

Mil-Spec Numbering System – Defined

Non-Wirewound RJ Styles

MIL-PRF-22097 RJ24 F W 103

Style _____

Characteristic _____

Temperature Coefficient Max.	±100 ppm/°c
Contact Resistance Variation Max.	1 %
Thermal Shock	1 %
Humidity	1 %
Shock	1 %
Vibration	1 %
Load Life	2 %
Low Temperature	1 %
High Temperature	2 %
Rotational Life	2 %

Terminal Type _____

Resistance Code _____

First Two Digits Significant
Last Digit = Number of Zeroes
(103 = 10,000 ohms)

Non-Wirewound RJR Styles – High Reliability

MIL-PRF-39035 RJR24 F W 102 P

Style _____

Characteristic _____

Temperature Coefficient Max.	±100 ppm/°c
Contact Resistance Variation Max.	1 %
Thermal Shock	1 %
Humidity	1 %
Shock	1 %
Vibration	1 %
Load Life	
2,000 Hours	3 %
10,000 Hours	3 %
Low Temperature	1 %
High Temperature	3 %
Rotational Life	2 %
Conditioning	1-1/2 %

Terminal Type _____

Resistance Code _____

First Two Digits Significant
Last Digit = Number of Zeroes
(102 = 1,000 ohms)

Failure Rate _____

(% Failures/1,000 Hours – 60 % Confidence)

M = 1.0 %
P = 0.1 %
R = .01 %

Wirewound RT Styles

MIL-PRF-27208 RT24 C2 P 101

Style _____

Characteristic _____

C = Temperature Coefficient ±50 ppm/°C
2 = 85 ° Rating Temperature, 150 ° Maximum Operating Temperature

Terminal Type _____

Resistance Code _____

First Two Digits Significant
Last Digit = Number of Zeroes
(101 = 100 ohms)

High-Rel Wirewound Specification

MIL-PRF-39015 RTR Styles

This specification has a procedure for ordering, processing, and marking parts entirely different than the other three specifications. IT DOES NOT USE THE TYPE DESIGNATION NUMBER AS THE PART NUMBER.

The number to order by consists of:

- The individual specification sheet number
M39015/2 (for style RTR22)
M39015/3 (for style RTR24)

- A dash number from the specification sheet table for the resistance value

M39015/2	M39015/3
-003 500	-006 500
-004 1K	-007 1K
-005 2K	-008 2K
-006 5K	-009 5K
-007 10K	-101 10K
-008 20K	

- Terminal Type
- Failure rate level M
M = 1 %
% Failure/1,000 Hours – 60% Confidence

Examples of Part Numbers

M39015/2 – 006LM
5K Term. Type L – Failure Rate M

M39015/3 – 010XM
10K Term. Type X – Failure Rate M

The table on the next page shows all part numbers covered by this specification, the conversion to the RTR type designation number required by the supplier to manufacture the part, and the number that will be marked on the units you receive (same as part number ordered but with the letter “J” in front of it). The letter “J” is a government mark and it is certification that the parts comply with the specification.

Information Notes:

- M39015/3 was added to the MIL-SPEC after its original release.

Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications.

Mil-Spec Numbering System – How to Order

Bourns High Reliability Mil-Spec Part Numbers

Order By	Process By*	Marked With	Terminal Types	Failure Rate
M39015/2-003(TS)(FR)	RTR22D(TS)501(FR)	JM39015/2-003(TS)(FR)	L, P, W, X	M
M39015/2-004(TS)(FR)	RTR22D(TS)102(FR)	JM39015/2-004(TS)(FR)		
M39015/2-005(TS)(FR)	RTR22D(TS)202(FR)	JM39015/2-005(TS)(FR)		
M39015/2-006(TS)(FR)	RTR22D(TS)502(FR)	JM39015/2-006(TS)(FR)		
M39015/2-007(TS)(FR)	RTR22D(TS)103(FR)	JM39015/2-007(TS)(FR)		
M39015/2-008(TS)(FR)	RTR22D(TS)203(FR)	JM39015/2-008(TS)(FR)		
M39015/3-006(TS)(FR)	RTR24D(TS)501(FR)	JM39015/3-006(TS)(FR)	P, W, X	M
M39015/3-007(TS)(FR)	RTR24D(TS)102(FR)	JM39015/3-007(TS)(FR)	P, W, X	M
M39015/3-008(TS)(FR)	RTR24D(TS)202(FR)	JM39015/3-008(TS)(FR)		
M39015/3-009(TS)(FR)	RTR24D(TS)502(FR)	JM39015/3-009(TS)(FR)		
M39015/3-010(TS)(FR)	RTR24D(TS)103(FR)	JM39015/3-010(TS)(FR)		

