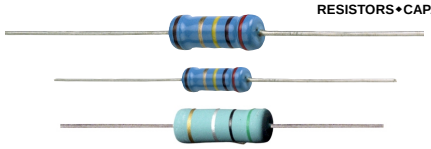
METAL FILM RESISTORS

GP SERIES - Standard
GPS SERIES - Small Size
FP/FPS SERIES - Flameproof

RoHS Term.W is RoHS compliant & 260°C compatible

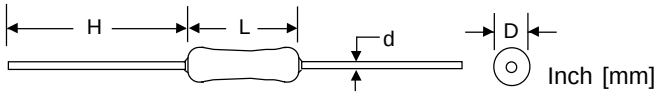


- ❒ Industry's widest range! 10 models, 1/8W to 2W, 1Ω to 22.1MΩ, 0.1% to 5%, 25ppm to 100ppm
- ❒ Miniature GPS Series enables significant space savings
- ❒ Flameproof FP & FPS version meet UL94V-0
- ❒ Wide selection available from stock

OPTIONS

- ❒ Option P: Pulse tolerant design
- ❒ Option ER: 100-hour burn-in (full rated $W_{25°}$)
- ❒ Option 48: Short-time overload screening
- ❒ Numerous design modifications are available - matched sets, TCR tracking, cut & formed leads, increased voltage and temperature ratings, non-magnetic construction, etc.

Precision performance, industry's lowest price!
RCD's GP metal film resistors and FP flameproof version are designed to provide high performance and reliability at low costs. Improved performance over industry standard is achieved via the use of high grade materials combined with stringent process controls. Unlike other manufacturers that lock users into a limited range of "standard products", RCD offers the industry's widest choice of design options, including non-standard resistance values.



SERIES GP & FP SPECIFICATIONS

RCD Type	Watt Rating (70°C)	Max Working Voltage[1]	TC ppm/°C	Standard Resis. Range (custom avail.)			L ± .020 [.5]*	D ± .016 [.4]*	d ± .003 [.08]	H (Min)**	Std. Reel Quantity
				.1% & .25%	0.5%	1% -5%					
GP50, FP50	.125W	200V	25 50 100	100Ω-1M 30Ω-1M 20Ω-1M	50Ω-1M 10Ω-1M 10Ω-1M	40Ω-1M 10Ω-1M 5Ω-10M	.134 [3.4]	.067 [1.7]	.018 [.45]	.98 [25]	5000
GP55, FP55	.25W	250V	25 50 100	51.1Ω-1M 10Ω-1M 1Ω-5.1M	30Ω-1M 10Ω-1M 10Ω-1M	30Ω-1M 10Ω-1M 1Ω-22.1M	.248 [6.3]	.090 [2.3]	.024 [.60]	.98 [25]	5000
GP60, FP60	.50W	350V	25 50 100	100Ω-1M 10Ω-1M 10Ω-1M	50Ω-1M 10Ω-2.2M 10Ω-2.2M	40Ω-1M 10Ω-5M 10Ω-10M	.353 [9.0]	.138 [3.5]	.026 [.65]	.98 [25]	2500
GP65, FP65	1.0W	400V	25 50 100	100Ω-1M 10Ω-1M 10Ω-1M	50Ω-1M 10Ω-3M 10Ω-3M	50Ω-1M 10Ω-3M 10Ω-3M	.455 [11.5]*	.177 [4.5]*	.030 [.75]	1.26 [32]	2000
GP70, FP70	2.0W	500V	25 50 100	100Ω-1M 10Ω-1M 10Ω-1M	50Ω-1M 10Ω-5M 10Ω-5M	50Ω-1M 10Ω-5M 10Ω-5M	.590 [15]*	.195 [5.0]*	.031 [.8]	1.26 [32]	1000

