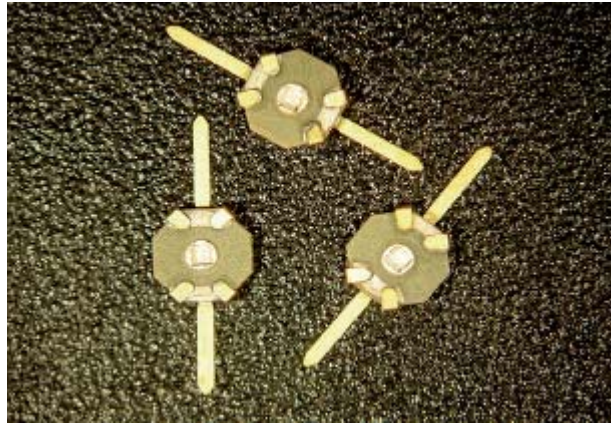


THIN CERAMIC TRIMMER CAPACITORS AT 9401G RoHS SERIES

SURFACE MOUNT TRIMMER CAPACITORS, RoHS COMPLIANT

Description

Miniaturized trimmers
 Performance up to 2 GHz and beyond
 Very small size and weight
 Ceramic dielectric
 Rated voltage 250 VDC
 Low capacitance drift , very stable over time
 Extremely low ERS and ESL
 High resonance frequency and very good Q
 Terminations are **gold plated**
 Delivered on tape and reel (SL1 version)
ROHS compliant
Max Soldering Temperature 260°C, 10s Max



Applications

RF amplifier, Filter networks
 Military and Avionics equipment
 Medical devices
 DR/Crystal Oscillators
 Broadband wireless LAN, Antenna tuning
 Telemetry

I. Electrical Specifications

P/N	AT 9401G-0 RoHS	AT 9401G-1 RoHS	AT 9401G-2 RoHS	AT 9401G-4 RoHS
	AT 9401G-0 SL1 RoHS	AT 9401G-1 SL1RoHS	AT 9401G-2 SL1 RoHS	AT 9401G-4 SL1 RoHS
Capacitance range (pF)	0.25 => 0.7	0.5 => 1.3	0.6 => 2.0	1.5 => 4.0
Working Voltage (Vdc)	250			
Withstanding Voltage (Vdc)	500			
Working Temp. range	-55°C to +125°C			
Temp. Coeff. (ppm/°C)	50±50	NPO±100	-400±200	-1100±300
Setting drift	< 1%			
Typical Q @ 100 MHz, CMax	>1000	>1000	>1000	>500
Insulation Resistance (MΩ)	10000 min			

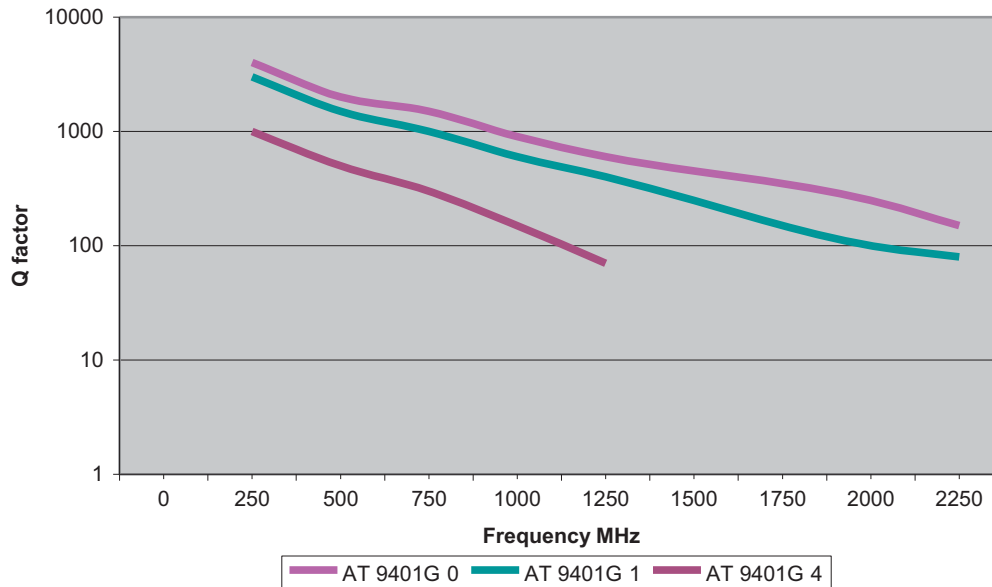
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THIN CERAMIC TRIMMER CAPACITORS AT 9401G RoHS SERIES

