

Electronic fuses

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5 x 15mm ferrule fuses

C515 (axial leads)

C519

Specifications

Description:
Time-delay fuse.

Dimensions:
5 x 15mm
(0.197" X 0.591").

Construction:
Glass tube.

Ratings:

- Volts — 125Vac
(3.5-7A)
— 250Vac (125mA-3A)
- Amps — 125mA-7A
- IR — 35A (125mA-1A @ 250Vac, p.f. = 0.7-0.8)
— 10kA (125mA-3A @ 125Vac, p.f. = 0.7-0.8)
— 25A (350mA @ 600V, p.f. = 0.7-0.8)
— 100A (1.25-3A @ 250Vac, p.f. = 0.7-0.8)
— 400A (3.5-7A @ 125Vac, p.f. = 1.0)

Agency Information: CE, UL Listing File E19180, Guide JDYX 125mA-250mA and 375mA-3A CSA Certification File LR65063, Class 1422-01, 125mA-250mA and 375mA-3A, UL Recognized, File E19180, Guide JDYX2, 350mA and 3.5A-7A.

Features and Benefits

- Time-delay for closer sizing on inductive circuits.

Typical Application

- Electronic Circuits
- Printed Circuit Boards

Catalog Numbers (Amps)

With Axial Leads

C515-125-R	C515-750-R	C515-2.25-R
C515-250-R	C515-1-R	C515-3-R
C515-350-R	C515-1.25-R	C515-3.5-R
C515-375-R	C515-1.5-R	C515-4-R
C515-500-R	C515-1.6-R	C515-5-R
C515-600-R	C515-2-R	C515-7-R

Without Axial Leads

C519-125-R	C519-750-R	C519-2.25-R
C519-250-R	C519-1-R	C519-3-R
C519-350-R	C519-1.25-R	C519-3.5-R
C519-375-R	C519-1.5-R	C519-4-R
C519-500-R	C519-1.6-R	C519-5-R
C519-600-R	C519-2-R	C519-7-R

Data Sheet: 2006 (C515) & 2007 (C519)

C518 (axial leads)

C520

Specifications

Description:
Fast-acting fuse.

Dimensions:
5 x 15mm
(0.197" X 0.591").

Construction:
Glass tube.

Ratings:

- Volts — 250Vac
- Amps — 100mA-5A
- IR — 35A (100mA-750mA @ 250V, p.f. = 0.7-0.8)
— 10kA (100mA-5A @ 125V, p.f. = 0.7-0.8)
— 100A (1-3.5A @ 250V, p.f. = 0.7-0.8)
— 200A (4-5A @ 250V, p.f. = 0.7-0.8)

Agency Information: CE, UL Listing File E19180, Guide JDYX CSA Certification File LR65063, Class 1422-01.

Features and Benefits

- Small footprint saves space in equipment.
- Fast-acting for maximum component protection.
- Available in clip mount and solder-in configurations

Typical Applications

- Electronic Circuits
- Printed circuit Boards

Catalog Numbers (Amps)

With Axial Leads

C518-100-R	C518-750-R	C518-3-R
C518-125-R	C518-1-R	C518-3.5-R
C518-250-R	C518-1.5-R	C518-4-R
C518-375-R	C518-2-R	C518-5-R
C518-500-R	C518-2.5-R	

Without Axial Leads

C520-100-R	C520-750-R	C520-3-R
C520-125-R	C520-1-R	C520-3.5-R
C520-250-R	C520-1.5-R	C520-4-R
C520-375-R	C520-2-R	C520-5-R
C520-500-R	C520-2.5-R	

Data Sheet: 2026 (C518) & 2027 (C520)

C517 (axial leads)

Specifications

Description: Fast-acting fuse.

Dimensions: 5 x 15mm
(0.197" X 0.591").

Construction: Glass tube.

Ratings:

- Volts — 350Vac*
- Amps — 3A
- IR — 100A @ 350Vac, p.f. = 1.0
— 100A @ 250Vac, p.f. = 0.7-0.8
— 10kA @ 125Vac, p.f. = 0.7-0.8

*350Vac/100A is UL Recognized

Agency Information: CE, UL Listing File E19180, Guide JDYX CSA Certification File LR65063, Class 1422-01 UL Recognized, File E19180, Guide JDYX2.

- Small footprint saves space in equipment.
- Fast-acting for maximum component protection.
- 350Vac rating for 277V ballast circuit protection.

Typical Applications

- Electronic Circuits
- Printed Circuit Boards
- Electronic Ballast Protection

Catalog Number (Amps)

With Axial Leads
C517-3

Data Sheet: 2025

5 x 20mm European (IEC) ferrule fuses

GDA-V (axial leads)

GDA

Specifications

Description: Fast-acting, high-breaking capacity fuse.

Dimensions:
5 x 20mm.

Construction:
Ceramic tube, nickel-plated brass endcaps.

Ratings:

Volts — 250Vac (or less)
Amps — 50mA-6.3A
IR — 1500A @ 250Vac

Agency Information: CE, UL Recognized, Guide JDYX2, File E19180, 50mA and 315mA-6.3A SEMKO Approval 50mA, 200mA and 315mA-6.3A, IEC 60127-Sheet I, VDE Approval 1.25A-6.3A.

Features and Benefits

- Fast-acting for maximum protection.
- High break capacity for use in higher fault energy electronic circuitry.
- Conforming to IEC standards.

Typical Applications

- Electronic Circuits

Catalog Numbers (Amps)

Catalog Numbers	I ² t	Max Voltage Drop (mV)
GDA-50mA	0.0017	9000
GDA-63mA	0.0005	3300
GDA-80mA	0.0011	2600
GDA-100mA	0.0018	2300
GDA-125mA	0.0037	1900
GDA-160mA	0.008	1600
GDA-200mA	0.020	1350
GDA-250mA	0.027	1300
GDA-315mA	0.010	1400
GDA-400mA	0.018	1200
GDA-500mA	0.038	1050
GDA-630mA	0.064	1200
GDA-800mA	0.097	490
GDA-1	0.480	230
GDA-1.25	0.9	200
GDA-1.6	1.9	180
GDA-2	2.0	205
GDA-2.5	3.9	190
GDA-3.15	8.1	160
GDA-4	14	160
GDA-5	25	155
GDA-6.3	48	150

Ordering Axial Leads

To order axial leads, place "V" in the catalog number.

Example: GDA-V-3.15.

Data Sheet: 2014

GDB-V (axial leads)

GDB

Specifications

Description: Fast-acting, low-breaking capacity fuse.

Dimensions:
5 x 20mm.

Construction:
Glass tube, nickel-plated brass endcaps.

Ratings:

Volts — 250Vac (or less)
Amps — 32mA-16A
IR — 35A @ 250Vac

Agency Information: CE, Designed to IEC 60127-Sheet II British Standard Approval SEMKO Approval VDE Approval, IMQ UL Recognized, Guide JDYX2, File E19180, 32mA-6.3A.

Features and Benefits

- Fast-acting for maximum protection, conforms to IEC standards.

