

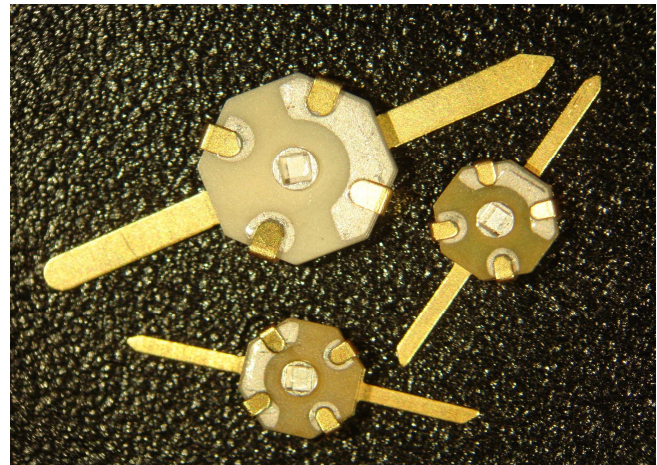
SMD Thin Ceramic Trimmer Capacitors

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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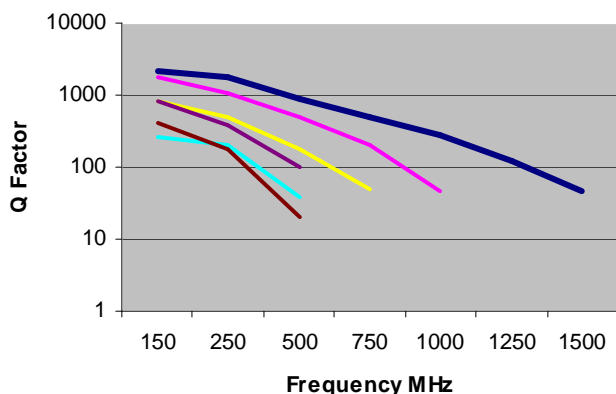
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I.2 AT 9410G ROHS series

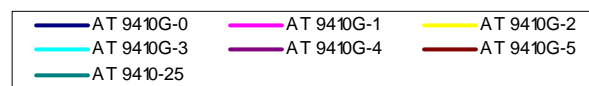
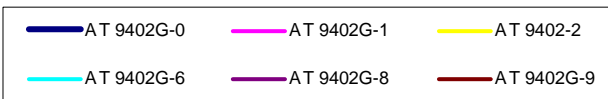
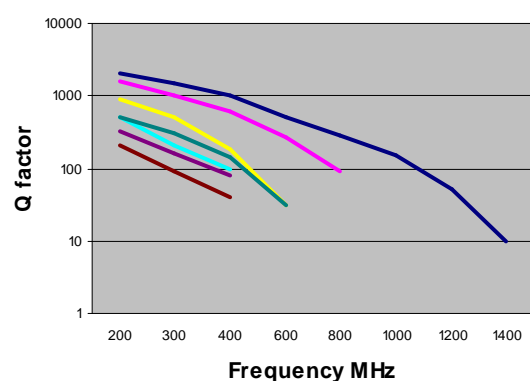
P/N	AT 9410G-0 ROHS	AT 9410G-1 ROHS	AT 9410G-2 ROHS	AT 9410G-3 ROHS	AT 9410G-4 ROHS	AT 9410G-5 ROHS	AT 9410G-25 ROHS
	AT 9410G-0 SL1 ROHS	AT 9410G-1 SL1 ROHS	AT 9410G-2 SL1 ROHS	AT 9410G-3 SL1 ROHS	AT 9410G-4 SL1 ROHS	AT 9410G-5 SL1 ROHS	AT 9410G-25 SL1 ROHS
From below	1.0	2.5	4.0	6.0	7.0	10.0	5.0
Capacitance range (pF)							
To above	4.5	10.0	18.0	35.0	40.0	50.0	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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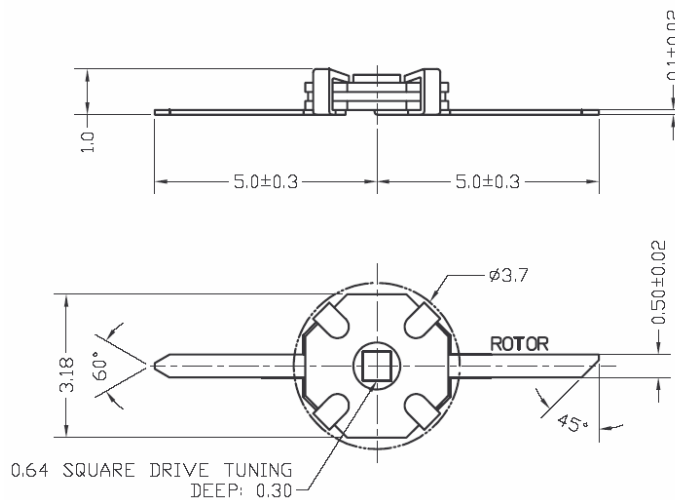
III. MECHANICAL & GENERAL SPECIFICATIONS

