

Thin-Trim® Trimmers 9701 Series

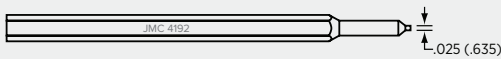
The Thin-Trim® 9701 Series capacitors are an advanced development in miniaturized trimmers for applications in circuits where size and performance are critical. These one-half turn ceramic capacitors feature high Q performance up to 2GHz and beyond.

The 9701 Series construction incorporates a butterfly electrode pattern that provides a series parallel capacitor with extremely low ESR and ESL. Knowles' square drive tuning mechanism ensures captive, non-slip, tamper-proof adjustments, eliminating backlash problems.

CHARACTERISTICS

Rated voltage: 250 VDC (test voltage 500 VDC)

- Insulation resistance: $>10^4$ M Ω
- Operating temperature range: -55°C to +125°C
- Torque: 0.05 to 0.5 oz. in.
- Vibration: 15g, 10-2000 Hz
- Shock: 100g, 6 milliseconds
- Setting drift: <1%
- Moisture resistance: MIL-STD-202, Method 106
- Resistant to soldering heat: MIL-STD-202, Method 210, Test C
- Solderability: MIL-STD-202, Method 208
- Resistant to cleaning solvents: MIL-STD-202, Method 215
- RoHS compliant



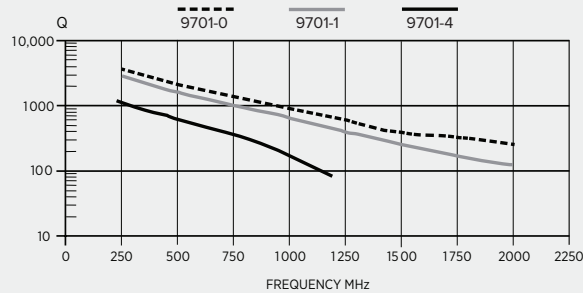
JMC Square Drive Tuning Tool 4192

APPLICATIONS

- RF Amplifier
- LC Filters and Networks
- Broadband Wireless LAN
- Medical Devices
- Cordless and Cellular phones
- DR/Crystal Oscillators
- Microstrip Line Filters

PACKAGING

- Tape and reel available for SL products
- Add suffix to JMC P/N for reel packaging
- R1 = 1,500 pieces, R4 = 6,000 pieces

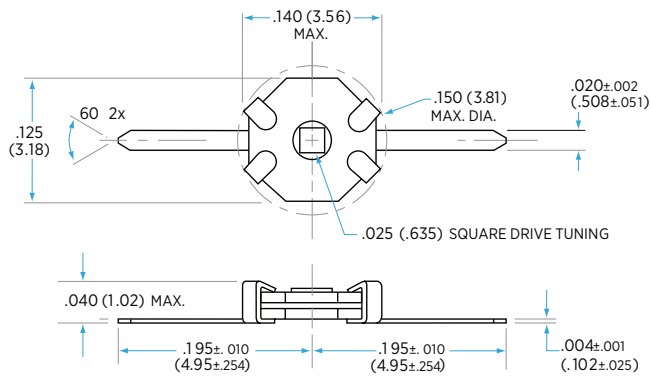


Series	Disk Size	Capacitance	Tuning Resolution	Min. Q @ 100 MHz	Drawing Figure
9701-0	0.125" (3.18mm)	0.25 to 0.7pF	90°	>1000	A
9701-0SL-1					B
9701-0SL-1B					E
9701-0SL-2					F
9701-0PC					D
9701-1					A
9701-1SL-1		B			
9701-1SL-1B		E			
9701-1SL-2		F			
9701-1PC		D			
9701-2		A			
9701-2SL-1		B			
9701-2SL-1B		E			
9701-2SL-2		F			
9701-2PC		D			
9701-4		1.5 to 4.0pF			A
9701-4SL-1					B
9701-4SL-1B					E
9701-4SL-2	F				
9701-4PC	D				