*May also order using this part number.

Qualified Part Numbers

RT/RTR22 (Commercial Model 3250)

Standard Values (ohms)	RT22C2 _____				Nominal Resolution (percent)
	L	P	W	X	
10	—	—	—	—	—
20	—	—	—	—	—
50	RT22C2L500	RT22C2P500	RT22C2W500	RT22C2X500	0.80
100	RT22C2L101	RT22C2P101	RT22C2W101	RT22C2X101	0.90
200	RT22C2L201	RT22C2P201	RT22C2W201	RT22C2X201	0.70
500	RT22C2L501	RT22C2P501	RT22C2W501	RT22C2X501	0.60
1K	RT22C2L102	RT22C2P102	RT22C2W102	RT22C2X102	0.40
2K	RT22C2L202	RT22C2P202	RT22C2W202	RT22C2X202	0.30
5K	RT22C2L502	RT22C2P502	RT22C2W502	RT22C2X502	0.25
10K	RT22C2L103	RT22C2P103	RT22C2W103	RT22C2X103	0.19
20K	RT22C2L203	RT22C2P203	RT22C2W203	RT22C2X203	0.16

Standard Values (ohms)	RTR22D _____				Nominal Resolution (percent)
	L	P	W	X	
10	—	—	—	—	—
20	—	—	—	—	—
50	—	—	—	—	—
100	—	—	—	—	—
200	—	—	—	—	—
500	RTR22DL501M	RTR22DP501M	RTR22DW501M	RTR22DX501M	0.60
1K	RTR22DL102M	RTR22DP102M	RTR22DW102M	RTR22DX102M	0.40
2K	RTR22DL202M	RTR22DP202M	RTR22DW202M	RTR22DX202M	0.30
5K	RTR22DL502M	RTR22DP502M	RTR22DW502M	RTR22DX502M	0.25
10K	RTR22DL103M	RTR22DP103M	RTR22DW103M	RTR22DX103M	0.19
20K	RTR22DL203M	RTR22DP203M	RTR22DW203M	RTR22DX203M	0.16

Bourns reserves the right per MIL-PRF-39035 to substitute a higher grade temperature characteristic or failure rate (QPL) than requested.

Qualified Part Numbers

RT/RTR24 (Commercial Model 3290)

Standard Values (ohms)	RT24C2			RTR24D			Nominal Resolution (percent)
	P	W	X	P	W	X	
10	RT24C2P100	RT24C2W100	RT24C2X100	—	—	—	1.11
20	RT24C2P200	RT24C2W200	RT24C2X200	—	—	—	0.93
50	RT24C2P500	RT24C2W500	RT24C2X500	—	—	—	0.62
100	RT24C2P101	RT24C2W101	RT24C2X101	—	—	—	0.60
200	RT24C2P201	RT24C2W201	RT24C2X201	—	—	—	0.54
500	RT24C2P501	RT24C2W501	RT24C2X501	RTR24DP501*	RTR24DW501*	RTR24DX501*	0.42
1K	RT24C2P102	RT24C2W102	RT24C2X102	RTR24DP102*	RTR24DW102*	RTR24DX102*	0.33
2K	RT24C2P202	RT24C2W202	RT24C2X202	RTR24DP202*	RTR24DW202*	RTR24DX202*	0.26
5K	RT24C2P502	RT24C2W502	RT24C2X502	RTR24DP502*	RTR24DW502*	RTR24DX502*	0.20
10K	RT24C2P103	RT24C2W103	RT24C2X103	RTR24DP103*	RTR24DW103*	RTR24DX103*	0.17

