹ / ₁₀ A* F09B250V ¹ / ₂ A* F09B250V ¹ / ₁₀ A F09B250V1A F09B250V1 1/4A F09B250V1 3/10A F09B250V2A F09B250V2 1/2A F09B250V2 3/10AS** F09B250V3 1/10A F09B250V3 1/2AS** F09B250V4A F09B250V5A F09B250V5 1/10A F09B250V6 1/4A F09B250V8A F09B250V10A *** Commercial version is FNM Series. See Data Sheet 2028 for more information.

Note: When silver-plated fuse caps are required, simply suffix the letter "S" to the Type Designation Number; i.e., "F02A250V¹/₁₀AS."

*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-15160/10 $\frac{13}{32}$ " x $1\frac{1}{2}$ " Fuses F10A250V1A F10A250V2A F10A250V3A F10A250V4AS** F10A250V5A F10A250V6AS** F10A250V8AS** F10A250V10A F10A250V15A F10A125V20AS** F10A125V30A* *** Commercial version is MIN Series. See Data Sheet 2047 for more information.	Military Standard MIL-F-15160/15 $\frac{9}{16}$ " x 2" Fuses F15A250V1A F15A250V3A F15A250V6A F15A250V10A F15A250V15A F15A250V20A F15A250V25A F15A250V30A	Military Standard MIL-F-15160/15 $\frac{9}{16}$ " x 2" Fuses F15BR250V1A F15BR250V1 $\frac{5}{16}$ A F15BR250V2A F15BR250V2 $\frac{1}{2}$ A F15BR250V3 $\frac{3}{16}$ AS** F15BR250V4AS** F15BR250V5A F15BR250V6 $\frac{1}{4}$ A* F15BR250V8A F15BR250V10A F15BR250V12A F15BR250V20A F15BR250V25A F15BR250V30A F15BR replaced F15B in October 1990. *** Commercial version is FRN-R Series. See Data Sheet 1019 for more information.	Military Standard MIL-F-15160/16 $\frac{13}{16}$ " x 3" Fuses F16A250V35A F16A250V40A F16A250V45A* F16A250V50A F16A250V60A
Military Standard MIL-F-15160/16 $\frac{13}{16}$ " x 3" Fuses F16BR250V35A F16BR250V40A F16BR250V45A F16BR250V50A F16BR250V60A F16BR replaced F16B in October 1990. *** Commercial version is FRN-R Series. See Data Sheet 1019 for more information.	Military Standard MIL-F-15160/19 1" x $5\frac{7}{8}$ " Fuses F19BR250V70A F19BR250V80A F19BR250V90A F19BR250V100A F19BR replaced F19B in October 1990. *** Commercial version is FRN-R Series. See Data Sheet 1020 for more information.	Military Standard MIL-F-15160/20 1 $\frac{1}{2}$ " x $7\frac{1}{8}$ " Fuses F20BR250V110A F20BR250V125A F20BR250V150A F20BR250V175A F20BR250V200A F20BR replaced F20B in October 1990. *** Commercial version is FRN-R Series. See Data Sheet 1020 for more information.	Military Standard MIL-F-15160/27 F27A Series is inactive for new design after December 1990. Military Standard MIL-F-15160/28 F28A Series is inactive for new design after December 1990. Military Standard MIL-F-15160/29 F29A Series is inactive for new design after December 1990. Military Standard MIL-F-15160/30 F30A Series is inactive for new design after December 1990. Military Standard MIL-F-15160/36 F36A and F36B Series are inactive for new design after December 1990. Military Standard MIL-F-15160/37 F37A and F37B Series are inactive for new design after December 1990. Military Standard MIL-F-15160/38 F38A and F38B Series are inactive for new design after December 1990.

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

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

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

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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 7¹/₈" 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

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

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

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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.

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

ABC Series

Description

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- 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

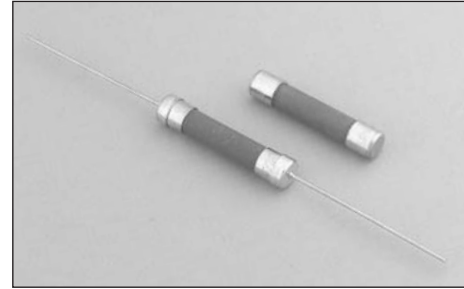
- UL Listed: Guide JDYX & File E19180.
- UL Recognition: Guide JDYX2 & File E19180.
- CSA Certification: Class 1422-01 & 1422-03, File 53787.

