

# THERMISTORS/RESISTORS

## RESISTOR NETWORKS

### RGLD & RGSD SERIES

**Murata**

*Innovator in Electronics*



Murata's thick film resistor networks are designed to meet a variety of application requirements in a compact, highly reliable package. Considerable production economies are also realized during board assembly since only one component, consisting of many resistors, has to be inserted in the PC board. Moreover, it is possible to assemble resistor networks consecutively with .10 inch pitch mounting holes. Our RGLD Series is also compatible with all standard DIP package heights with a maximum seated height of just 5.0mm.

Quality is monitored and controlled in accordance with TQC (Total Quality Concepts) inspection. The AQL is .25% for value and tolerance at 25°C and visual marking (major) attributes. Dimension is .65% AQL and general workmanship is 2.5% AQL.

Murata welcomes the opportunity to aid in the design of resistor network modules to meet specific requirements within the overall capabilities described in this catalog.

#### DIMENSIONS: mm

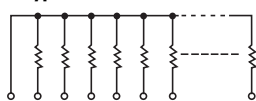
$L \text{ max.}$   
 $2.5 \text{ max.}$   
 $H \text{ max.}$   
 $0.5$   
 $0.25$   
 $3.5 \pm 0.5$   
 $P \times (\text{number of Pins} - 1) \pm 0.3$   
 $P = 2.54 \pm 0.2$

	Circuit	Type	Number of Pins (Number of Resistors)	Power Ratings Each Resistor (W)	Max. Operating Voltage (V)	Dimensions	
						L	H
	Common Circuit	X	4(3) ~ 13(12)	1/8	100	10.1 ~ 33.0	5.0
	Isolated Circuit	Y	6(3), 8(4), 10(5), 12(6), 14(7)			15.5 ~ 35.5	
	Even Pin Voltage Divider	M	7(6), 9(8), 11(10), 13(12)			17.6 ~ 33.0	
	Dual Terminator Circuit	Z	6(8), 7(10), 8(12), 9(14), 10(16)	1/32		15.1 ~ 27.8	6.3
	Ladder Circuit	L	6(8), 7(10), 8(12), 9(14), 10(16) 11(18)				

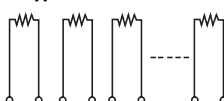
#### SPECIFICATIONS

##### AVAILABLE CIRCUITS

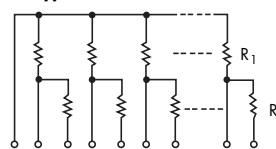
##### X Type



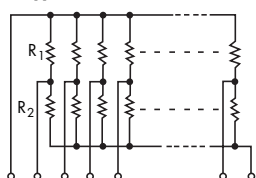
##### Y Type



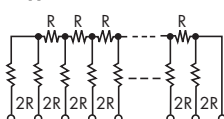
##### M Type



##### Z Type

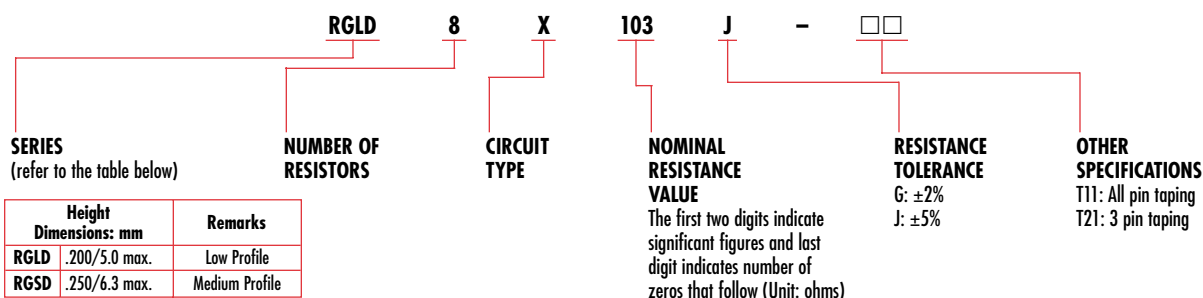


##### L Type



Custom R-Networks are also available. Contact Murata Electronics.

#### PART NUMBERING SYSTEM



\*Applicable in North American market only. \*Applicable in European market only.

