

INCH-POUND

W-F-1814/57D

15 November 2013

SUPERSEDING

W-F-1814/57C

20 November 2009

FEDERAL SPECIFICATION SHEET

FUSE, CARTRIDGE, HIGH INTERRUPTING CAPACITY, CLASSES RK1 AND RK5
(CURRENT-LIMITING) 250 VOLTS, 31-60 AMPERES

The General Services Administration has authorized the use of this federal specification sheet by all federal agencies.

The complete requirements for procuring the fuses described herein shall consist of this document and the latest issue in effect of [W-F-1814](#).

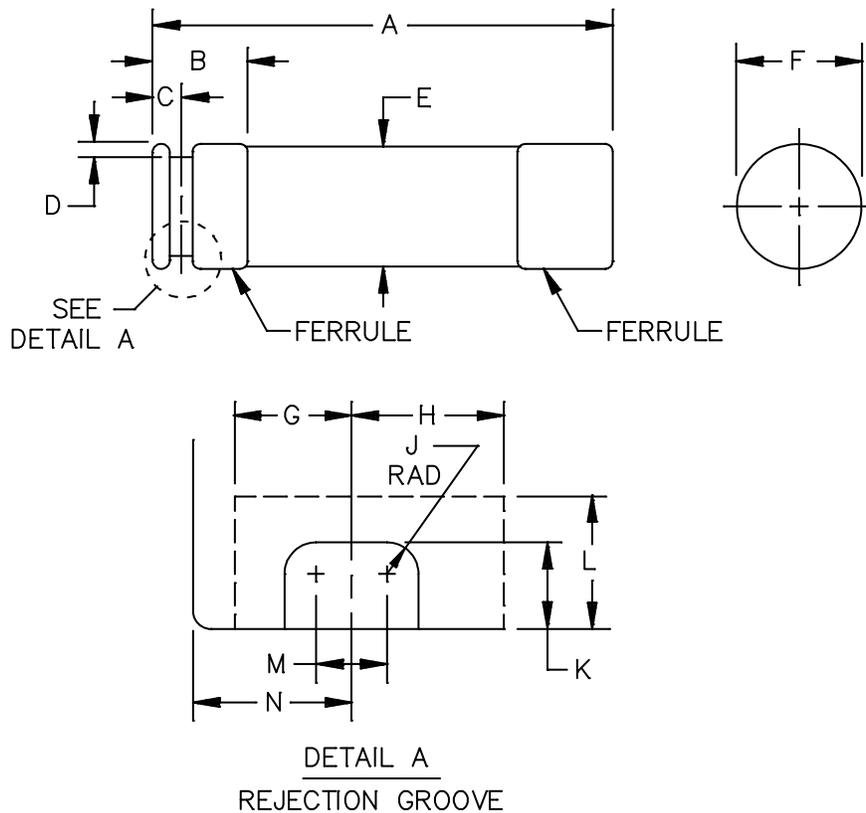


FIGURE 1. Classes RK1 and RK5 fuses, 250 volts, 31-60 amperes.

Ltr	Inches		mm		Ltr	Inches		mm	
	Min	Max	Min	Max		Min	Max	Min	Max
A	2.970	3.030	75.44	76.96	H	.165	.175	4.19	4.45
B	.620	---	15.75	---	J	.026	.036	.66	.91
C	.183	.193	4.65	4.90	K	.080	.090	2.03	2.29
D	.085	.130	2.16	3.30	L	.125	.135	3.18	3.43
E	---	.780	---	19.81	M	.081	.091	2.06	2.31
F	.804	.820	20.42	20.83	N	.183	.193	4.65	4.90
G	.118	.128	2.30	3.25					

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Solid line indicates location, shape, and dimensions for minimum rejection groove.
4. Dashed line indicates location, shape, and dimensions for maximum rejection groove.
5. Unless otherwise specified, tolerances are ± 0.02 (0.51 mm) for two-place decimals and ± 0.005 (0.13 mm) for three-place decimals.

FIGURE 1. Classes RK1 and RK5 fuses, 250 volts, 31-60 amperes – continued.

REQUIREMENTS:

Interface and physical dimensions: See [figure 1](#).

Physical: Nonrenewable.

Terminals: Ferrule type. The ferrules shall be approximately circular in cross-section.

Material: Brass, copper, or copper alloy.

Strength: 5 inch-pound torque between body and ferrules.

Alignment: The inside diameter of tubular gauge shall be not more than .823 inch (20.90 mm).

Body:

Insulating material: Fiber, ceramic, melamine-impregnated glass fiber, or other suitable material.

Electrical:

Voltage: 250 volts or less.

Frequency: 48 Hz to 60 Hz.

Current: See [table I](#).

Current carrying capacity: 110 percent of rated current indefinitely with temperature rise not to exceed 50°C (90°F) above ambient on the body and the ferrules.

Overload interrupt:

Instantaneous: Shall interrupt within 1 hour at 135 percent of rated current and within 4 minutes at 200 percent of rated current.

Time delay: In addition to the above requirement, the fuse shall not interrupt 500 percent of rated current within 10 seconds.

Interrupting capacity rating: 200,000 amperes rms symmetrical at 250 volts, 48 to 60 Hz and a power factor of 20 percent or less. Closing angle shall be essentially at the zero of the voltage wave (maximum offset) or later, to produce start of arcing within 30 electrical degrees prior to system peak voltage.

Threshold ratio: 30 maximum for RK1; 65 maximum for RK5.

Peak let-thru current: See [table II](#).

Maximum clearing I^2T : See [table II](#).

| Applicable fuseholder: Class R for ferrule type fuses in accordance with [UL 4248-12](#).

Part or Identifying Number (PIN): The Government PIN shall consist of the prefix “WF1814/57-“ followed by the PIN designation shown in [table I](#).

TABLE I. Current rating and PIN designation.

Current in amperes	PIN designation			
	RK5		RK1	
	Instantaneous	Time delay	Instantaneous	Time delay
35	F535	D535	F135	D135
40	F540	D540	F140	D140
45	F545	D545	F145	D145
50	F550	D550	F150	D150
55	F555	D555	F155	D155
60	F560	D560	F160	D160

TABLE II. Peak let-thru and I²T current.

	Between threshold and 50 kA		100 kA		200 kA	
	RK1	RK5	RK1	RK5	RK1	RK5
Maximum acceptable peak let-thru current ($I_p \times 10^3$)	10	20	12	21	16	26
Maximum clearing I ² T (amperes squared seconds) ($I^2T \times 10^3$)	40	200	40	200	50	200

Referenced documents. In addition to [W-F-1814](#), this document references the following:

- | [UL 4248-12](#)

The margins of this specification sheet are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

MILITARY INTEREST:

| Custodians:

Army - CR
Navy - EC
Air Force - 85
DLA - CC

| Review activities:

Army - AR, AT, CR4
Navy - OS
NSA - NS

CIVIL AGENCY COORDINATING ACTIVITIES:

GSA - FAS

Preparing activity:

DLA - CC

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| NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.