SURFACE MOUNT TRIMMER CAPACITORS, RoHS COMPLIANT

II. Typical Q factor

Typical Q factor of AT 9401G ROHS series tuned at Max capacitance



III. Mechanical and general specifications

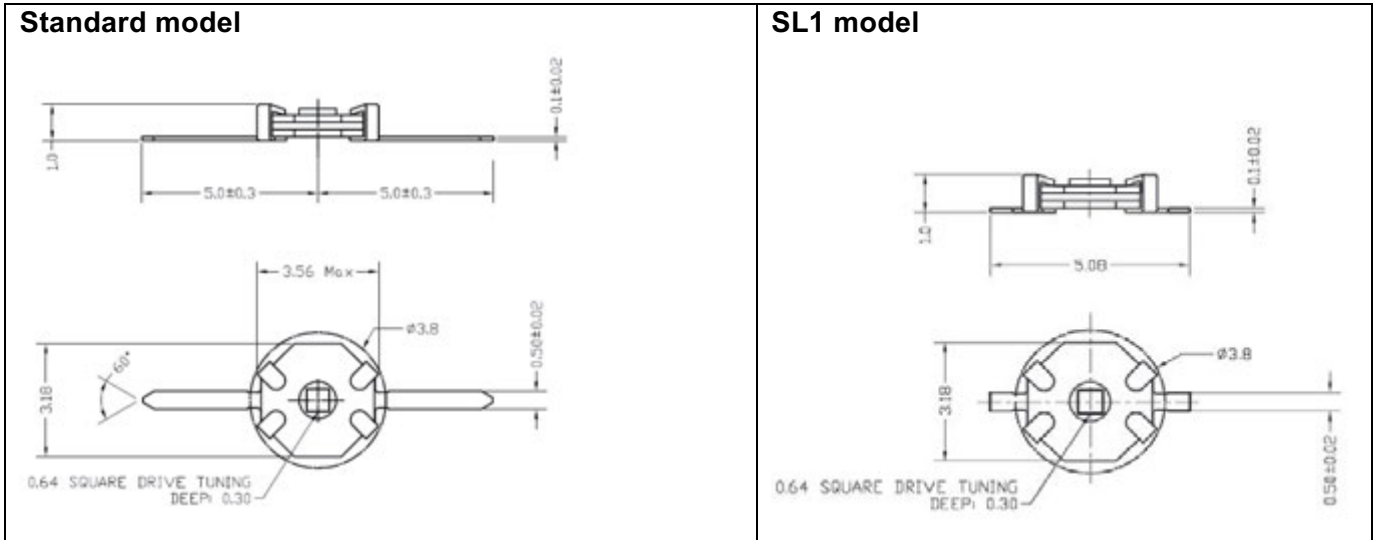
P/N	AT 9401G-0 RoHS AT 9401G-0 SL1 RoHS	AT 9401G-1 RoHS AT 9401G-1 SL1 RoHS	AT 9401G2 RoHS AT 9401G-2 SL1 RoHS	AT 9401G-4 RoHS AT 9401G-4 SL1RoHS
Rotating torque (cN.cm)	5 to 70			
Shock	100g @ 6 ms			
Vibration	15g @ 10-2000 Hz			
Moisture resistance	MIL-STD-202, Method 106			

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THIN CERAMIC TRIMMER CAPACITORS AT 9401G RoHS SERIES

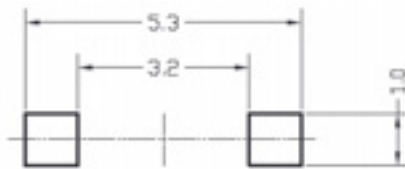
SURFACE MOUNT TRIMMER CAPACITORS, RoHS COMPLIANT