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	

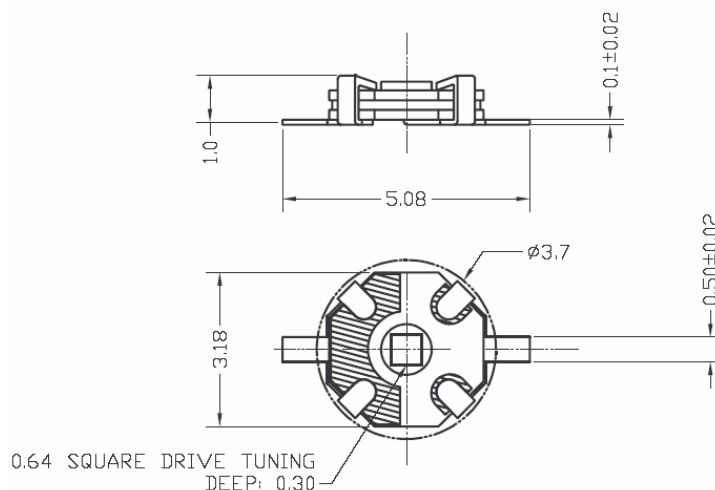
IV. OUTLINE DIMENSIONS

IV-1 AT 9402G series

Standard model



SL1 model



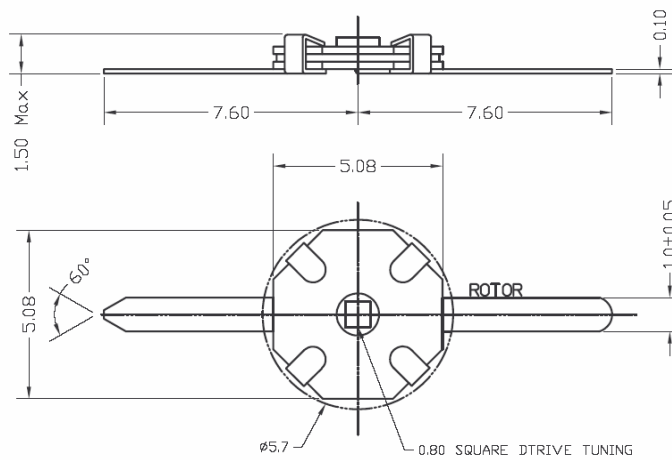
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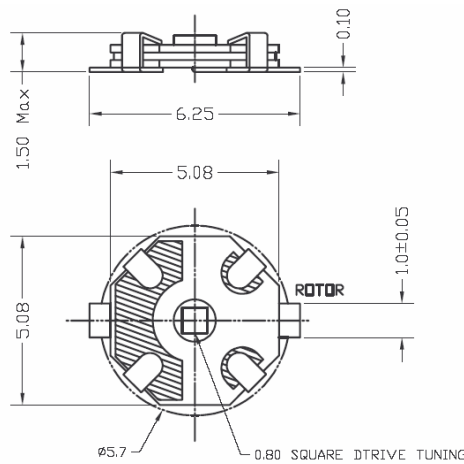
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IV-2 AT 9410G series

Standard model

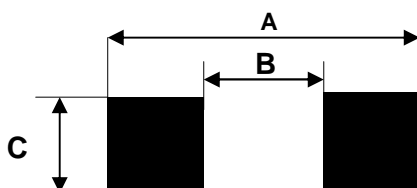


SL1 model



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

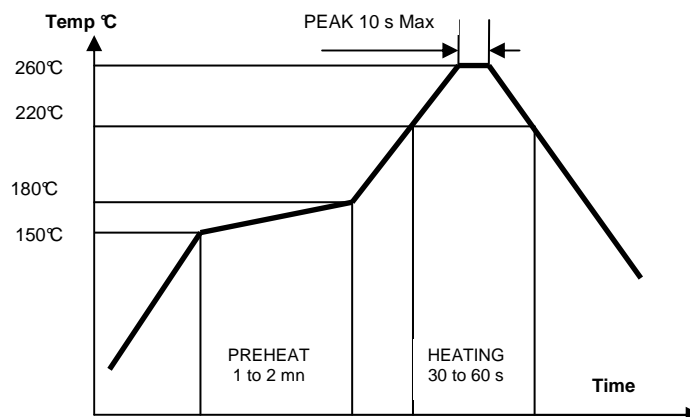
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Recommended reflow solder temperature profile

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-1 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

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

TEMEX – CERAMICS, PARC INDUSTRIEL BERSOL 1, VOIE ROMAINE, 33600 PESSAC, France
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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 TEMEX-CERAMICS 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.