Typical Applications

- Electronic Circuits

Catalog Numbers (Amps)

Catalog Numbers	I ² t	Max Voltage Drop (mV)
GDB-32mA	0.000047	10000
GDB-40mA	0.00011	8000
GDB-50mA	0.00020	3200
GDB-63mA	0.00057	2500
GDB-80mA	0.0012	2200
GDB-100mA	0.003	2100
GDB-125mA	0.005	2000
GDB-160mA	0.008	1950
GDB-200mA	0.016	1600
GDB-250mA	0.028	1400
GDB-315mA	0.058	1150
GDB-400mA	0.018	950
GDB-500mA	0.018	220
GDB-630mA	0.035	220
GDB-800mA	0.067	180
GDB-1	0.60	200
GDB-1.25	0.84	200
GDB-1.6	1.6	190
GDB-2	4.2	160
GDB-2.5	6.1	145
GDB-3.15	13	130
GDB-4	22	120
GDB-5	42	115
GDB-6.3	69	110
GDB-8"	—	—
GDB-10"	—	—
GDB-12"	—	—
GDB-16"	—	—

¹IEC Standard 127 Sheet II does not include ratings above 6.3A.

Ordering Axial Leads

To order axial leads, place "V" in the catalog number. Example: GDB-V-1.25.

Data Sheet: 2015

GDC-V (axial leads)

GDC

Specifications

Description: Time-delay, low-breaking capacity fuse.

Dimensions:
5 x 20mm.

Construction:
Glass tube, nickel-plated brass endcaps.

Ratings:

Volts — 250Vac (or less)
Amps — 32mA-6.3A
IR — 35A @ 250Vac

Agency Information: CE, Designed to IEC 60127-Sheet III British Standard Approval SEMKO Approval VDE Approval, IMQ UL Recognized, Guide JDYX2, File E19180, 32mA-6.3A.

Features and Benefits

- Time-delay compatibility for inductive circuits.
- Conforming to IEC standards.

Typical Applications

- Electronic Circuits

Catalog Numbers (Amps)

Catalog Numbers	I ² t	Max Voltage Drop (mV)
GDC-32mA	0.0014	1050
GDC-40mA	0.0034	920
GDC-50mA	0.006	800
GDC-63mA	0.012	760
GDC-80mA	0.015	580
GDC-100mA	0.022	490
GDC-125mA	0.034	390
GDC-160mA	0.052	320
GDC-200mA	0.078	340
GDC-250mA	0.17	270
GDC-315mA	0.41	250
GDC-400mA	0.61	210
GDC-500mA	0.75	168
GDC-630mA	1.3	158
GDC-800mA	3.1	132
GDC-1	3.6	85
GDC-1.25	7	80
GDC-1.6	10	80
GDC-2	17	80
GDC-2.5	34	80
GDC-3.15	56	75
GDC-4	91	75
GDC-5	133	75
GDC-6.3	270	65

Ordering Axial Leads

To order axial leads, place "V" in the catalog number.

Example: GDC-V-630mA.

Data Sheet: 2016

5 x 20mm North American (UL) ferrule fuses

GMA-V (axial leads)

GMA

Specifications

Description:
Fast-acting fuse.

Dimensions:
5 x 20mm
(0.197" x 0.788").

Construction:
Glass tube,
nickel-plated brass endcaps.

Ratings:

- Volts — 250Vac (63mA-2.5A)
— 125Vac (3.15-15A)
- Amps — 63mA-15A
- IR — 35A (63mA- 1A @ 250Vac,
p.f. = 0.7-0.8)
— 10kA (63mA-6A @ 125Vac,
p.f. = 0.7-0.8)
— 100A (1.25-2.5A @ 250Vac,
p.f. = 0.7-0.8)
— 200A (7-8A @ 125Vac, p.f. = 1.0)
— 150A (10-15A @ 125Vac,
p.f. = 1.0)

Agency Information: CE, Std.
248-14 UL Listed Guide JDYX, File
E19180, 0-6A, UL Recognized, Guide
JDYX2, File E19180, 7-15A, CSA
Certified, Class 1422-01,
File E65063, 0-6.

Features and Benefits

- Fast-acting for maximum protection.

Typical Applications

- Electronic Circuits

Catalog Numbers (Amps)

With Axial Leads

GMA-V-63-R	GMA-V-800-R	GMA-V-4-R
GMA-V-100-R	GMA-V-1-R	GMA-V-5-R
GMA-V-125-R	GMA-V-1.25-R	GMA-V-6-R
GMA-V-200-R	GMA-V-1.5-R	GMA-V-7-R
GMA-V-250-R	GMA-V-1.6-R	GMA-V-8-R
GMA-V-300-R	GMA-V-2-R	GMA-V-10-R
GMA-V-500-R	GMA-V-2.5-R	GMA-V-15-R
GMA-V-600-R	GMA-V-3.15-R	
GMA-V-750-R	GMA-V-3.5-R	

Without Axial Leads

GMA-63-R	GMA-800-R	GMA-4-R
GMA-100-R	GMA-1-R	GMA-5-R
GMA-125-R	GMA-1.25-R	GMA-6-R
GMA-200-R	GMA-1.5-R	GMA-7-R
GMA-250-R	GMA-1.6-R	GMA-8-R
GMA-300-R	GMA-2-R	GMA-10-R
GMA-500-R	GMA-2.5-R	GMA-15-R
GMA-600-R	GMA-3.15-R	
GMA-750-R	GMA-3.5-R	

Data Sheet: 2017

GMC-V (axial leads)

GMC

Specifications

Description: Medium
time-delay fuse.

Dimensions: 5 x 20mm
(0.197" x 0.788").

Construction: Glass
tube, nickel-plated brass
endcaps.

Ratings:

- Volts — 250Vac (63mA-3.15A)
— 125Vac (3.5-10A)
- Amps — 63mA-10A
- IR — 35A (63mA- 1A @ 250Vac,
p.f. = 0.7-0.8)
— 10kA (63mA-6A @ 125Vac, p.f.
= 0.7-0.8)
— 100A (1.25-3.15A @ 250Vac,
p.f. = 0.7-0.8)
— 200A (6.3-10A @ 125Vac, p.f.
= 1.0)

Agency Information: CE, Std. 248-14,
UL Listed Guide JDYX, File E19180, 0-
6.3A, UL Recognized, Guide JDYX2,
File E19180, 7-8A, CSA Certified, Class
1422-01, File 65063, 0-6.3A.

Features and Benefits

- Conforming to UL standards.

Typical Applications

- Electronic Circuits

Catalog Numbers (Amps)

With Axial Leads

GMC-V-63-R	GMC-V-500-R	GMC-V-2.5
GMC-V-80-R	GMC-V-600-R	GMC-V-3.15
GMC-V-100-R	GMC-V-630-R	GMC-V-3.5
GMC-V-125-R	GMC-V-750-R	GMC-V-4
GMC-V-150-R	GMC-V-800-R	GMC-V-5
GMC-V-200-R	GMC-V-1-R	GMC-V-6
GMC-V-250-R	GMC-V-1.25-R	GMC-V-6.3
GMC-V-300-R	GMC-V-1.5-R	GMC-V-7
GMC-V-315-R	GMC-V-1.6-R	GMC-V-8
GMC-V-400-R	GMC-V-2-R	GMC-V-10

Without Axial Leads

GMC-63mA	GMC-500-R	GMC-2.5-R
GMC-80mA	GMC-600-R	GMC-3.15-R
GMC-100mA	GMC-630-R	GMC-3.5-R
GMC-125mA	GMC-750-R	GMC-4-R
GMC-150mA	GMC-800-R	GMC-5-R
GMC-200mA	GMC-1-R	GMC-6-R
GMC-250mA	GMC-1.25-R	GMC-6.3-R
GMC-300mA	GMC-1.5-R	GMC-7-R
GMC-315mA	GMC-1.6-R	GMC-8-R
GMC-400mA	GMC-2-R	GMC-10-R

Data Sheet: 2018

GMD-V (axial leads)

GMD

Specifications

Description: Time-
delay fuse.