*Last letter in number is failure rate level. M = 1.0 %

RT12 (Commercial Model 3057)

Standard Values (ohms)	RT12C2			Nominal Resolution (percent)
	L	P	Y	
10	RT12C2L100	RT12C2P100	RT12C2Y100	2.40
20	RT12C2L200	RT12C2P200	RT12C2Y200	1.90
50	RT12C2L500	RT12C2P500	RT12C2Y500	1.40
100	RT12C2L101	RT12C2P101	RT12C2Y101	1.00
200	RT12C2L201	RT12C2P201	RT12C2Y201	0.86
500	RT12C2L501	RT12C2P501	RT12C2Y501	0.89
1K	RT12C2L102	RT12C2P102	RT12C2Y102	0.72
2K	RT12C2L202	RT12C2P202	RT12C2Y202	0.58
5K	RT12C2L502	RT12C2P502	RT12C2Y502	0.43
10K	RT12C2L103	RT12C2P103	RT12C2Y103	0.34
20K	RT12C2L203	RT12C2P203	RT12C2Y203	0.31

RT26 (Commercial Model 3260)

Standard Values (ohms)	RT26C2		Nominal Resolution (percent)
	W	X	
10	RT26C2W100	RT26C2X100	1.90
20	RT26C2W200	RT26C2X200	1.50
50	RT26C2W500	RT26C2X500	1.25
100	RT26C2W101	RT26C2X101	1.00
200	RT26C2W201	RT26C2X201	0.94
500	RT26C2W501	RT26C2X501	0.58
1K	RT26C2W102	RT26C2X102	0.50
2K	RT26C2W202	RT26C2X202	0.45
5K	RT26C2W502	RT26C2X502	0.34

RJ22 (Commercial Model 3252)

Standard Values (ohms)	RJ22F			
	L	P	W	X
10	RJ22FL100	RJ22FP100	RJ22FW100	RJ22FX100
20	RJ22FL200	RJ22FP200	RJ22FW200	RJ22FX200
50	RJ22FL500	RJ22FP500	RJ22FW500	RJ22FX500
100	RJ22FL101	RJ22FP101	RJ22FW101	RJ22FX101
200	RJ22FL201	RJ22FP201	RJ22FW201	RJ22FX201
500	RJ22FL501	RJ22FP501	RJ22FW501	RJ22FX501
1K	RJ22FL102	RJ22FP102	RJ22FW102	RJ22FX102
2K	RJ22FL202	RJ22FP202	RJ22FW202	RJ22FX202
5K	RJ22FL502	RJ22FP502	RJ22FW502	RJ22FX502
10K	RJ22FL103	RJ22FP103	RJ22FW103	RJ22FX103
20K	RJ22FL203	RJ22FP203	RJ22FW203	RJ22FX203
25K	RJ22FL253	RJ22FP253	RJ22FW253	RJ22FX253
50K	RJ22FL503	RJ22FP503	RJ22FW503	RJ22FX503
100K	RJ22FL104	RJ22FP104	RJ22FW104	RJ22FX104
250K	RJ22FL254	RJ22FP254	RJ22FW254	RJ22FX254
500K	RJ22FL504	RJ22FP504	RJ22FW504	RJ22FX504
1 MEG	RJ22FL105	RJ22FP105	RJ22FW105	RJ22FX105

Bourns reserves the right per MIL-R-39035 to substitute a higher grade temperature characteristic or failure rate (QPL) than requested.

Qualified Part Numbers

RJ24 (Commercial Model 3296 for P, W, X; Model 3292 for L)