Thin-Trim® Trimmers 9701 Series Continued

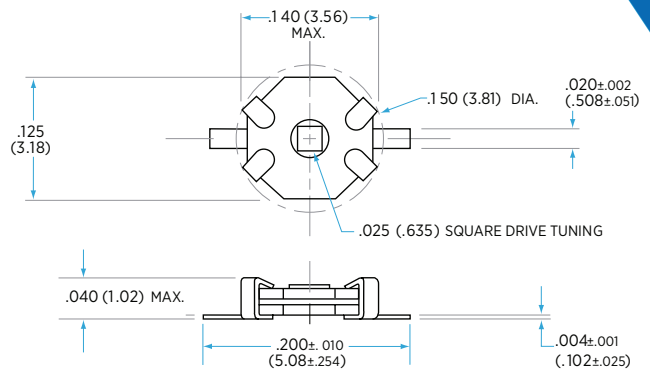


FIGURE A



Dimensions: inches (mm)

FIGURE B



Dimensions: inches (mm)

FIGURE C

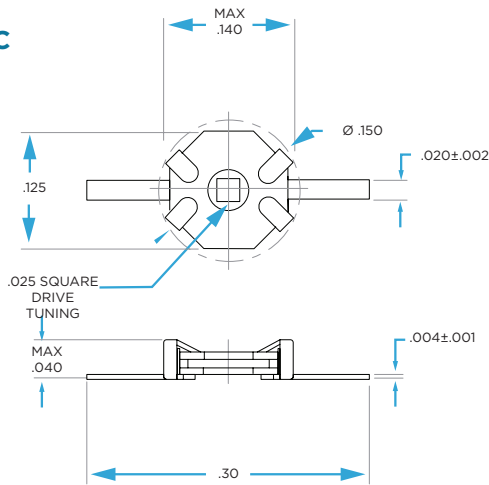


FIGURE E

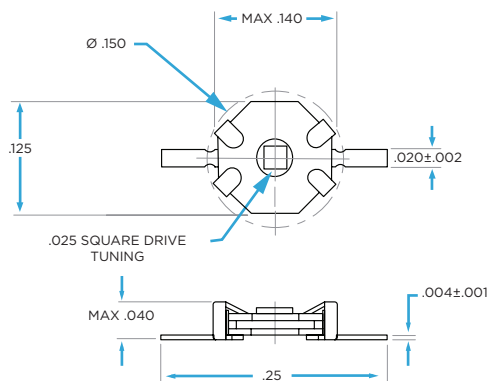


FIGURE D

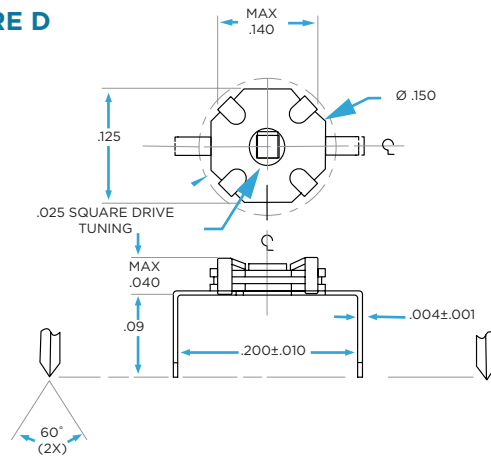
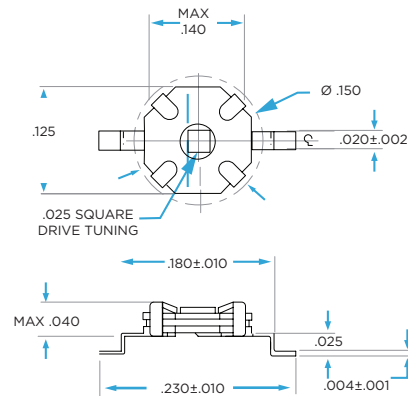


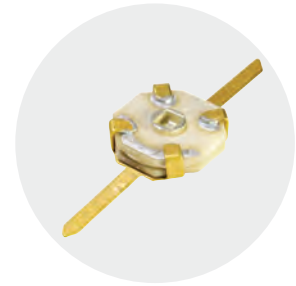
FIGURE F



Thin-Trim® Trimmers 9702 and 9710 Series

Thin-Trim® 9702 and 9710 Series capacitors are an advanced development in miniaturized trimmer capacitors for applications in circuits where size and performance are critical.