For more detailed information regarding this product line in North America, see Catalog No. C-22-C. To receive additional information on Murata Products call 1-800-831-9172.

For more detailed information regarding this product line in Europe, see Catalog No. N16E-6.

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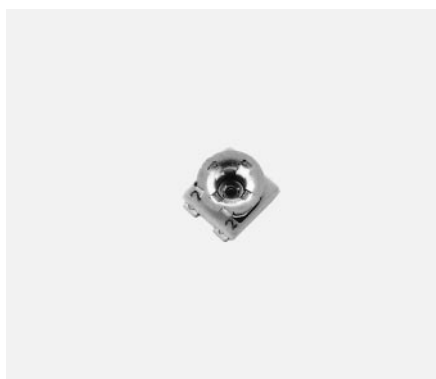
# THERMISTORS/RESISTORS

## TRIMMER POTENTIOMETERS

### POZ3 SERIES

**Murata**

*Innovator in Electronics*



#### FEATURES

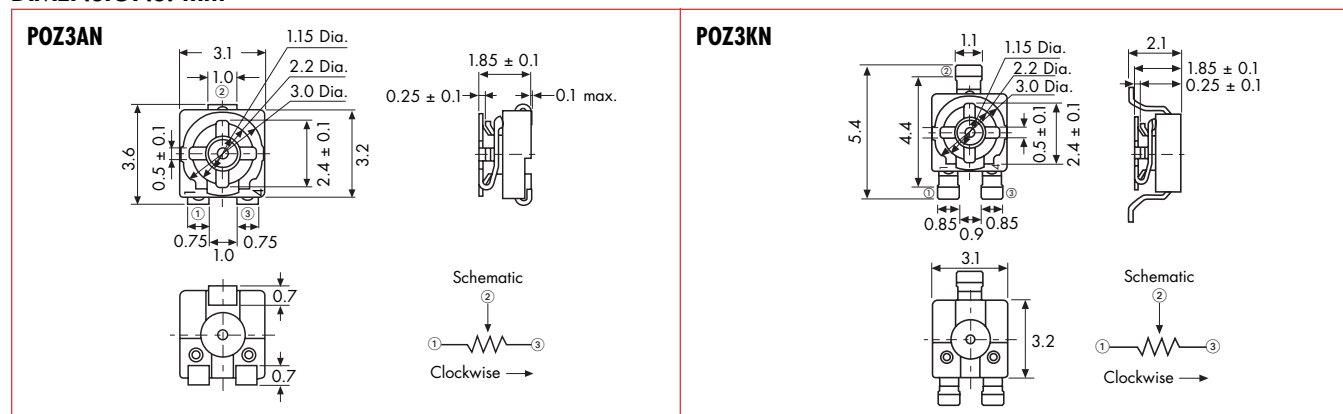
- Single-turn carbon; square; 3.1mm package
- Excellent solderability characteristics are achieved via special plating techniques on each termination.
- Specially designed substrate prevents wicking of flux onto the top of the part
- Enlarged bottom termination enhances soldering strength while reducing the necessary land area required promoting high-density PCB mounting

- Funnel shaped, adjustment slot allows for in-process automatic adjustment

#### APPLICATIONS

- Cordless telephones
- CD-players
- CD-ROMs
- Car stereos
- TFT-LCD TV sets
- Headphone stereos
- Radar detectors