IV. Outline dimensions



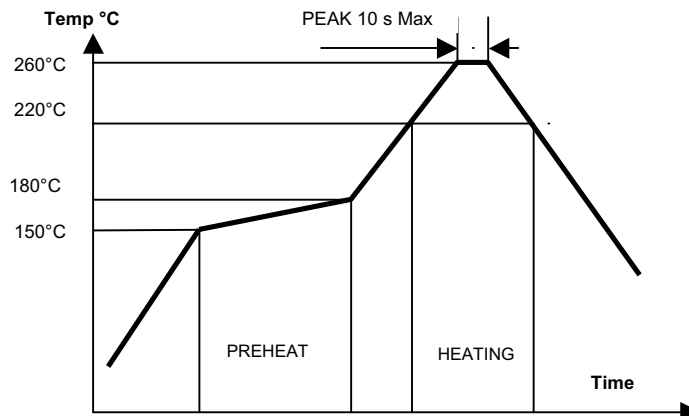
V. Soldering

Typical solder pad layout for SL1 model



Recommended reflow solder temperature profile

Maximum Soldering Temperature 260°C MAX



THIN CERAMIC TRIMMER CAPACITORS AT 9401G RoHS SERIES

SURFACE MOUNT TRIMMER CAPACITORS, RoHS COMPLIANT

VI. Packaging

Parts delivered :

Standard model: in bulk

SL1 model: in bulk for quantity lower than 1.5 kp
on tape and reel in 12 mm width carrier tape in quantities of 1500 p on 7 inches reel

VII. How to order

Standard model and SL1 model in qty < 1.5 kp

Reference ROHS

Examples AT 9401G-1 ROHS
AT 9401G-0 SL1 ROHS

SL1 model on tape and reel : Reference R3 ROHS

Example AT 9401G-4 SL1 R3 ROHS Qty 1.5 kp

VIII. Tuning tool

Tuning Tool reference: AT 4192

IX. Recommendation for cleaning

SMD Thin AT 9401G ROHS series are compatible with a wide variety of cleaning process including those that utilize aqueous or semi-aqueous solutions, alcohol solutions, de-ionized water and numerous other cleaners. However, due to the large variety of such processes, the customer through cleaning process evaluation in conjunction with TEMEX-CERAMICS product purchased must determine actual compatibility. SMD Thin AT 9401G ROHS series capacitors should be cleaned in contamination free solution. If rough torque occurs after cleaning, re-clean in fresh solution.

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SMD THIN CERAMIC TRIMMER CAPACITORS AT 9402G & AT 9410G RoHS SERIES

SURFACE MOUNT TRIMMER CAPACITORS, RoHS COMPLIANT

Description

Miniaturized trimmers
 Thin profile
 Very small size and weight
 Ceramic dielectric
 Rated voltage 250 VDC
 Low capacitance drift, very stable over time
 Very good Q
 Terminations are **gold plated**
 Delivered on tape and reel (SL1 version)
ROHS compliant
Non magnetic models
Max Soldering Temperature 260°C, 10s
Max



Applications

RF amplifier, Filter networks
 DR/Crystal Oscillators
 Military and Avionics equipment
 Broadband wireless LAN, Antenna tuning
 Medical devices
 Telemetry

I. Electrical specifications

I.1 AT 9402G ROHS series

P/N	AT 9402G-0 ROHS	AT 9402G-1 ROHS	AT 9402G-2 ROHS	AT 9402G-4 ROHS	AT 9402G-6 ROHS	AT 9402G-8 ROHS	AT 9402G-9 ROHS
	AT 9402G-0 SL1 ROHS	AT 9402G-1 SL1 ROHS	AT 9402G-2 SL1 ROHS	AT 9402G-4 SL1 ROHS	AT 9402G-6 SL1 ROHS	AT 9402G-8 SL1 ROHS	AT 9402G-9 SL1 ROHS
From below	0.5	1.0	2.5	3.0	8.0	5.0	7.0
Capacitance range (pF)							
To above	2.5	5.0	10.0	12.0	25.0	15.0	18.0
Working Voltage (VDC)	250 VDC						
Test Voltage (VDC)	500 VDC						
Working Temp. range	55°C to +125°C						
Temp. Coeff. (ppm/°C)	100+/- 100	100+/- 200	50+/- 100	1100+/- 300	1100+/- 300	300+/- 300	450+/- 300
Setting drift	< 1%						
Typical Q@100 MHz, CMax	3000	1000	1000	500	300	750	500
Insulation Resistance (MΩ)	10000 min						