The Thin-Trim® capacitor embodies a radical reduction in size and weight over standard ceramic capacitors, with a proportional improvement in electrical characteristics. The capacitor consists of a metallic rotor suspended under spring pressure between two metalized dielectric disks. In addition to physically securing the assembly, the springs serve as both the internal electrical connection and the external terminals, simplifying the construction and further reducing size. The incorporation of the Johanson square drive tuning mechanism ensures captive, non-slip, tamper-proof adjustments that are not subject to backlash problems associated with screwdriver type adjustments.



CHARACTERISTICS

Rated voltage: 250 VDC (test voltage 500 VDC)

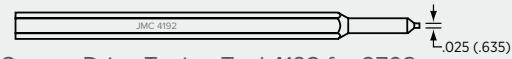
- Insulation resistance: $>10^4$ M Ω
- Operating temperature range: -55°C to +125°C
- Torque: 0.05 to 1.0 oz. in. for 9702 0.2 to 2.0 oz. in. for 9710
- Vibration: 15g, 10-2000 Hz
- Shock: 100g, 6 milliseconds
- Setting drift: <1%
- Moisture resistance: MIL-STD-202, Method 106
- Resistant to soldering heat: MIL-STD-202, Method 210, Test C
- Solderability: MIL-STD-202, Method 208
- Resistant to cleaning solvents: MIL-STD-202, Method 215

APPLICATIONS

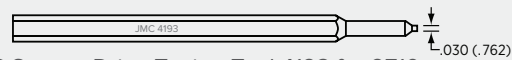
- RF Amplifier
- LC Filters and Networks
- Broadband Wireless LAN
- Medical Devices
- Cordless and Cellular phones
- DR/Crystal Oscillators
- Microstrip Line Filters

PACKAGING

- Tape and reel available for 9702-SL and 9710-SL products
- Add suffix to JMC P/N for reel packaging
- 9710-SL R7 = 3,000 pieces

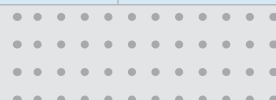


JMC Square Drive Tuning Tool 4192 for 9702



JMC Square Drive Tuning Tool 4193 for 9710

Series	Disk Size	Capacitance	Tuning Resolution	Min. Q @ 100 MHz	Color Code	Drawing Figure
9702-0	0.125" (3.18mm)	0.5 to 2.5pF	180°	3000	Red	A
9702-0SL-1	0.125" (3.18mm)					B
9702-1	0.125" (3.18mm)	1.0 to 5.0pF		1000	Black	A
9702-1SL-1	0.125" (3.18mm)					B
9702-2	0.125" (3.18mm)	2.5 to 10pF		1000	Blue	A
9702-2SL-1	0.125" (3.18mm)					B
9702-4	0.125" (3.18mm)	3.0 to 12pF		500	Brown	A
9702-4SL-1	0.125" (3.18mm)					B
9702-6	0.125" (3.18mm)	8.0 to 25pF		300	Yellow	A
9702-6SL-1	0.125" (3.18mm)					B
9702-8	0.125" (3.18mm)	5.0 to 15pF		750	None	A
9702-8SL-1	0.125" (3.18mm)					B
9702-9	0.125" (3.18mm)	7.0 to 18pF		500	Grey	A
9702-9SL-1	0.125" (3.18mm)					B
9710-0	0.125" (3.18mm)	1.0 to 4.5pF		1000	Red	C
9710-0SL-1	0.200" (5.08mm)					D
9710-1	0.200" (5.08mm)	2.5 to 10pF		1000	Black	C
9710-1SL-1	0.200" (5.08mm)					D
9710-2	0.200" (5.08mm)	4.0 to 18pF		700	Blue	C
9710-2SL-1	0.200" (5.08mm)					D
9710-3	0.200" (5.08mm)	6.0 to 35pF		200	Orange	C
9710-3SL-1	0.200" (5.08mm)					D
9710-4	0.200" (5.08mm)	7.0 to 40pF		200	Brown	C
9710-4SL-1	0.200" (5.08mm)					D
9710-5	0.200" (5.08mm)	10.0 to 50pF	200	Green	C	
9710-5SL-1	0.200" (5.08mm)				D	
9710-25	0.200" (5.08mm)	5.0 to 25pF	200	Yellow	C	
9710-25SL-1	0.200" (5.08mm)				D	