Dimensions:
5 x 20mm
(0.197" x 0.788").

Construction:
Glass tube, nickel-
plated brass end-
caps.

Ratings:

- Volts — 250Vac
- Amps — 125mA-4A
- IR — 10kA (125mA-3A @
125Vac, p.f. = 0.7-0.8)
— 10kA (4A @ 125Vac, p.f. =
1.0)
— 100A (125mA-3A @
250Vac, p.f. = 0.7-0.8)
— 200A (4A @ 250Vac, p.f. =
1.0)

Agency Information: CE, Std. 248-
14, UL Listed Guide JDYX, File
E19180, 0-3A, UL Recognized, Guide
JDYX2, File E19180, 4A, CSA
Certified, Class 1422-01, File 65063,
0-3A.

Features and Benefits

- Time-delay compatibility for inductive circuits.
- Conforming to UL standards.

Typical Applications

- Electronic Circuits

Catalog Numbers (Amps)

With Axial Leads

GMD-V-125-R	GMD-V-500-R	GMD-V-1.5-R
GMD-V-150-R	GMD-V-630-R	GMD-V-1.6-R
GMD-V-200-R	GMD-V-750-R	GMD-V-2-R
GMD-V-250-R	GMD-V-800-R	GMD-V-2.5-R
GMD-V-300-R	GMD-V-1-R	GMD-V-3-R
GMD-V-315-R	GMD-V-1.2-R	GMD-V-4-R
GMD-V-400-R	GMD-V-1.25-R	

Without Axial Leads

GMD-125-R	GMD-500-R	GMD-1.5-R
GMD-150-R	GMD-630-R	GMD-1.6-R
GMD-200-R	GMD-750-R	GMD-2-R
GMD-250-R	GMD-800-R	GMD-2.5-R
GMD-300-R	GMD-1-R	GMD-3-R
GMD-315-R	GMD-1.2-R	GMD-4-R
GMD-400-R	GMD-1.25-R	

Data Sheet: 2019

1/4" Dia. x 5/8" to 1" length ferrule fuses

Electronic Fuses

AGA-V (axial leads)

AGA

Specifications

Description: Fast-acting fuse.

Dimensions:
1/4" x 5/8"
(6.4 x 15.9mm).

Construction:
Glass tube.

Ratings:

Volts — 125Vac (or less)

Amps — 1/6-30A

IR — 10,000 (1/6-1 1/2A @ 125Vac)

— 200A (2-5A @ 125Vac)

— 1000A (6-30A @ 32Vac)

Agency Information: CE, Std. 248-14, UL File E19180, UL Listed, Guide JDYX 0-1 1/2A UL Recognized, Guide JDYX2 2-12A.

Features and Benefits

- Fast-acting for maximum protection.
- Size rejects insertion of other fuse types.

Typical Applications

- Electronic Circuits

Catalog Numbers (Amps)

With Axial Leads*

AGA-V-1/6	AGA-V-1	AGA-V-7 1/2
AGA-V-1/10	AGA-V-1 1/2	AGA-V-10
AGA-V-1/8	AGA-V-2	AGA-V-15
AGA-V-1/4	AGA-V-2 1/2	AGA-V-20
AGA-V-3/8	AGA-V-3	AGA-V-25
AGA-V-1/2	AGA-V-5	AGA-V-30
AGA-V-4/10	AGA-V-6	
AGA-V-3/4	AGA-V-7	

Without Axial Leads

AGA-1/6	AGA-1	AGA-7 1/2
AGA-1/10	AGA-1 1/2	AGA-10
AGA-1/8	AGA-2	AGA-15
AGA-1/4	AGA-2 1/2	AGA-20
AGA-3/8	AGA-3	AGA-25
AGA-1/2	AGA-5	AGA-30
AGA-4/10	AGA-6	
AGA-3/4	AGA-7	

*AGA-V is UL Listed 0-5A, UL Recognized 6-12A.

AGW

Specifications

Description: Fast-acting fuse.

Dimensions: 1/4" x 7/8"
(6.4 x 22.2mm).

Construction: Glass tube.

Ratings:

Volts — 32Vac

Amps — 1-30A

IR — 100A

Features and Benefits

- Fast-acting for maximum protection.
- Size rejects insertion of other fuse types.

Typical Applications

- Electronic Circuits

Catalog Numbers (Amps)

AGW-1	AGW-4	AGW-15
AGW-1 1/2	AGW-5	AGW-20
AGW-2	AGW-6	AGW-25
AGW-2 1/2	AGW-7 1/2	AGW-30
AGW-3	AGW-10	



AGX-V (axial leads)

AGX

Specifications

Description: Fast-acting fuse.

Dimensions: 1/4" x 1"
(6.4 x 25.4mm).

Construction: Glass tube.

Ratings:

Volts — 250Vac (1/600-2A)

— 125Vac (2 1/2-7A)

— 32V (8-30A)

Amps — 1/600-30A

IR — 35A (1/600-2A @ 250Vac)

— 10,000A (2 1/2-7A @ 125Vac)

— 1000A (8-30A @ 32V)

Agency Information: CE, Std. 248-14, UL File E19180 UL Listed, Guide JDYX, 0-5A UL Recognized, Guide JDYX2, 6-20A CSA File 47233; Class 1422-01, 0-5A.

Features and Benefits

- Size rejects insertion of other fuse types.

Typical Applications

- Electronic Circuits

Catalog Numbers (Amps)

With Axial Leads**

AGX-V-1/600	AGX-V-1/6	AGX-V-5
AGX-V-1/200	AGX-V-4/10	AGX-V-6
AGX-V-1/100	AGX-V-1/2	AGX-V-7
AGX-V-1/50	AGX-V-3/4	AGX-V-8
AGX-V-1/25	AGX-V-1	AGX-V-10
AGX-V-1/10	AGX-V-1 1/4	AGX-V-15
AGX-V-1/6	AGX-V-1 1/2	AGX-V-20
AGX-V-1/4	AGX-V-2	AGX-V-25
AGX-V-1/20	AGX-V-2 1/2	AGX-V-30
AGX-V-1/10	AGX-V-3	
AGX-V-1/6	AGX-V-4	

Without Axial Leads

AGX-1/600	AGX-1/6	AGX-5
AGX-1/200	AGX-4/10	AGX-6
AGX-1/100	AGX-1/2	AGX-7
AGX-1/50	AGX-3/4	AGX-8
AGX-1/25	AGX-1	AGX-10
AGX-1/10	AGX-1 1/4	AGX-15
AGX-1/6	AGX-1 1/2	AGX-20
AGX-1/4	AGX-2	AGX-25
AGX-1/20	AGX-2 1/2	AGX-30
AGX-1/10	AGX-3	
AGX-1/6	AGX-4	

**AGX-V is UL Recognized from 6-20A @ 32Vac



1/4" Dia. x 1 1/4" length fast-acting ferrule fuses

AGC-V (axial leads)

AGC

Specifications

Description: Fast-acting fuse.