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SMD THIN CERAMIC TRIMMER CAPACITORS AT 9402G & AT 9410G RoHS SERIES

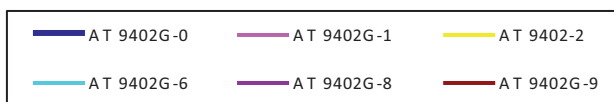
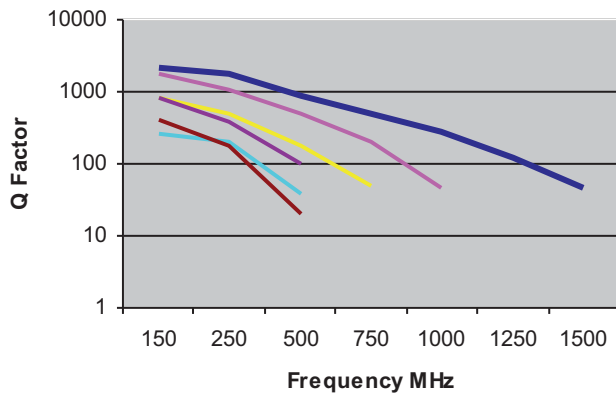
SURFACE MOUNT TRIMMER CAPACITORS, RoHS COMPLIANT

I.2 AT 9410G ROHS series

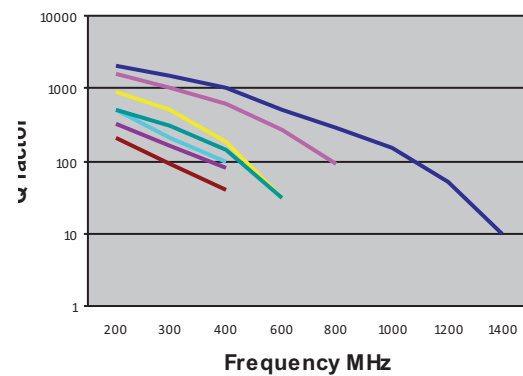
P/N	AT 9410G-0 ROHS	AT 9410G-1 ROHS	AT 9410G-2 ROHS	AT 9410G-3 ROHS	AT 9410G-4 ROHS	AT 9410G-5 ROHS	AT 9410G-25 ROHS
	AT 9410G-0 SL1 ROHS	AT 9410G-1 SL1 ROHS	AT 9410G-2 SL1 ROHS	AT 9410G-3 SL1 ROHS	AT 9410G-4 SL1 ROHS	AT 9410G-5 SL1 ROHS	AT 9410G-25 SL1 ROHS
From below Capacitance range (pF) To above	1.0 4.5	2.5 10.0	4.0 18.0	6.0 35.0	7.0 40.0	10.0 50.0	5.0 25.0
Working Voltage (VDC)	250 VDC						
Test Voltage (VDC)	500 VDC						
Working Temp. range	55°C to +125°C						
Temp. Coeff. (ppm/°C)	50+/- 50	100+/- 200	400+/- 200	1100+/- 300	1100+/- 300	1500+/- 500	NPO+/- 150
Setting drift	< 1%						
Typical Q@100 MHz, CMax	1000	1000	700	200	200	200	200
Insulation Resistance (MΩ)	10000 min						

