

# MICRO-MINIATURE FILM RESISTORS



RESISTORS • CAPACITORS • COILS • DELAY LINES

## MFA SERIES



### FEATURES

- ❑ Subminiature size results in significant space savings, enabling high density circuits
- ❑ Wide resistance range: 1Ω to 10MΩ
- ❑ Standard tolerances: ±1%, 2%, 5%, 10% (±0.5% available)
- ❑ Excellent high frequency performance
- ❑ Excellent environmental performance
- ❑ Available with cut & formed leads

### World's smallest axial-lead resistors!

RCD Series MFA resistors were originally developed for use in aerospace requirements but have found numerous uses in industrial and medical applications, including hearing aids and high-frequency circuits. MFA1/10 & MFA1/20 are color banded, MFA1/16 is stamped with 3-digit resistance code.

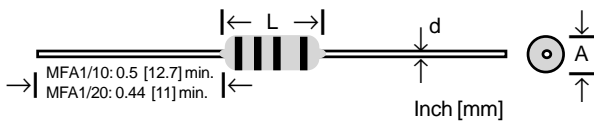


Figure 1: MFA1/10 & MFA1/20

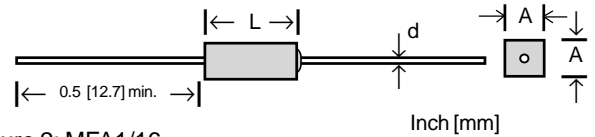


Figure 2: MFA1/16

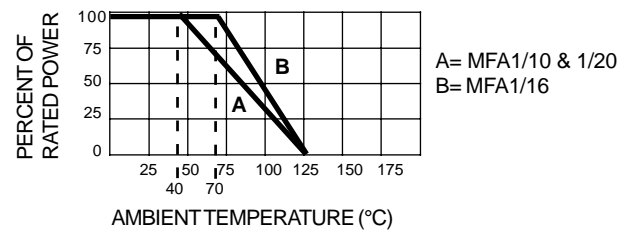
### DIMENSIONS & ELECTRICAL RATINGS

RCD Type	Figure	Wattage Rating	Max. Voltage	Resistance Range				L ± .024 [.6]	A ± .008 [.2]	d ± .002 [.05]
				1% Tol.	2% Tol.	5% Tol.	10% Tol.			
MFA1/20	1	.05W @40°C	60V	100Ω - 1M	100Ω - 1M	1Ω - 10M	1Ω - 10M	.090 [2.3]	.030 [.76]	.008 [.2]
MFA1/16	2	.063W@70°C	50V	-	-	10Ω - 2.4M	2Ω - 10M	.075 [1.9]	.036 [.91]	.008 [.2]
MFA1/10	1	.10W@40°C	100V	-	51Ω - 390K	10Ω - 1M	1Ω - 4.7M	.130 [3.3]	.044[1.1]	.012 [.3]

### TYPICAL PERFORMANCE

Thermal Shock (-55° to +125°C)	0.2% ΔR
Short Time Overload (2.5x W, 5S, NTE 2x rated V)	1% ΔR
Low Temp. Operation (-55°C, 100 Hrs)	0.5% ΔR
High Temp. Exposure (125°C, 100hrs)	0.5% ΔR
Temperature Coefficient	250ppm/°C (available to 25ppm)
Resistance to Solder Heat	0.2% ΔR
Moisture Resistance	2% ΔR
Load Life(1000 hrs.)	1.0% ΔR, 5% Max.
Operating Temperature	-55 to +125°C
Dielectric Strength	200V
Voltage Coefficient	10ppm/volt
Insulation Resistance	100Mohm

### DERATING



### P/N DESIGNATION:

**MFA1/20 - 1001 - F B W**

**RCD Type** \_\_\_\_\_

**Resis. Value:** 4 digit code if tol. is 0.5% or 1%  
(1R00=1Ω, 10R0=10Ω, 1000=100Ω, 1001=1KΩ)  
3 digit code if tol. is 2% or greater (1R0=1Ω, 100=10Ω,  
101=100Ω, 102=1KΩ, 103=10K, 104=100K, 105=1M)

**Tolerance:** D=0.5%, F=1%, G=2%, J=5%

**Packaging:** B=Bulk, T=T&R (MFA1/10 only)

**Termination:** W= Lead-free, Q= Tin/Lead (leave blank if either is acceptable)