Dimensions: 1/4" x 1 1/4"
(6.4 x 31.7mm).

Construction: Glass tube with nickel-plated brass endcaps.

Ratings:

Volts — 250Vac (1/20-10A)
— 32Vac (15-30A)

Amps — 1/20-30A

IR* — 35A (1/20-1A @ 250Vac)
— 100A (1 1/4-3A @ 250Vac)
— 200A (4-10A @ 250Vac)
— 1000A (15-30A @ 32Vac)

*Interrupting ratings were measured at 70% – 80% power factor on AC, and at a time constant described in UL 248.

Agency Information:

CE, Std. 248-14, UL Listed, Guide JDYX, File E19180, 0-10A UL Recognized, Guide JDYX2, File E19180, 15-30A CSA Certification, Class 1422-01, File 53787.

Features and Benefits

- Original electronic glass tube fuse.
- Fast-acting for maximum protection.
- Wide amp/volt ratings allow versatility of protecting electronic circuits.

Typical Applications

- Electronic Circuits

Catalog Numbers (Amps)

With Axial Leads

AGC-V-1/20	AGC-V-1/2	AGC-V-5
AGC-V-1/10	AGC-V-3/4	AGC-V-6
AGC-V-1/5	AGC-V-1	AGC-V-7
AGC-V-1/2	AGC-V-1 1/4	AGC-V-8
AGC-V-3/8	AGC-V-1 1/2	AGC-V-9
AGC-V-1/4	AGC-V-2	AGC-V-10
AGC-V-1/8	AGC-V-2 1/4	AGC-V-15
AGC-V-1/10	AGC-V-2 1/2	AGC-V-20
AGC-V-1/15	AGC-V-3	AGC-V-25
AGC-V-1/20	AGC-V-4	AGC-V-30

Without Axial Leads

AGC-1/20	AGC-1/2	AGC-5
AGC-1/10	AGC-3/4	AGC-6
AGC-1/5	AGC-1	AGC-7
AGC-1/2	AGC-1 1/4	AGC-8
AGC-3/8	AGC-1 1/2	AGC-9
AGC-1/4	AGC-2	AGC-10
AGC-1/8	AGC-2 1/4	AGC-15
AGC-1/10	AGC-2 1/2	AGC-20
AGC-1/15	AGC-3	AGC-25
AGC-1/20	AGC-4	AGC-30

ABC-V (axial leads)

ABC

Specifications

Description: Fast-acting fuse.

Dimensions: 1/4" x 1 1/4"
(6.4 x 31.7mm).

Construction: Ceramic tube with nickel-plated brass endcaps.

Ratings:

Volts — 250Vac/125Vdc (1/4-20A)
— 125Vac/125Vdc (25-30A)

Amps — 1/4-30A

IR** — 35A (1/4-1A @ 250Vac)
— 10kA (1/4-20A @ 250Vdc)
— 100A (1 1/2-3A @ 250Vac)
— 200A (4-10A @ 250Vac)
— 750A (15A @ 250Vac)
— 400A (20A @ 250Vac)
— 400A (25-30A @ 250Vdc)
— 1kA (25-30A @ 125Vdc)

**Interrupting ratings were measured at 70% – 80% power factor on AC, and at a time constant described in UL 248.

Agency Information:

CE, Std. 248-14 UL Listed, Guide JDYX File E19180, 0-15A UL Recognized, Guide JDYX2, File E19180, 20-25A CSA Certification, Class 1422-01, File 53787, 0-15A, Class 1422-30, File 53787, 20-25A.

Features and Benefits

- Ceramic body allows for higher amp/volt rating combinations.
- Consolidate inventory by replacing AGC fuses for reduced SKU investment and minimizing potential for misapplying fuse.

Typical Applications

- Electronic Circuits

Catalog Numbers (Amps)

With Axial Leads

ABC-V-1/4	ABC-V-2 1/2	ABC-V-8
ABC-V-1/2	ABC-V-3	ABC-V-10
ABC-V-3/4	ABC-V-4	ABC-V-15
ABC-V-1	ABC-V-5	ABC-V-20
ABC-V-1 1/2	ABC-V-6	ABC-V-25
ABC-V-2	ABC-V-7	ABC-V-30

Without Axial Leads

ABC-1/4	ABC-2 1/2	ABC-8
ABC-1/2	ABC-3	ABC-10
ABC-3/4	ABC-4	ABC-15
ABC-1	ABC-5	ABC-20
ABC-1 1/2	ABC-6	ABC-25
ABC-2	ABC-7	ABC-30

GBB-V (axial leads)

GBB

Specifications

Description: Very fast-acting fuse.

Dimensions: 1/4" x 1 1/4"
(6.4 x 31.7mm).

Construction: Ceramic cartridge with nickel-plated brass endcaps.

Ratings:

Volts — 250Vac/125Vdc

Amps — 1-30A

IR — 200A @ 250Vac
— 200A (20-30A @ 125Vac/dc)
— 10,000A (1A -15A @ 125Vac/dc)

Agency Information:

CE, Std. 248-14, UL Recognized, 1-30, 125Vdc/250Vac, File E56412, Guide JFHR2, CSA Certified, 1-10, 125Vdc/250Vac, File 53787, Class 1422-01.

Features and Benefits

- Very fast-acting performance allows protection of highly sensitive electronic circuitry.

Typical Applications

- Electronic Circuits

Catalog Numbers (Amps)

With Axial Leads

GBB-V-1	GBB-V-6	GBB-V-15
GBB-V-1 1/4	GBB-V-7	GBB-V-20
GBB-V-2	GBB-V-8	GBB-V-25
GBB-V-3	GBB-V-9	GBB-V-30
GBB-V-4	GBB-V-10	
GBB-V-5	GBB-V-12	

Without Axial Leads

GBB-1	GBB-6	GBB-15
GBB-1 1/4	GBB-7	GBB-20
GBB-2	GBB-8	GBB-25
GBB-3	GBB-9	GBB-30
GBB-4	GBB-10	
GBB-5	GBB-12	

1/4" Dia. x 1 1/4" length time-delay ferrule fuses

MDL-V (axial leads)

MDL

Specifications

Description: Time-delay fuse.

Dimensions: 1/4" x 1 1/4"
(6.4 x 31.7mm).

Construction: Glass tube with nickel-plated brass endcaps.

Ratings:

Volts — 250Vac (1/6-8A)
— 32Vac (9-30A)

Amps — 1/6-30A

IR* — 35A (1/6-1A @ 250Vac)
— 100A (1 1/4-3A @ 250Vac)
— 200A (4-8A @ 250Vac)
— 1000A (9-30A @ 32Vac)

*Interrupting ratings were measured at 70% – 80% power factor on ac, and at a time constant described in UL 198L.

Agency Information: CE, Std. 248-14, UL Listed, Guide JDYX, File E19180; 1/6-8A CSA Certification Class 1422-01, File 53787, 1/6-8A, UL Recognized, Guide JDYX2, File E19180, 8.1-30A.