Thin-Trim® Trimmers 9702 and 9710 Series



FIGURE A

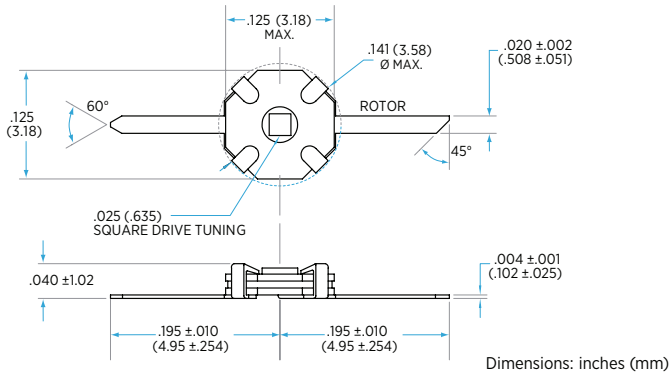


FIGURE B

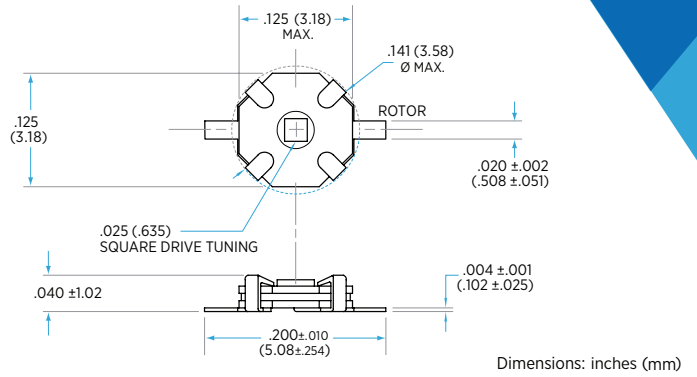


FIGURE C

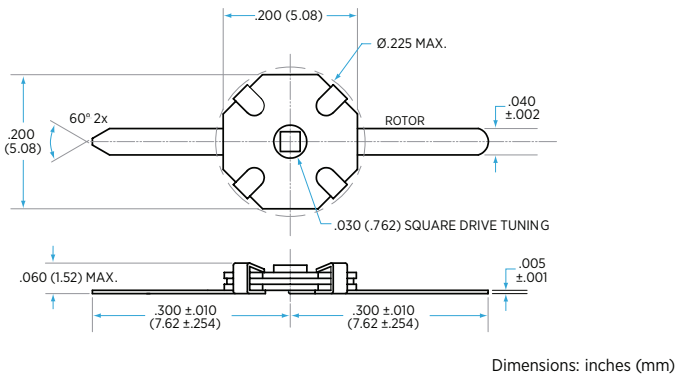
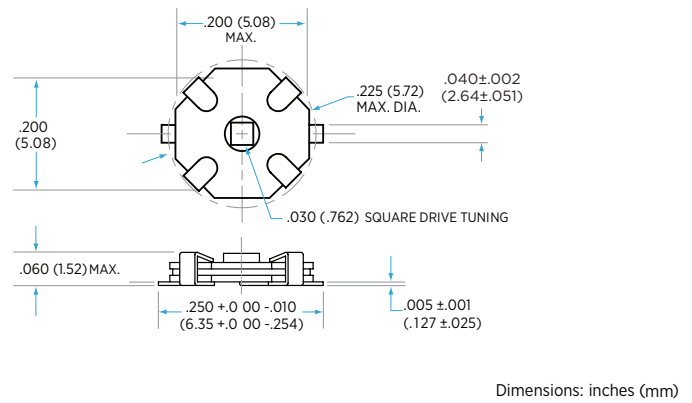
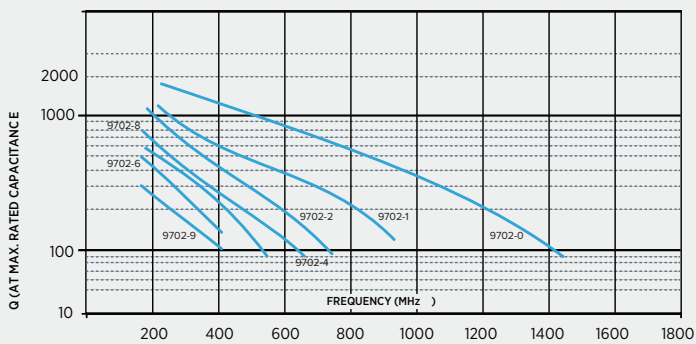