II. Typical Q factor

Typical Q factor of AT 9402G ROHS series tuned at Max capacitance



Typical Q factor of AT 9410G ROHS series tuned at Max capacitance



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SMD THIN CERAMIC TRIMMER CAPACITORS AT 9402G & AT 9410G RoHS SERIES

SURFACE MOUNT TRIMMER CAPACITORS, RoHS COMPLIANT

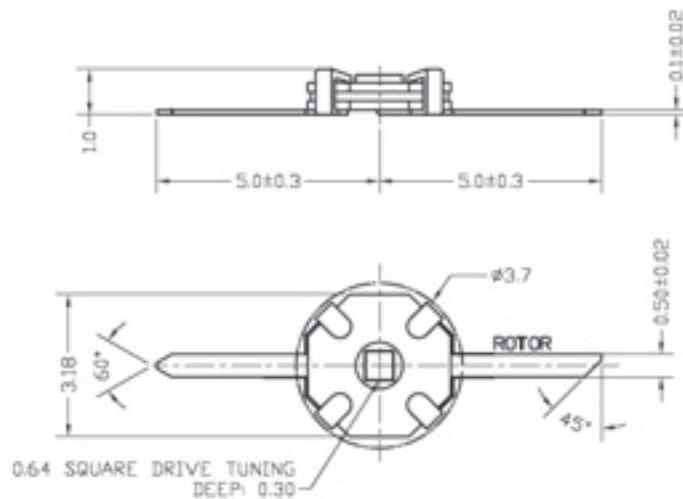
III. Mechanical and general specifications

P/N	AT 9402G ROHS Series	AT 9410G ROHS Series
Rotating torque (cN.cm)	5 to 70	14 to 140
Shock	100g @ 6ms	
Vibration	15g @ 10 200 Hz	
Moisture resistance	MIL STD 202, Method 106	

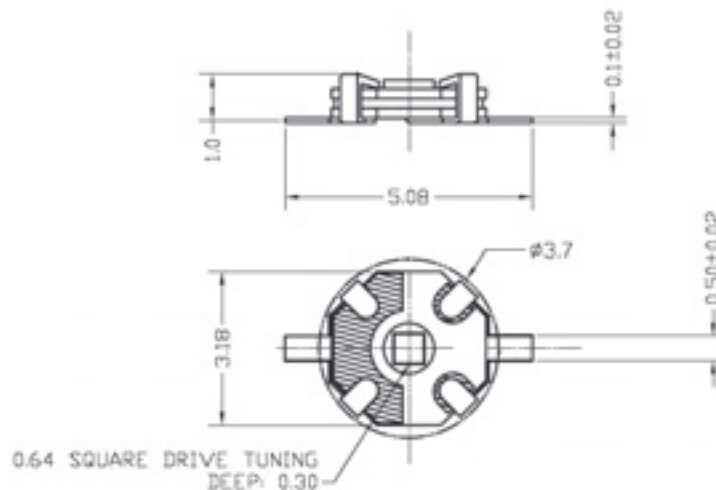
IV. Outline Dimensions

IV-1. AT 9402G series

Standard model



SL1 model



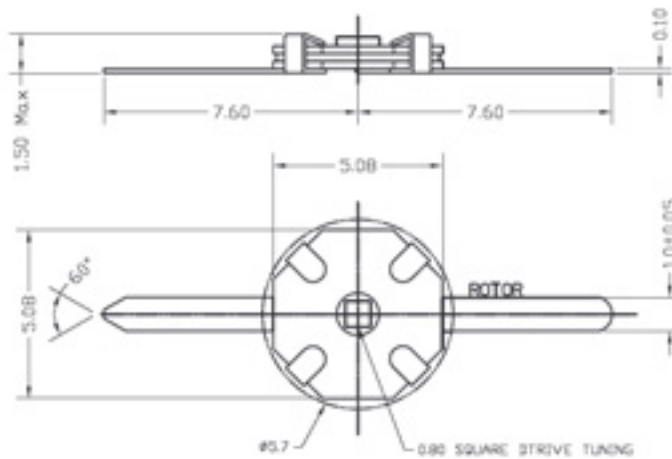
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SMD THIN CERAMIC TRIMMER CAPACITORS AT 9402G & AT 9410G RoHS SERIES

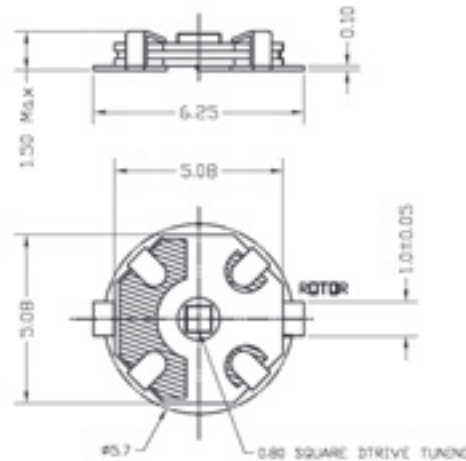
SURFACE MOUNT TRIMMER CAPACITORS, RoHS COMPLIANT