Standard Values (ohms)	RJ24F_____			
	L	P	W	X
10	RJ24FL100	RJ24FP100	RJ24FW100	RJ24FX100
20	RJ24FL200	RJ24FP200	RJ24FW200	RJ24FX200
50	RJ24FL500	RJ24FP500	RJ24FW500	RJ24FX500
100	RJ24FL101	RJ24FP101	RJ24FW101	RJ24FX101
200	RJ24FL201	RJ24FP201	RJ24FW201	RJ24FX201
500	RJ24FL501	RJ24FP501	RJ24FW501	RJ24FX501
1K	RJ24FL102	RJ24FP102	RJ24FW102	RJ24FX102
2K	RJ24FL202	RJ24FP202	RJ24FW202	RJ24FX202
5K	RJ24FL502	RJ24FP502	RJ24FW502	RJ24FX502
10K	RJ24FL103	RJ24FP103	RJ24FW103	RJ24FX103
20K	RJ24FL203	RJ24FP203	RJ24FW203	RJ24FX203
25K	RJ24FL253	RJ24FP253	RJ24FW253	RJ24FX253
50K	RJ24FL503	RJ24FP503	RJ24FW503	RJ24FX503
100K	RJ24FL104	RJ24FP104	RJ24FW104	RJ24FX104
250K	RJ24FL254	RJ24FP254	RJ24FW254	RJ24FX254
500K	RJ24FL504	RJ24FP504	RJ24FW504	RJ24FX504
1 MEG	RJ24FL105	RJ24FP105	RJ24FW105	RJ24FX105

RJR24 (Commercial Model 3296)

Standard Values (ohms)	RJR24F_____		
	P	W	X
10	RJR24FP100*	RJR24FW100*	RJR24FX100*
20	RJR24FP200*	RJR24FW200*	RJR24FX200*
50	RJR24FP500*	RJR24FW500*	RJR24FX500*
100	RJR24FP101*	RJR24FW101*	RJR24FX101*
200	RJR24FP201*	RJR24FW201*	RJR24FX201*
500	RJR24FP501*	RJR24FW501*	RJR24FX501*
1K	RJR24FP102*	RJR24FW102*	RJR24FX102*
2K	RJR24FP202*	RJR24FW202*	RJR24FX202*
5K	RJR24FP502*	RJR24FW502*	RJR24FX502*
10K	RJR24FP103*	RJR24FW103*	RJR24FX103*
20K	RJR24FP203*	RJR24FW203*	RJR24FX203*
25K	RJR24FP253*	RJR24FW253*	RJR24FX253*
50K	RJR24FP503*	RJR24FW503*	RJR24FX503*
100K	RJR24FP104*	RJR24FW104*	RJR24FX104*
250K	RJR24FP254*	RJR24FW254*	RJR24FX254*
500K	RJR24FP504*	RJR24FW504*	RJR24FX504*
1 MEG	RJR24FP105*	RJR24FW105*	RJR24FX105*

RJ/RJR26 (Commercial Model 3262; Commercial Model 3266 for A & B)