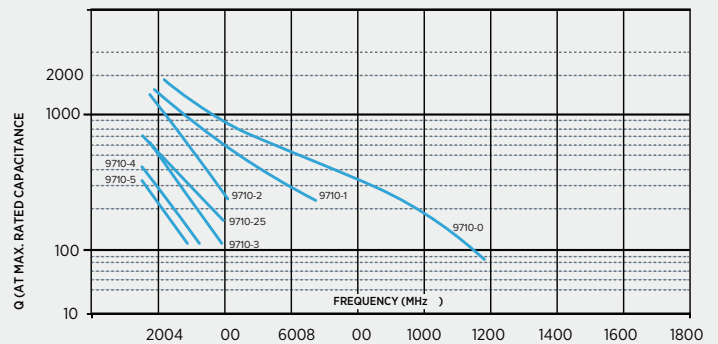
FIGURE D



Q VS. FREQUENCY 9702 SERIES

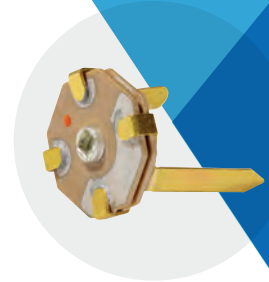


Q VS. FREQUENCY 9710 SERIES



Thin-Trim® Trimmers

9900 Series



Series	Disk Size	Capacitance	Tuning Resolution	Min. Q @ 100 MHz	Color Code	Drawing Figure	
9911	0.300" (7.62mm)	1.65 to 17pF	180°	>3000	Black	E	
9911PC						F	
9912		6.0 to 25pF			>2000	Blue	E
9912PC							F
9912SL-2							G
9914		7.5 to 50pF				>1000	Brown
9914PC				F			
9914SL-2		G					
9917		20.0 to 90pF		White	E		
9917PC					F		
9917SL-2					G		
9918		20.0 to 100pF		White	E		
9918PC	F						

FIGURE E

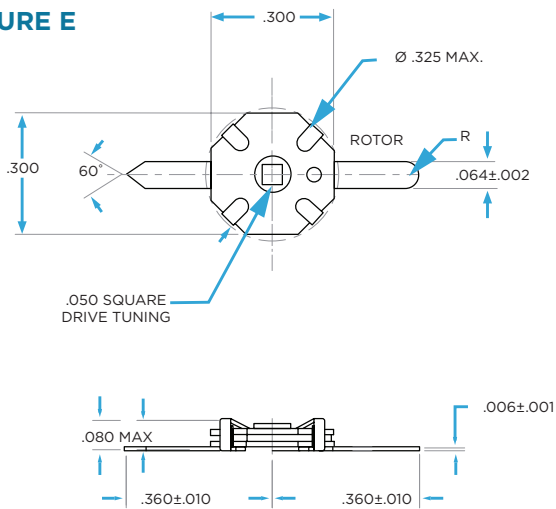


FIGURE F

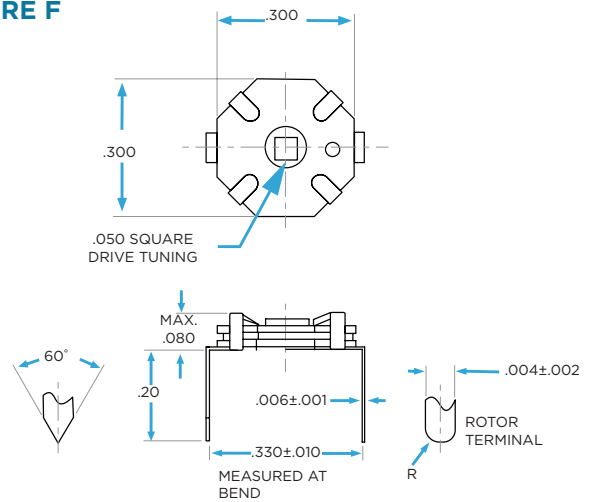


FIGURE G

