

M Series Trimmer Capacitors

AIR DIELECTRIC TRIMMER CAPACITORS, RoHS COMPLIANT

DESCRIPTION

Air dielectric
 Rated voltage 200 VDC
 Low temperature coefficient
 Low capacitance drift
 Very stable over time
 High Q factor
 Multi-turn, high resolution
 High ratio quality/price
 Self-locking constant torque drive mechanism
 Terminations are **silver plated**
ROHS compliant
Maximum Soldering Temperature 260°C, 3 s Max



APPLICATIONS

Commercial and high volume applications
 Filters for CATV, NTT
 Broadcasting
 Sensors
 Security doors

I. ELECTRICAL SPECIFICATIONS

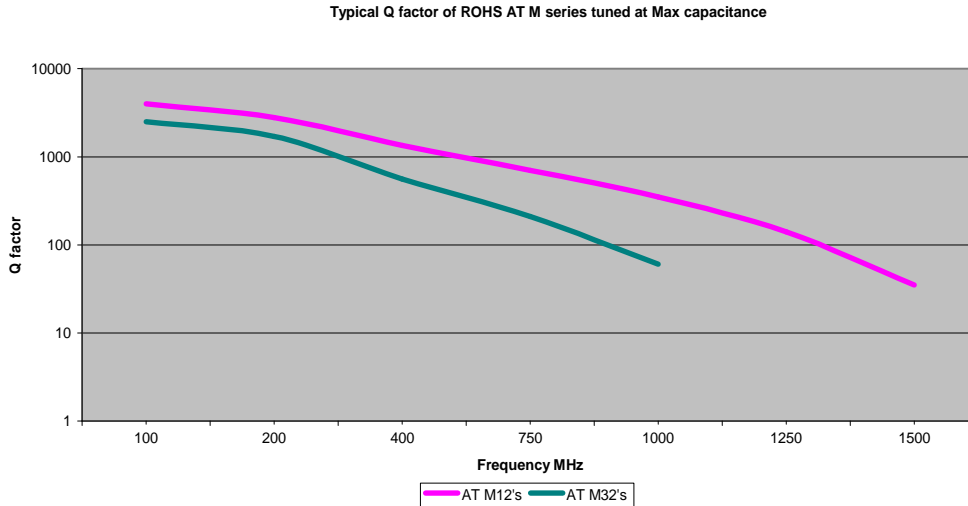
P/N	AT M120 ROHS AT M121 ROHS AT M122 ROHS AT M123 ROHS	AT M220ROHS AT M221 ROHS AT M222 ROHS AT M223 ROHS	AT M320 ROHS AT M321 ROHS AT M322 ROHS AT M323 ROHS	AT M420 ROHS AT M421 ROHS AT M422 ROHS AT M423 ROHS
Capacitance range	1.2 to 7.0 pF >7 turns	0.9 to 7.5 pF >7 turns	1.0 to 10.0 pF >7 turns	1.4 to 14 pF >7 turns
Working Voltage	200 VDC			
Test Voltage	400 VDC			
Working Temp. range	-40°C to +85°C			
Temp. Coefficient	50+/-50 ppm/°C	0+/-50 ppm/°C	0+/- 50 ppm/°C	0+/-50 ppm/°C
Setting drift	< 1%			
Q factor @ 100 MHz	>2000	>2000	> 2500	> 2500
Insulation Resistance	>10000 MΩ			

Capacitance change is linear versus rotation of mobile rotor.

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II. QUALITY FACTOR

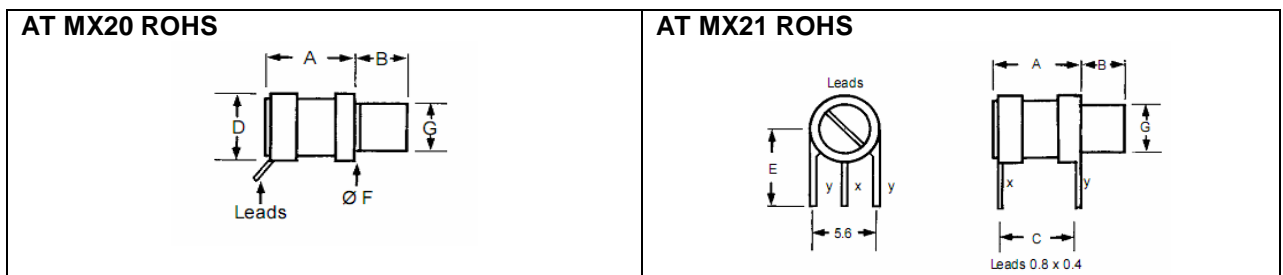


III. MECHANICAL & GENERAL SPECIFICATIONS

P/N	AT M120 ROHS AT M121 ROHS AT M122 ROHS AT M123 ROHS	AT M220 ROHS AT M221 ROHS AT M222 ROHS AT M223 ROHS	AT M320 ROHS AT M321 ROHS AT M322 ROHS AT M323 ROHS	AT M420 ROHS AT M421 ROHS AT M422 ROHS AT M423 ROHS
Rotating torque	70 to 350 g.cm			
Max torque on rotor stop	500 g.cm			
Rotational life	> 600 revolutions			
Vibrations	60g, 10-2000 Hz			
Shocks	100g, 6ms			