SERIES GPS & FPS SPECIFICATIONS

RCD Type	Watt Rating (70°C)	Max Working Voltage[1]	TC ppm/°C	Standard Resis. Range (custom avail.)			L ± .020 [.5]*	D ± .016 [.4]*	d ± .003 [.08]	H (Min)**	Std. Reel Quantity
				.1% & .25%	0.5%	1% -5%					
GP50S, FP50S	.25W	200V	25 50 100	100Ω-1M 30Ω-1M 20Ω-1M	50Ω-1M 10Ω-1M 10Ω-1M	40Ω-1M 10Ω-1M 5Ω-10M	.134 [3.4]	.067 [1.7]	.018 [.45]	.98 [25]	5000
GP52S, FP52S	.4W	200V	25 50 100	100Ω-1M 30Ω-1M 20Ω-1M	50Ω-1M 10Ω-1M 10Ω-1M	40Ω-1M 10Ω-1M 10Ω-2.4M	.134 [3.4]	.067 [1.7]	.020 [.5]	.98 [25]	5000
GP55S, FP55S	.5W	250V	25 50 100	51.1Ω-1M 10Ω-1M 1Ω-5.1M	30Ω-1M 10Ω-1M 10Ω-1M	30Ω-1M 10Ω-1M 1Ω-22.1M	.248 [6.3]	.090 [2.3]	.024 [.60]	.98 [25]	5000
GP56S, FP56S	.6W	250V	25 50 100	51.1Ω-1M 10Ω-1M 1Ω-5.1M	30Ω-1M 10Ω-1M 10Ω-1M	30Ω-1M 10Ω-1M 1Ω-22.1M	.248 [6.3]	.090 [2.3]	.024 [.60]	.98 [25]	5000
GP60S, FP60S	1W	350V	25 50 100	100Ω-1M 10Ω-1M 10Ω-1M	50Ω-1M 10Ω-2.2M 10Ω-2.2M	40Ω-1M 10Ω-5M 10Ω-10M	.353 [9.0]	.138 [3.5]*	.028 [.7]	.98 [25]	2500

[1] Working voltage = $(PR)^{1/2}$, voltage level not to exceed the maximum value listed. Increased ratings available
* Tolerance is ±.032 [.8] on GP65, FP65, GP70, FP70 length, ±.024 [.6] on GP65, FP65, GP70,FP70, GP60S, FP60S body diameter
**Lead length dimensions are for bulk packaged parts, taped parts may be shorter (refer to taping spec)

TYPICAL PERFORMANCE CHARACTERISTICS

Environmental Test	GP/FP (Standard)	GPS /FPS (Mini)
Short Time Overload	0.25%	0.5%
Resis. to Solder Heat	0.05%	0.05%
Moisture Resistance*	0.3% (FP=0.6%)	0.3% (FPS=0.6%)
1000 Hour Load Life	0.5%	1%
Temperature Cycling	0.2%	0.2%
Low Temp Operation	0.1%	0.1%
Noise	0.1uV/V	
Voltage Coefficient	5ppm/V	
Derating	Derate W and V by 1.11%/°C above 70°C	
Operating Temperature	-55°C to +160°C	
Flame Retardancy	GP&GPS = UL94V-1, FP&FPS = UL94V-0	
Dielectric Strength	500V (GP& FP50/50S/52S=300V)	

* To ensure utmost reliability, care should be taken to avoid potential sources of ionic contamination.

P/N DESIGNATION:

GP55S ❒ - 1002 - F T ❒ W

Type: GP or FP (flameproof)

Option Codes: P, ER, 48 (leave blank if standard)

Resis.Code 2%-5%: 2 signif. figures & multiplier (1R0=1Ω, 100=10Ω, 101=100Ω, 102=1K, 103=10K, 104=100K, 105=1M, 106=10M)
Resis.Code 0.1%-1%: 3 sig. figures &multiplier, (1R00=1Ω, 10R0=10Ω, 1000=100Ω, 1001=1K, 1002=10K, 1003=100K, 1004=1M, 1005=10M)

Tolerance Code: J=5%, G=2%, F=1%, D=0.5%, C=0.25%, B=0.1% (1% is standard)

Packaging: B = Bulk, T = Tape & Reel

TC Options: 50=50ppm, 25=25ppm, leave blank for standard TC (100ppm 10Ω to 1M, 200ppm <10Ω or >1M)

Termination: W= Lead-free, Q= Tin/Lead (leave blank if either is acceptable, in which case RCD will select based on lowest price and quickest delivery)

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FA020B Sale of this product is in accordance with GF-061. Specifications subject to change without notice.