IV-2. AT 9410G series

Standard model

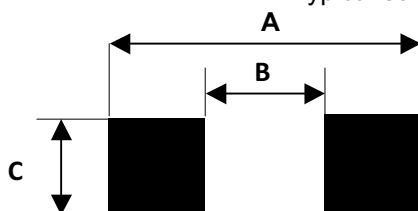


SL1 model



V. Soldering

Typical solder pad layout for SL1 model



Dim in mm	AT 9402G SL1	AT 9410G SL1
A	5.3	6.6
B	3.2	5.3
C	1.0	1.5

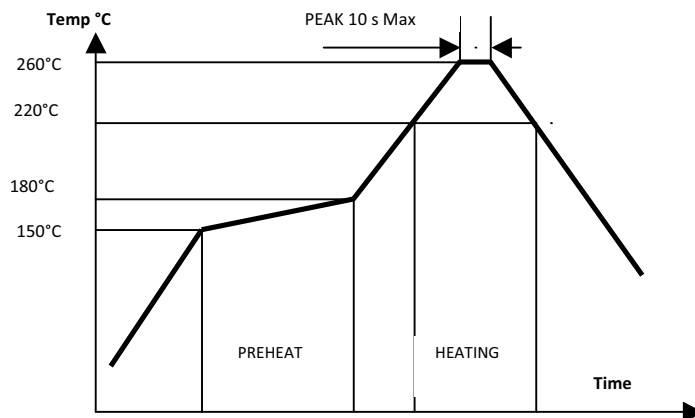
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SMD THIN CERAMIC TRIMMER CAPACITORS AT 9402G & AT 9410G RoHS SERIES

SURFACE MOUNT TRIMMER CAPACITORS, RoHS COMPLIANT

Recommended reflow solder temperature profile

Maximum Soldering Temperature 260°C MAX



VI. Packaging

VI-1. AT 9402G series

Standard model: in bulk

SL1 model: in bulk for quantity lower than 1.5 kp
on tape and reel in 12 mm width carrier tape in quantities of 1500 p on 7 inches reel

VI-2. AT 9410G series

Standard model: in bulk

SL1 model: in bulk for quantity lower than 3.0 kp
on tape and reel in 24 mm width carrier tape in quantities of 3000 p on 13 inches reel

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SMD THIN CERAMIC TRIMMER CAPACITORS AT 9402G & AT 9410G RoHS SERIES

SURFACE MOUNT TRIMMER CAPACITORS, RoHS COMPLIANT

VII. How to order

Standard model and SL1 model in qty < 1.5 kp for AT 9402G SL1 and qty < 3.0 kp for AT 9410G SL1

	Reference	ROHS
Examples	AT 9402G-1	ROHS
	AT 9410G-5 SL1	ROHS
AT 9402G SL1 model on tape and reel :	Reference	R3 ROHS
Example for Qty 1.5 kp	AT 9402G-4 SL1	R3 ROHS
AT 9410G SL1 model on tape and reel :	Reference	R7 ROHS
Example for Qty 3.0 kp	AT 9410G-2 SL1	R7 ROHS

VIII. Tuning tool

Tuning Tool reference: AT 4192 for AT 9402G series
AT 4193 for AT 9410G series

IX. Recommendations for cleaning

SMD Thin AT 9402G ROHS and AT 9410G ROHS series are compatible with a wide variety of cleaning process including those that utilize aqueous or semi-aqueous solutions, alcohol solutions, de-ionized water and numerous other cleaners. However, due to the large variety of such processes, the customer through cleaning process evaluation in conjunction with EXXELIA TEMEX product purchased must determine actual compatibility. SMD Thin AT 9401G ROHS and AT 9410G ROHS series capacitors should be cleaned in contamination free solution. If rough torque occurs after cleaning, re-clean in fresh solution.