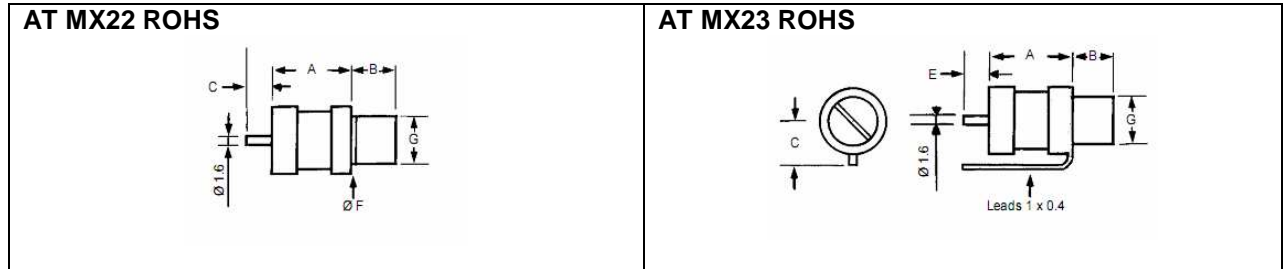
AT M series trimmer capacitors, panel mount version, models AT MX20 ROHS and AT MX22 ROHS are available with a threaded bushing 15/64-64 UNS and with 7mm hexagonal nut, 1 mm thick. To order such model add suffix THR to the reference.

IV. MODELS



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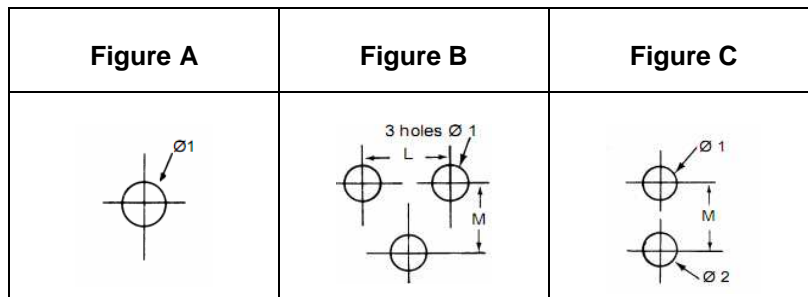


Terminals are silver plated
 Custom designs available upon request

V. DIMENSIONS in mm

P/N	A	B	C	D	E	F	G
AT M120 ROHS	7.8	4.6		7.0		Φ 6, h=0.5	5.8
AT M121 ROHS	8.2	4.2	7.6	7.0	7.9		5.8
AT M122 ROHS	7.2	4.6	2.8	7.0		Φ 6, h=0.5	5.8
AT M123 ROHS	7.6	4.2	5.2	7.0	2.8		5.8
AT M220 ROHS	8.1	4.6		7.0		Φ 6, h=0.5	5.8
AT M221 ROHS	8.5	4.2	7.9	7.0	7.9		5.8
AT M222 ROHS	7.8	4.6	2.8	7.0		Φ 6, h=0.5	5.8
AT M223 ROHS	8.2	4.2	5.2	7.0	2.8		5.8
AT M320 ROHS	8.1	4.6		7.0		Φ 6, h=0.5	5.8
AT M321 ROHS	8.5	4.2	7.9	7.0	7.9		5.8
AT M322 ROHS	7.8	4.6	2.8	7.0		Φ 6, h=0.5	5.8
AT M323 ROHS	8.2	4.2	5.2	7.0	2.8		5.8
AT M420 ROHS	8.1	4.6		7.0		Φ 6, h=0.5	5.8
AT M421 ROHS	8.5	4.2	7.9	7.0	7.9		5.8
AT M422 ROHS	7.8	4.6	2.8	7.0		Φ 6, h=0.5	5.8
AT M423 ROHS	8.2	4.2	5.2	7.0	2.8		5.8

VI. SUGGESTED MOUNTING HOLES AND SOLDERING



Models	Figure	Φ1	Φ2	L	M
AT M120 ROHS, AT M220 ROHS, AT M320 ROHS, AT M420 ROHS	A	6.2			
AT M121 ROHS	B	1.3		5.6	7.6
AT M221 ROHS, AT M321 ROHS, AT M421 ROHS	B	1.3		5.6	7.9
AT M122 ROHS, AT M222 ROHS, AT M322 ROHS, AT M422 ROHS	A	6.2			
AT M123 ROHS, AT M223 ROHS, AT M323 ROHS, AT M423 ROHS	C	1.3	1.7		5.2

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Hand soldering: Use a temperature controlled 40 watts iron set at 260°C maximum. The solder joint should be made on 3 seconds or less.

VII. RECOMMENDATIONS FOR CLEANING

Delivered without sealing cap, M Series Trimmer Capacitors have to be installed after circuit board have been cleaned.

VIII. PACKAGING

Parts are delivered in bulk.

IX. HOW TO ORDER

Standards AT M series trimmer capacitors

	Reference	RoHS
Examples	AT M122	ROHS
	AT M423	ROHS

AT M series trimmer capacitors, panel mount version, models AT MX20 ROHS and AT MX22 ROHS with a threaded bushing 15/64-64 UNS and with 7mm hexagonal nut, 1 mm thick.

	Reference	THR	ROHS
Examples	AT M 122	THR	ROHS
	AT M 220	THR	ROHS

X. TUNING TOOL

Recommended Tuning Tool reference is **AT 8777**
Improper screwdriver size will cause internal thread damage.

XI. ADJUSTING

The maximum torque on rotor stop value should not be exceeded or damage to capacitor may result. Always use the recommended tuning tool.