Standard Values (ohms)	RJ26F_____			RJR26F_____				
	P	W	X	P	W	X	A**	B**
10	RJ26FP100	RJ26FW100	RJ26FX100	RJR26FP100*	RJR26FW100*	RJR26FX100*	RJR26FA100*	RJR26FB100*
20	RJ26FP200	RJ26FW200	RJ26FX200	RJR26FP200*	RJR26FW200*	RJR26FX200*	RJR26FA200*	RJR26FB200*
50	RJ26FP500	RJ26FW500	RJ26FX500	RJR26FP500*	RJR26FW500*	RJR26FX500*	RJR26FA500*	RJR26FB500*
100	RJ26FP101	RJ26FW101	RJ26FX101	RJR26FP101*	RJR26FW101*	RJR26FX101*	RJR26FA101*	RJR26FB101*
200	RJ26FP201	RJ26FW201	RJ26FX201	RJR26FP201*	RJR26FW201*	RJR26FX201*	RJR26FA201*	RJR26FB201*
500	RJ26FP501	RJ26FW501	RJ26FX501	RJR26FP501*	RJR26FW501*	RJR26FX501*	RJR26FA501*	RJR26FB501*
1K	RJ26FP102	RJ26FW102	RJ26FX102	RJR26FP102*	RJR26FW102*	RJR26FX102*	RJR26FA102*	RJR26FB102*
2K	RJ26FP202	RJ26FW202	RJ26FX202	RJR26FP202*	RJR26FW202*	RJR26FX202*	RJR26FA202*	RJR26FB202*
5K	RJ26FP502	RJ26FW502	RJ26FX502	RJR26FP502*	RJR26FW502*	RJR26FX502*	RJR26FA502*	RJR26FB502*
10K	RJ26FP103	RJ26FW103	RJ26FX103	RJR26FP103*	RJR26FW103*	RJR26FX103*	RJR26FA103*	RJR26FB103*
20K	RJ26FP203	RJ26FW203	RJ26FX203	RJR26FP203*	RJR26FW203*	RJR26FX203*	RJR26FA203*	RJR26FB203*
25K	RJ26FP253	RJ26FW253	RJ26FX253	RJR26FP253*	RJR26FW253*	RJR26FX253*	RJR26FA253*	RJR26FB253*
50K	RJ26FP503	RJ26FW503	RJ26FX503	RJR26FP503*	RJR26FW503*	RJR26FX503*	RJR26FA503*	RJR26FB503*
100K	RJ26FP104	RJ26FW104	RJ26FX104	RJR26FP104*	RJR26FW104*	RJR26FX104*	RJR26FA104*	RJR26FB104*
200K	—	—	—	RJR26FP204*	RJR26FW204*	RJR26FX204*	RJR26FA204*	RJR26FB204*
250K	RJ26FP254	RJ26FW254	RJ26FX254	RJR26FP254*	RJR26FW254*	RJR26FX254*	RJR26FA254*	RJR26FB254*
500K	RJ26FP504	RJ26FW504	RJ26FX504	RJR26FP504*	RJR26FW504*	RJR26FX504*	RJR26FA504*	RJR26FB504*
1 MEG	RJ26FP105	RJ26FW105	RJ26FX105	RJR26FP105*	RJR26FW105*	RJR26FX105*	RJR26FA105*	RJR26FB105*

*Last letter in number is failure rate level. M = 1.0 %; P = 0.1 %; R = 0.01 %

**Model RJR26FA commercial model is 3266W. Model RJR26FB commercial model is 3266X.

Bourns reserves the right per MIL-PRF-39035 to substitute a higher grade temperature characteristic or failure rate (QPL) than requested.

Qualified Part Numbers

RJ12 (Commercial Model 3059)

Standard Values (ohms)	RJ12F_____	
	P	Y
10	RJ12FP100	RJ12FY100
20	RJ12FP200	RJ12FY200
50	RJ12FP500	RJ12FY500
100	RJ12FP101	RJ12FY101
200	RJ12FP201	RJ12FY201
500	RJ12FP501	RJ12FY501
1K	RJ12FP102	RJ12FY102
2K	RJ12FP202	RJ12FY202
5K	RJ12FP502	RJ12FY502
10K	RJ12FP103	RJ12FY103
20K	RJ12FP203	RJ12FY203
25K	RJ12FP253	RJ12FY253
50K	RJ12FP503	RJ12FY503
100K	RJ12FP104	RJ12FY104
200K	RJ12FP204	RJ12FY204
250K	RJ12FP254	RJ12FY254
500K	RJ12FP504	RJ12FY504
1 MEG	RJ12FP105	RJ12FY105

RJ/RJR50 (Commercial Model 3329)

Standard Values (ohms)	RJ50F_____	RJR50F_____
	P	P
10	RJ50FP100	RJR50FP100*
20	RJ50FP200	RJR50FP200*
50	RJ50FP500	RJR50FP500*
100	RJ50FP101	RJR50FP101*
200	RJ50FP201	RJR50FP201*
500	RJ50FP501	RJR50FP501*
1K	RJ50FP102	RJR50FP102*
2K	RJ50FP202	RJR50FP202*
5K	RJ50FP502	RJR50FP502*
10K	RJ50FP103	RJR50FP103*
20K	RJ50FP203	RJR50FP203*
25K	RJ50FP253	RJR50FP253*
50K	RJ50FP503	RJR50FP503*
100K	RJ50FP104	RJR50FP104*
200K	—	RJR50FP204*
250K	RJ50FP254	RJR50FP254*
500K	RJ50FP504	RJR50FP504*
1 MEG	RJ50FP105	RJR50FP105*

*Last letter in number is failure rate level. M = 1.0 %; P = 0.1 %