Features and Benefits

- Time-delay allows close sizing on inductive circuits.
- Broad amp size range allows improved compatibility between fuse and circuit operating characteristics.

Typical Applications

- Electronic Circuits

Catalog Numbers (Amps)

With Axial Leads

MDL-V-1/16	MDL-V-1	MDL-V-7
MDL-V-1/10	MDL-V-1 1/4	MDL-V-8
MDL-V-1/8	MDL-V-1 1/2	MDL-V-9
MDL-V-1/4	MDL-V-2	MDL-V-10
MDL-V-3/16	MDL-V-2 1/4	MDL-V-12
MDL-V-1/4	MDL-V-2 1/2	MDL-V-15
MDL-V-3/10	MDL-V-3	MDL-V-20
MDL-V-1/2	MDL-V-4	MDL-V-25
MDL-V-3/4	MDL-V-5	MDL-V-30
MDL-V-1	MDL-V-6	

Without Axial Leads

MDL-1/16	MDL-1	MDL-7
MDL-1/10	MDL-1 1/4	MDL-8
MDL-1/8	MDL-1 1/2	MDL-9
MDL-1/4	MDL-2	MDL-10
MDL-3/16	MDL-2 1/4	MDL-12
MDL-1/4	MDL-2 1/2	MDL-15
MDL-3/10	MDL-3	MDL-20
MDL-1/2	MDL-4	MDL-25
MDL-3/4	MDL-5	MDL-30
MDL-1	MDL-6	

Data Sheet:2004

MDQ-V (axial leads)

MDQ

Specifications

Description: Dual-element, time-delay fuse.

Dimensions: 1/4" x 1 1/4"
(6.4 x 31.7mm).

Construction: Glass tube with nickel-plated brass endcaps.

Ratings:

Volts — 250Vac (1/100-7A)
— 32Vac (7 1/2-7A)

Amps — 1/100-15A

IR — 35A (1/100-1A @ 250Vac)
— 100A (1 1/4-3A @ 250Vac)
— 200A (4-7A @ 25Vac)
— 1000A (7 1/2-12A @ 32Vac)

Agency Information: CE, Std. 248-14, UL Listed, File E19180; Guide JDYX, 1/6-7A CSA Certification, File 47233, Class 1422-01, 1/6-7A, UL Recognized, Guide JDYX2, File E19180, 7.1-30A.

Features and Benefits

- Dual-element design allows closer sizing to inductive circuits than any other fuses.

Typical Applications

- Electronic Relay and Control Circuits

Catalog Numbers (Amps)

With Axial Leads

MDQ-V-1/100	MDQ-V-1/10	MDQ-V-1 1/2	MDQ-V-5
MDQ-V-1/50	MDQ-V-1/5	MDQ-V-1 3/4	MDQ-V-6
MDQ-V-1/25	MDQ-V-1/2	MDQ-V-1 7/8	MDQ-V-6 1/4
MDQ-V-1/10	MDQ-V-1/2	MDQ-V-2	MDQ-V-7
MDQ-V-1/6	MDQ-V-1/2	MDQ-V-2 1/4	MDQ-V-7 1/2
MDQ-V-1/4	MDQ-V-1/2	MDQ-V-2 1/2	MDQ-V-8
MDQ-V-1/3	MDQ-V-1/2	MDQ-V-2 3/4	MDQ-V-9
MDQ-V-1/2	MDQ-V-1	MDQ-V-3	MDQ-V-10
MDQ-V-3/4	MDQ-V-1 1/4	MDQ-V-3 1/2	MDQ-V-12
MDQ-V-1	MDQ-V-1 1/2	MDQ-V-4	MDQ-15

Without Axial Leads

MDQ-1/100	MDQ-1/10	MDQ-1 1/2	MDQ-5
MDQ-1/50	MDQ-1/5	MDQ-1 3/4	MDQ-6
MDQ-1/25	MDQ-1/2	MDQ-1 7/8	MDQ-6 1/4
MDQ-1/10	MDQ-1/2	MDQ-2	MDQ-7
MDQ-1/6	MDQ-1/2	MDQ-2 1/4	MDQ-7 1/2
MDQ-1/4	MDQ-1/2	MDQ-2 1/2	MDQ-8
MDQ-1/3	MDQ-1/2	MDQ-2 3/4	MDQ-9
MDQ-1/2	MDQ-1	MDQ-3	MDQ-10
MDQ-3/4	MDQ-1 1/4	MDQ-3 1/2	MDQ-12
MDQ-1	MDQ-1 1/2	MDQ-4	MDQ-15

Data Sheet: 2044

MDA-V (axial leads)

MDA

Specifications

Description: Time-delay fuse.

Dimensions: 1/4" x 1 1/4"
(6.4 x 31.7mm).

Construction: Ceramic tube with nickel-plated brass endcaps.

Ratings:

Volts — 250Vac (or less)
— 125Vdc (20A- 30A)

Amps — 1/10-30A

IR** — 35A (1/10-1A @ 250Vac)
— 100A (2 1/2-3A @ 250Vac)
— 200A (4-10A @ 250Vac)
— 1500A (15-30A @ 250Vac)
— 10,000A (20-30A @ 125Vdc)

**Interrupting ratings were measured at 70% – 80% power factor on ac, and at a time constant described in UL 248.

Agency Information: CE, Std. 248-14, UL Listed, Guide JDYX, File E19180, 0-15A CSA Certification, Class 1422-01, File 53787, 0-15A.

Features and Benefits

- Ceramic body allows for higher amp/volt rating combinations.
- Inventory consolidation by replacing MDL fuses allows for reduced SKU investment and minimizing potential for misapplying fuse.

Typical Applications

- Electronic Circuits

Catalog Numbers (Amps)

With Axial Leads

MDA-V-1/10	MDA-V-2 1/2	MDA-V-10
MDA-V-1/5	MDA-V-3	MDA-V-12
MDA-V-1/2	MDA-V-4	MDA-V-15
MDA-V-1/4	MDA-V-5	MDA-V-20
MDA-V-1	MDA-V-6	MDA-V-25
MDA-V-1 1/2	MDA-V-7	MDA-V-30
MDA-V-2	MDA-V-8	

Without Axial Leads

MDA-1/10	MDA-2 1/2	MDA-10
MDA-1/5	MDA-3	MDA-12
MDA-1/2	MDA-4	MDA-15
MDA-1/4	MDA-5	MDA-20
MDA-1	MDA-6	MDA-25A
MDA-1 1/2	MDA-7	MDA-30A
MDA-2	MDA-8	

Data Sheet: 2002

PC board mount fuse holders

HTC-45M



PCB Vertical Mount

Specifications

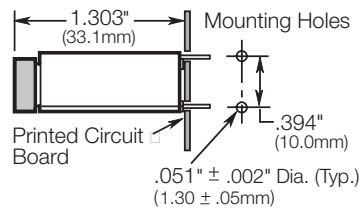
Description: PCB vertical mount bayonet cap and fuse holder.

Dimensions: See Dimensions illustration.

Ratings:

See Specifications table.