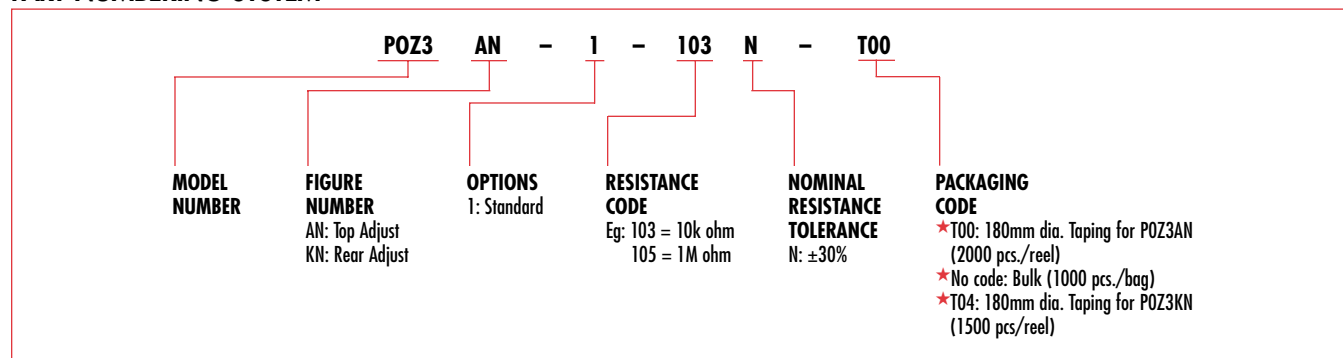
#### DIMENSIONS: mm



#### SPECIFICATIONS

Item	POZ3AN	POZ3KN
Standard Resistance Range	200Ω ~ 2MΩ (1, 2, 3, 5 step)	
Resistance Tolerance	±30%	
Taper	B (Linear)	
Power Rating	1/10W (50°C)	
Maximum Working Voltage	50VDC	
Operating Temperature Range	-25°C ~ +85°C	
Rotational Torque	2.0 ~ 19.6mNm (20 ~ 200gf • cm)	
Effective Rotational Angle	230° ± 10°	

#### PART NUMBERING SYSTEM



\*POZ3 Series available as standard through authorized Murata Electronics Distribution on TAPE ONLY. ▲Applicable in North American market only. ▼Applicable in European market only.  
For more detailed information regarding this product line in North America, see Catalog No. C-22-C. To receive additional information on Murata Products call 1-800-831-9172.  
For more detailed information regarding this product line in Europe, see Catalog No. R50E-7.



# THERMISTORS/RESISTORS TRIMMER POTENTIOMETERS RVG3 SERIES

**muRata**

*Innovator in Electronics*



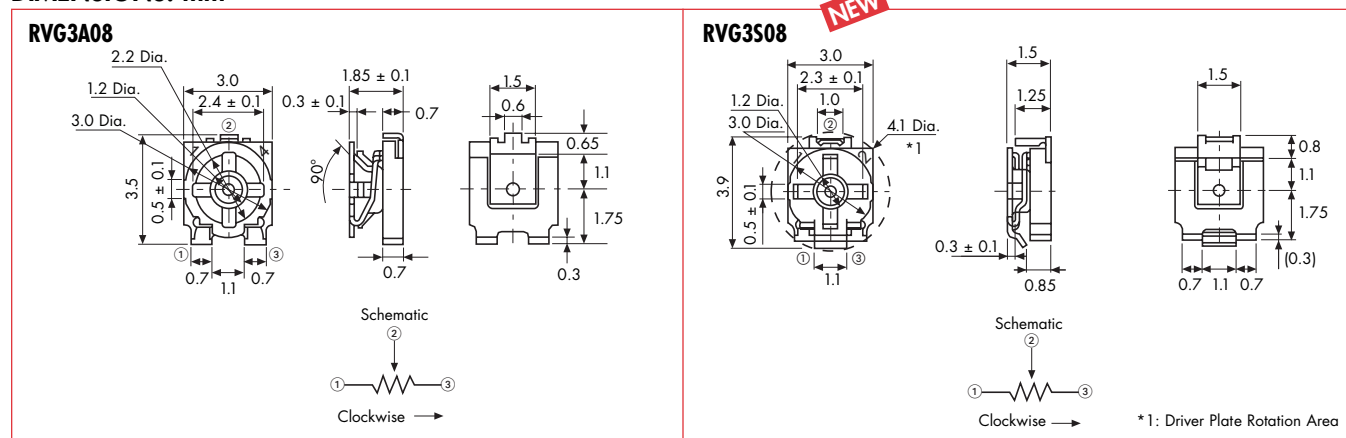
## FEATURES

- Single-turn cermet; square; 3.0mm package
- Funnel shaped slot allows for in-process automatic adjustment providing superior adjustability, (RVG3A08 Series).
- Miniature package allows high density PCB mounting
- Plated termination achieves a high resistance to solder leaching.
- Recommended for both reflow and flow soldering method. (Need cleaning for flow soldering method.)