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)

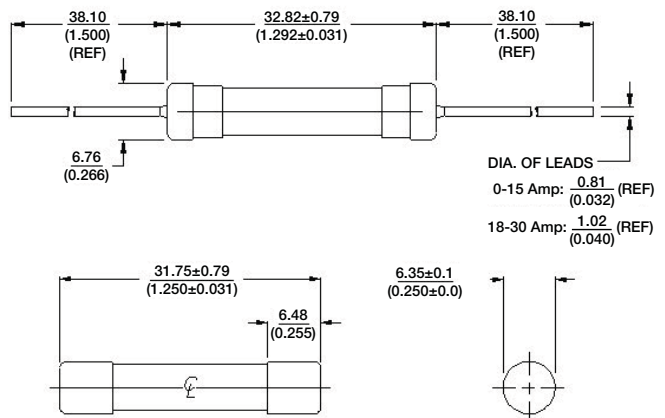
Ordering

- 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††

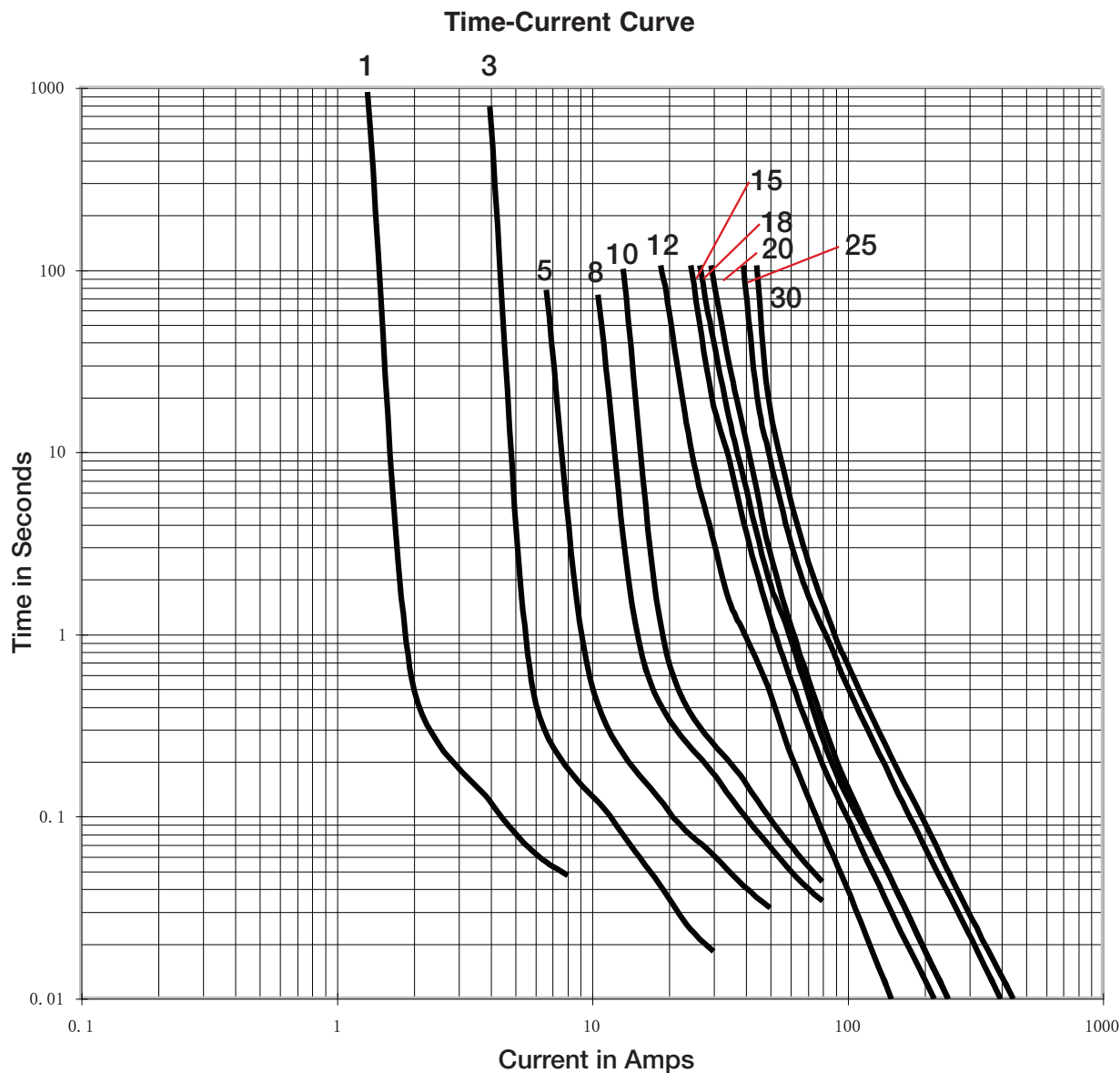
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** Typical DC cold resistance measured at <10% of rated current.

† 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)



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

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