Dimensions



Data Sheet 2110

HTC-50M



PCB Horizontal Mount

Specifications

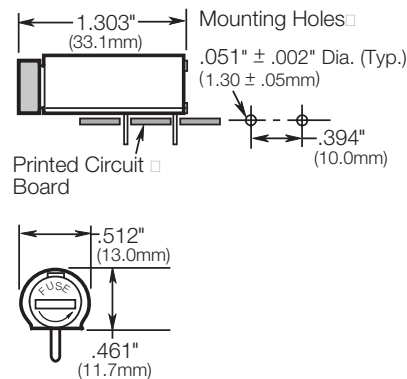
Description: PCB horizontal mount bayonet cap and fuse holder.

Dimensions: See Dimensions illustration.

Ratings:

See Specifications table.

Dimensions



Data Sheet 2110

HTC-60M, HTC-65M



PCB Stand-Off Mount

Specifications

Description: Two-leg (HTC-60M) and four-leg (HTC-65M) PCB stand-off fuse holder.

Dimensions: See Dimensions illustration.

Construction: Valox DR48 body material, phosphor bronze terminals.

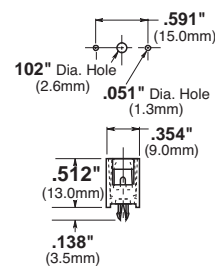
Ratings:

Volts: — 250V

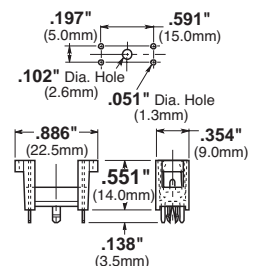
Amps: — 6.3A

Dimensions

HTC-60M (2-leg)



HTC-65M (4-Leg)



Data Sheet 2110

Specifications

Volts: 250V

Amps: 6.3A

Terminals: For HTC-45M, HTC-50M Tin-plated.

Molded Materials: High temperature thermoplastic that meets the flammability ratings of UL 94V0; Glow Wire Test: 960°C per IEC 60695-2-1.

Solderability: In accordance with IEC 68-2-20.

Electrical: Contact Resistance: ≤ 10mΩ; Insulation Resistance: ≥ 10mΩ; Dielectric Strength ≥ 2000 Vac.

Shock Safety: PC2 (fuse holders).

Agency Information: CE, HTC-45M, HTC-50M UL Recognized, (Guide IZLT2, File E14853; 6.3A, 250V; CSA Certified, (Class 6225-01, File 47235; 6.3A, 250V) SEMKO: (9226032; 6.3A, 250V).

Packaging: Standard Qty 10 (No Prefix), Bulk Qty 100 (Prefix Catalog Number with BK/).

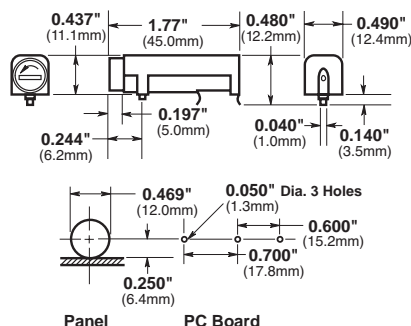
PC board mount fuse holders

HBH-I (for ¼" x 1¼" fuses)**HBH-M** (for 5 x 20mm fuses)**PCB Horizontal Mount**

Specifications
Description: PCB horizontal mount fuse holder.

Dimensions: See Dimensions illustration.

Ratings:
 See Specifications table.

Dimensions

Panel PC Board

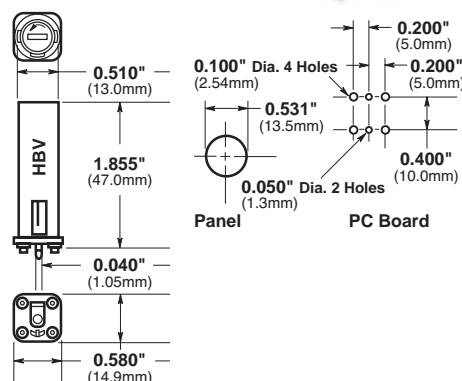
Data Sheet: 2118

HBV-I (for ¼" x 1¼" fuses)**HBV-M** (for 5 x 20mm fuses)**PCB Vertical Mount with Stability Pins**

Specifications
Description: PCB vertical mount fuse holder with stability pins.

Dimensions: See Dimensions illustration.

Ratings:
 See Specifications table.

Dimensions

Panel PC Board

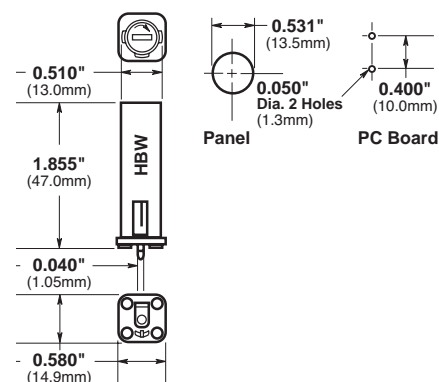
Data Sheet: 2118

HBW-I (for ¼" x 1¼" fuses)**HBW-M** (for 5 x 20mm fuses)**PCB Vertical Mount without Stability Pins**

Specifications
Description: PCB vertical mount fuse holder without stability pins.

Dimensions: See Dimensions illustration.

Ratings:
 See Specifications table.

Dimensions

Panel PC Board

Data Sheet: 2118

**FBI****FBM****Fuse Holder Caps (Fit all three shown above)****Specifications**

Electrical Ratings: UL — 16A @ 250V; CSA — 12A @ 250V; VDE — 6.3A @ 250V; SEMKO — 10A @ 250V
 Insulation resistance — 10,000 megohm at 500Vdc. Contact resistance — less than 0.005 ohms @ 20mV. Dielectric strength — over 200V/mil.

Molded Material: High dielectric molded phenolic with a UL 94VO flammability rating.

Fuse Carrier & Knob: Spring-loaded, bayonet-type. Tin plated brass. Screwdriver slotted.

Mounting: "Kicked" terminals (all models) and stabilizer pins on HBV model for increased stability.

Environmental: Maximum operating temperature — (-40°C to +85°C).

Agency Information: CE, UL Recognized — Guide IZLT2, File EI4853;
 CSA Certified — Class 6225-01, File 47235
 VDE — 41421

SEMKO — 9308147 (HBH, HBV) 9222106 (HBW)

PC board fuseclips for 5mm diameter fuses

HTC-15M, HTC-140M

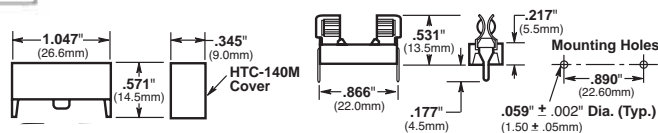
PCB Mounted Fuse Holder & Snap-On Cover

Voltage Rating: 250V, 6.3A, 1.6W

HTC-15M (fuse holder), HTC-140M (natural cover),
HTC-150M* (transparent cover)