## APPLICATIONS

- Camcorders
- Video disk players
- TFT-LCD TV sets
- Headphone stereos
- Cordless telephones
- Micro-motors
- Optical cameras
- Car stereos

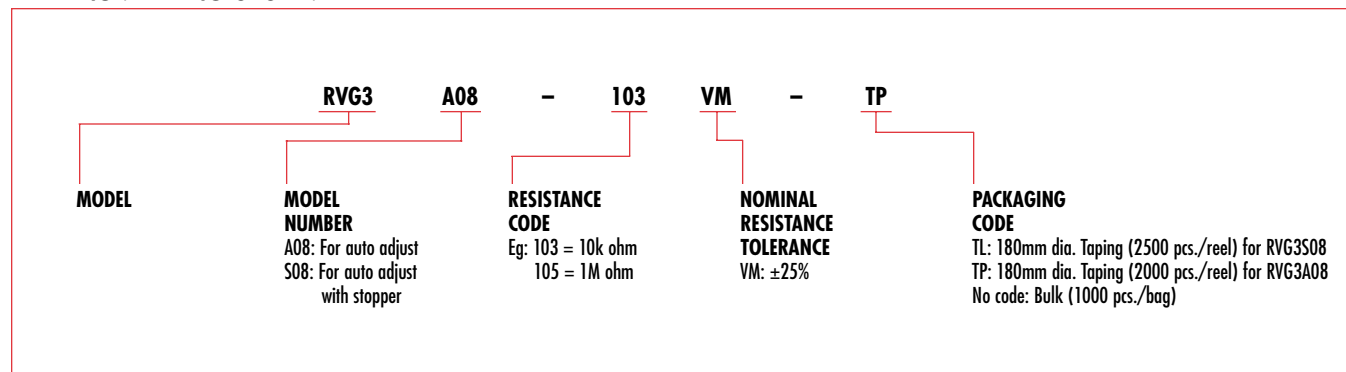
## DIMENSIONS: mm



## SPECIFICATIONS

Item	
Standard Resistance Range	100Ω ~ 2MΩ (1, 2, 3, 5 step)
Resistance Tolerance	±25%
Taper	B (Linear)
Power Rating	1/10W (70°C)
Maximum Working Voltage	50VDC
Operating Temperature Range	-55°C ~ +125°C
Rotational Torque	2.0 ~ 24.5mNm (20 ~ 250gf • cm)
Effective Rotational Angle	270° ± 10°

## PART NUMBERING SYSTEM



\*Applicable in North American market only. \*Applicable in European market only.

For more detailed information regarding this product line in North America, see Catalog No. C-22-C. To receive additional information on Murata Products call 1-800-831-9172.

For more detailed information regarding this product line in Europe, see Catalog No. R50E-7.

