

INCH-POUND

W-F-1814/56D

15 November 2013

SUPERSEDING

W-F-1814/56C

01 October 2009

## FEDERAL SPECIFICATION SHEET

### FUSE, CARTRIDGE, HIGH INTERRUPTING CAPACITY, CLASSES RK1 AND RK5 (CURRENT-LIMITING) 250 VOLTS, 0-30 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](#).

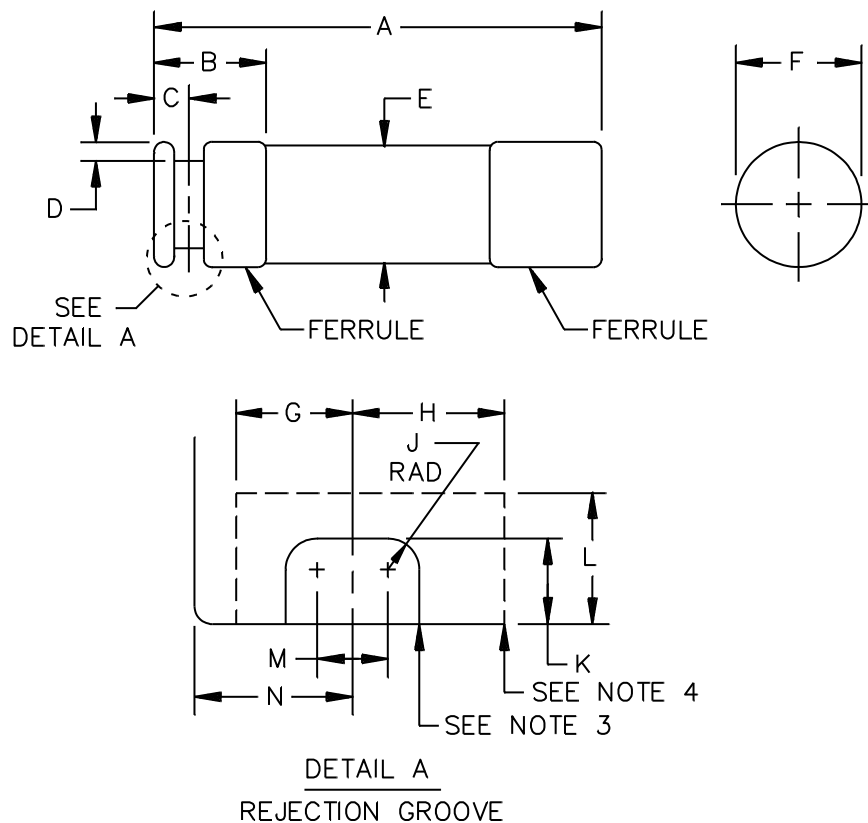


FIGURE 1. Classes RK1 and RK5 fuses, 250 volts, 0-30 amperes.

Ltr	Inches		mm		Ltr	Inches		mm	
	Min	Max	Min	Max		Min	Max	Min	Max
A	1.970	2.030	50.04	51.56	H	---	.150	---	3.81
B	.500	---	12.70	---	J	.026	.036	.66	.91
C	.151	.161	3.84	4.09	K	.850	---	21.59	---
D	.085	.130	2.16	3.30	L	---	.130	---	3.30
E	---	.530	---	13.46	M	.070	---	1.78	---
F	.554	.570	14.07	14.48	N	.151	.161	3.84	4.09
G	---	.115	---	2.92					

## 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  $\pm 0.02$  (0.51 mm) for two-place decimals and  $\pm 0.005$  (0.13 mm) for three-place decimals.

FIGURE 1. Classes RK1 and RK5 fuses, 250 volts, 0-30 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 .571 inch (14.50 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](#).

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Current carrying capacity: 110 percent of rated current indefinitely with temperature rise on the terminals 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 2 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 Hz 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 "WF1814/56-" 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
1/10	F501	D5001	F101	D1001
15/100		D50015		D10015
2/10		D5002		D1002
3/10		D5003		D1003
4/10		D5004		D1004
1/2		D5005		D1005
6/10		D5006		D1006
8/10		D5008		D1008
1		D501		D101
1 1/8		D50112		D10112
1 1/4		D50125		D10125
1 4/10		D5014		D1014
1 6/10		D5016		D1016
1 8/10		D5018		D1018
2		D502		D102
2 1/4		D50225		D10225
2 1/2		D5025		D1025
2 8/10		D5028		D1028
3	F503	D503	F103	D103
3 2/10		D5032		D1032
3 1/2		D5035		D1035
4		D504		D104
4 1/2		D5045		D1045
5		D505		D105
5 6/10		D5056		D1056
6	F506	D506	F106	D106
6 1/4		D50625		D10625
7		D507		D107
8		D508		D108
9	F510	D509	F110	D109
10		D510		D110
12		D512		D112
15		D515		D115
17 1/2	F515	D5175	F115	D1175
20		D520		D120
25		D525		D125
30		D530		D130

TABLE II. Peak let-thru and  $I^2T$  current.

	Between threshold and 50 kA		100 kA		200 kA	
	RK1	RK5	RK1	RK5	RK1	RK5
Maximum acceptable peak let-thru current ( $I_p \times 10^3$ )	6	11	10	11	12	14
Maximum clearing $I^2T$ (amperes squared seconds) ( $I^2T \times 10^3$ )	10	50	10	50	11	50

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>.