*Available in bulk only. Use this format: BK/HTC-150M

Data Sheet: 2110



HTC-200M

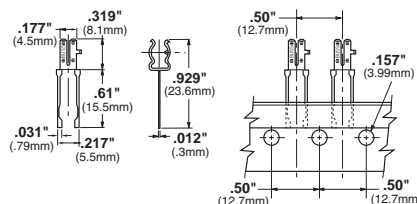
PCB Mounted Fuseclip

Construction: Tin-plated bronze

Tape and Fan Fold packed

Ammo Pack (AP/HTC-200M) 1000 pieces per box

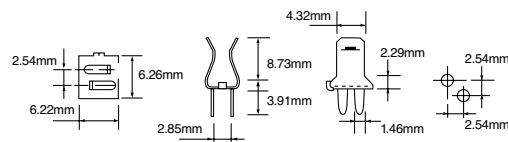
Data Sheet: 2110



HTC-210M

PCB Mounted Fuseclip with End Stops

Data Sheet: 2110



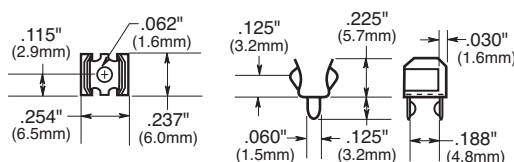
1A3399 Series

PCB Fuseclips with End Stops & Straight Leads

Catalog Numbers	Clip Material*	Finish
1A3399-01	Beryllium copper*	Silver
1A3399-04	Beryllium copper*	Bright tin
1A3399-10	Spring bronze	Bright tin

*Beryllium copper recommended for amps higher than 15 amps (1/2" clips).

Data Sheet: 2131



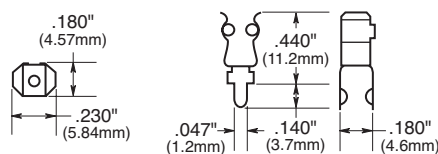
1A5018 Series

PCB High Profile Fuseclips with End Stops & Straight Leads

Catalog Numbers	Clip Material*	Finish
1A5018-7	Spring bronze	Silver
1A5018-10	Spring bronze	Bright tin

*Beryllium copper recommended for amps higher than 15 amps (1/2" clips).

Data Sheet: 2131

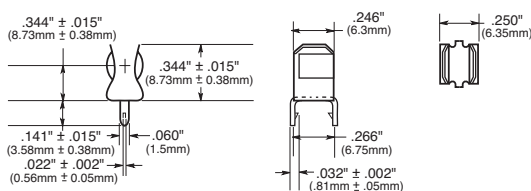


1A5601 Series

PCB Fuseclips (0-7A)

Catalog Number	Clip Material	Finish
1A5601	Cartridge brass	Bright tin

Data Sheet: 2131

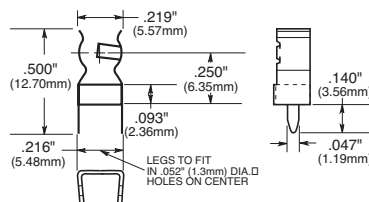


1A5602 Series

PCB Fuseclips (0-7A)

Catalog Number	Clip Material	Finish
1A5602	Cartridge brass	Bright tin

Data Sheet: 2131



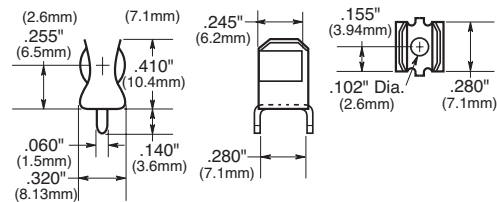
PC board fuseclips for 1/4" diameter fuses

1A3398 Series

PCB Fuseclips without End Stops or Straight Leads

Catalog Numbers	Clip Material	Finish
1A3398-07	Cartridge brass	Bright tin
1A3398-08	Spring bronze	Bright tin

Data Sheet: 2131



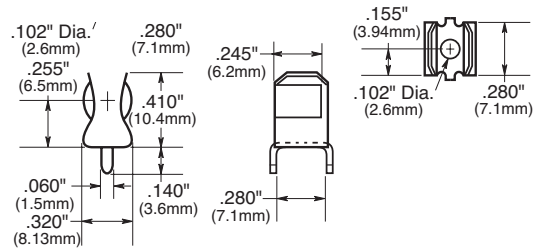
1A1907 Series

PCB Fuseclips with End Stops & Straight Leads

Catalog Numbers	Clip Material*	Finish
1A1907-02	Cartridge brass	None/bright dipped
1A1907-03	Beryllium copper*	Bright tin
1A1907-05	Beryllium copper*	Silver
1A1907-06	Cartridge brass	Bright tin
1A1907-08	Spring bronze	None/bright dipped
1A1907-09	Spring bronze	Bright tin

*Beryllium copper recommended for amps higher than 15A (1/4" clips).

Data Sheet: 2131



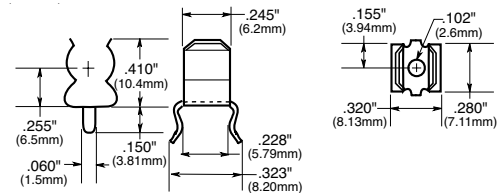
1A4533 Series

PCB Fuseclips without End Stops or Angled Out Leads

Catalog Numbers	Clip Material*	Finish
1A4533-01	Beryllium copper*	Bright tin
1A4533-06	Cartridge brass	Bright tin
1A4533-07	Spring bronze	Bright tin

*Beryllium copper recommended for amps higher than 15A (1/4" clips).

Data Sheet: 2131



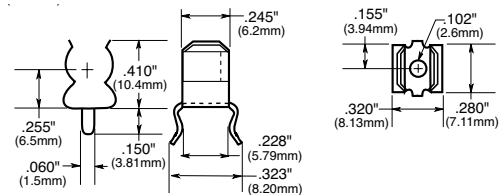
1A4534 Series

PCB Fuseclips with End Stops & Angled Out Leads

Catalog Numbers	Clip Material*	Finish
1A4534-01	Beryllium copper*	Bright tin
1A4534-06	Cartridge brass	Bright tin
1A4534-07	Spring bronze	Bright tin

*Beryllium copper recommended for amps higher than 15A (1/4" clips).

Data Sheet: 2131



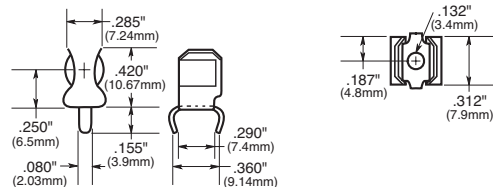
1A1119 Series

Fuseclips with End Stops & Angled In Leads

Catalog Numbers	Clip Material*	Finish
1A1119-04	Beryllium copper*	Bright tin
1A1119-05	Beryllium copper*	Silver
1A1119-10	Cartridge brass	Bright tin
1A1119-13	Spring bronze	Bright tin

*Beryllium copper recommended for amps higher than 15A (1/4" clips).

Data Sheet: 2131



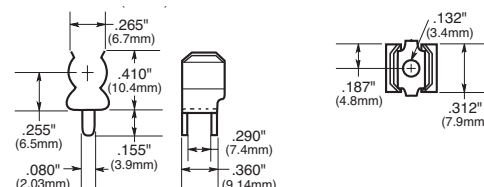
1A1120 Series

PCB Fuseclips without End Stops or Angled In Leads

Catalog Numbers	Clip Material*	Finish
1A1120-02	Cartridge brass	None/bright dipped
1A1120-05	Beryllium copper*	Silver
1A1120-06	Beryllium copper*	Bright tin
1A1120-09	Cartridge brass	Bright tin
1A1120-11	Spring bronze	None/bright dipped
1A1120-12	Spring bronze	Bright tin

*Beryllium copper recommended for amps higher than 15A (1/4" clips).

Data Sheet: 2131



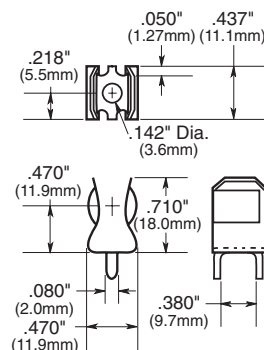
PC Board fuseclips for $\frac{13}{32}$ " diameter and ATC® fuses

1A3400 Series

PCB Fuseclips for $\frac{13}{32}$ " diameter fuses with End Stops & Straight Leads

Catalog Number	Amp Rating	Clip Material	Finish
1A3400-09	20A Max.	Spring bronze	Bright tin

Data Sheet 2131

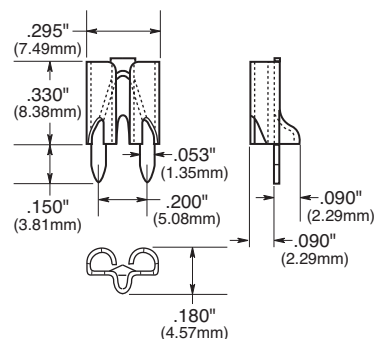


1A5600 Series

PCB Fuseclips for ATC® Fuses (0-20A)

Catalog Number	Clip Material	Finish
1A5600	Brass	Satin finish tin

Data Sheet 2131



Did You Know?

The POWER of Cooper Bussmann Branded Merchandising

The Cooper Bussmann brand name is recognized as the leader in circuit protection products by the majority of electrical end-users. Just like our circuit protection products, our branded merchandise is the highest quality. You can now find everything you need, from apparel to sporting goods at www.BussShop.com.

Shopping on-line will also give you:

- Up-to-date inventory counts
- Seasonally updated merchandise
- Immediate e-mail order acknowledgment and shipping notification
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PC Board fuseclips for $\frac{1}{4}$ ", $\frac{5}{32}$ ", $\frac{13}{32}$ " and $\frac{9}{16}$ " diameter fuses

5681 & 5682 Series

PCB Fuseclips with Mounting Holes For $\frac{1}{4}$ " Diameter Fuses

Catalog Numbers

Catalog Numbers	End Stop	Clip Mat.**	Finish	Dimensions (in)		D (Height)	E (Width)	Hole Dia.	Fig. Ref.
				B (To End Stop)	C (Contact)				
5681-08	No	Spg. Br.	Nickel	†	0.265	0.410	0.320	0.132	2
5681-15		Spg. Br.	Bright tin						
5682-01		BeCU	Silver	0.106					
5682-02	Yes	BeCU	Silver	0.132					
5682-41		Spg. Br.	Bright tin	0.106	0.260	0.410	0.320	0.132	1
5682-44		Spg. Br.	Bright tin	0.132					

**Spg. Br. — Spring Bronze; BeCU — Beryllium Copper.

†Hole in center of both clip and contact area.

Data Sheet: 2132

5672 & 5674 Series

PCB Fuseclips with Mounting Holes For $\frac{5}{32}$ " Diameter Fuses

Catalog Numbers	End Stop	Clip Mat.**	Finish	Dimensions (in)		D (Height)	E (Width)	Hole Dia.	Fig. Ref.
				B (To End Stop)	C (Contact)				
5672-11	No	Spg. Br.	Bright tin	†	0.362	0.520	0.380	0.172	2
5674-01		BeCU	Silver						
5674-10	Yes	BeCU	Bright tin	0.168	0.356	0.520	0.380	0.172	1
5674-41		Spg. Br.	Bright tin						

**Spg. Br. — Spring Bronze; BeCU — Beryllium Copper.

†Hole in center of both clip and contact area.

Data Sheet: 2132

5956 & 5960 Series

PCB Fuseclips with Mounting Holes For $\frac{13}{32}$ " Diameter Fuses

Catalog Numbers	End Stop	Clip Mat.**	Finish	Dimensions (in)		D (Height)	E (Width)	Hole Dia.	Fig. Ref.
				B (To End Stop)	C (Contact)				
5956-16	No	Spg. Br.	Bright tin	†	0.312	0.710	0.470	0.172	2
5960-07		BeCU	Silver	0.168				0.196	
5960-09		BeCU	Silver	0.200				0.172	
5960-51	Yes	Spg. Br.	Bright dip*	0.168	0.389	0.710	0.470	0.196	1
5960-53		Spg. Br.	Bright dip*	0.200				0.172	
5960-61		Spg. Br.	Bright tin	0.168				0.196	
5960-62		Spg. Br.	Bright tin	0.168				0.132	
5960-63		Spg. Br.	Bright tin	0.200				0.172	
5960-64		Spg. Br.	Bright tin	0.200				0.128	

*Bright dip is actually treated bare metal with no plating.

**Spg. Br. = Spring Bronze; BeCU = Beryllium Copper.

†Hole in center of both clip and contact area.

Data Sheet: 2132

5591 & 5592 Series

PCB Fuseclips with Mounting Holes For $\frac{9}{16}$ " Diameter Fuses

Catalog Number	End Stop	Clip Mat.**	Finish	Dimensions (in)		D (Height)	E (Width)	Hole Dia.	Fig. Ref.
				B (To End Stop)	C (Contact)				
5591-42	Yes	Spg. Br.	Bright dip*	0.260	0.510	0.890	0.600	0.172	1
5592-01		BeCU	Silver					0.200	
5592-11	No	Spg. Br.	Silver	†	0.505	0.890	0.600	0.200	2
5592-33		Spg. Br.	Bright dip*					0.172	

*Bright Dip is actually treated bare metal with no plating.

**Spg. Br. — Spring Bronze; BeCU — Beryllium Copper.

†Hole in center of both clip and contact area.

Data Sheet: 2132

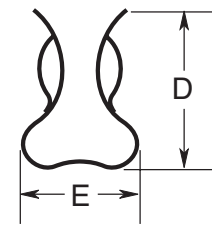
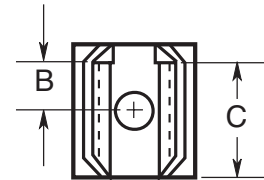


FIGURE 1

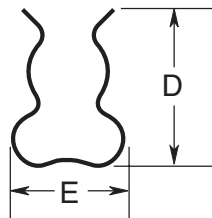
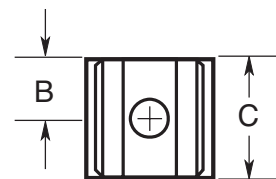


FIGURE 2

COOPER Bussmann



**Imagine Being in the Shoes
of the Person Who Doesn't
Give Serious Thought to
Circuit Protection.**

The burning question is: "Why would anyone forego circuit protection when Cooper Bussmann makes it so simple?"

With the industry's widest range of safety-enhanced products, expert technical support and safety programs, Cooper Bussmann provides everything you need to keep your systems, your personnel and yourself far from harm's way.

Simply contact your nearest Cooper Bussmann distributor or visit us at www.bussmann.com.

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