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# THERMISTORS/RESISTORS TRIMMER POTENTIOMETERS RVG4M SERIES



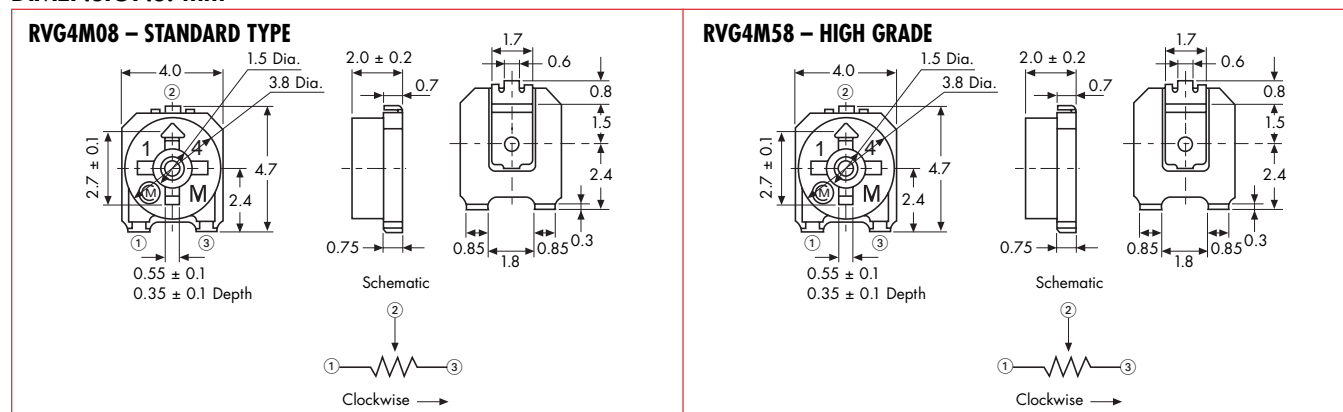
## FEATURES

- Single-turn cermet; square; 4.0mm package
- Available for flow and reflow soldering method while maintaining unique sealed construction
- Simple 3 part construction achieves high reliability
- Available for cleaning after soldering
- Plated termination achieves a high resistance to solder leaching.
- High grade version is available (RVG4M58)

## APPLICATIONS

- FDDs
- HDDs
- Measuring equipment
- Encoders
- Professional use cameras

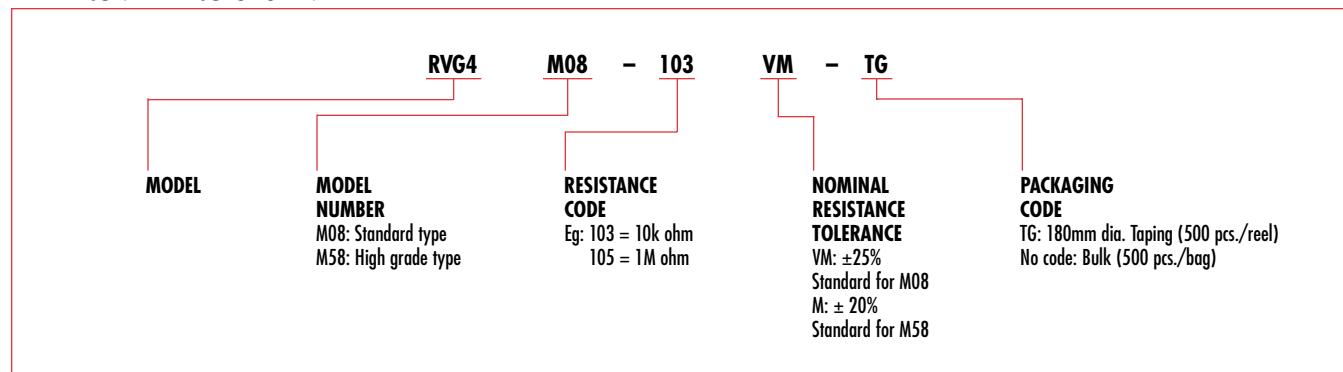
## DIMENSIONS: mm



## SPECIFICATIONS

Item	RVG4M08	RVG4M58
Standard Resistance Range	200 $\Omega$ ~ 2M $\Omega$ (1, 2, 3, 5 step)	100 $\Omega$ ~ 2M $\Omega$ (1, 2, 3, 5 step)
Resistance Tolerance	$\pm 25\%$	$\pm 20\%$
Taper	B (Linear)	B (Linear)
Power Rating	1/10W (70°C)	1/4W (70°C)
Maximum Working Voltage	50VDC	200VDC
Operating Temperature Range	-55°C ~ +125°C	-55°C ~ +125°C
Rotational Torque	2.0 ~ 24.5mNm (20 ~ 250gf • cm)	1.0 ~ 14.7mNm (10 ~ 150gf • cm)
Effective Rotational Angle	240° $\pm$ 10°	240° $\pm$ 10°
Marking Color on Driver Plate	Black	Purple

## PART NUMBERING SYSTEM



\*Applicable in North American market only. ▼Applicable in European market only.

For more detailed information regarding this product line in North America, see Catalog No. C-22-C. To receive additional information on Murata Products call 1-800-831-9172.

For more detailed information regarding this product line in Europe, see Catalog No. R50E-7.



# THERMISTORS/RESISTORS

## TRIMMER POTENTIOMETERS—MULTI-TURN CERMET CHIP

### POG5 SERIES



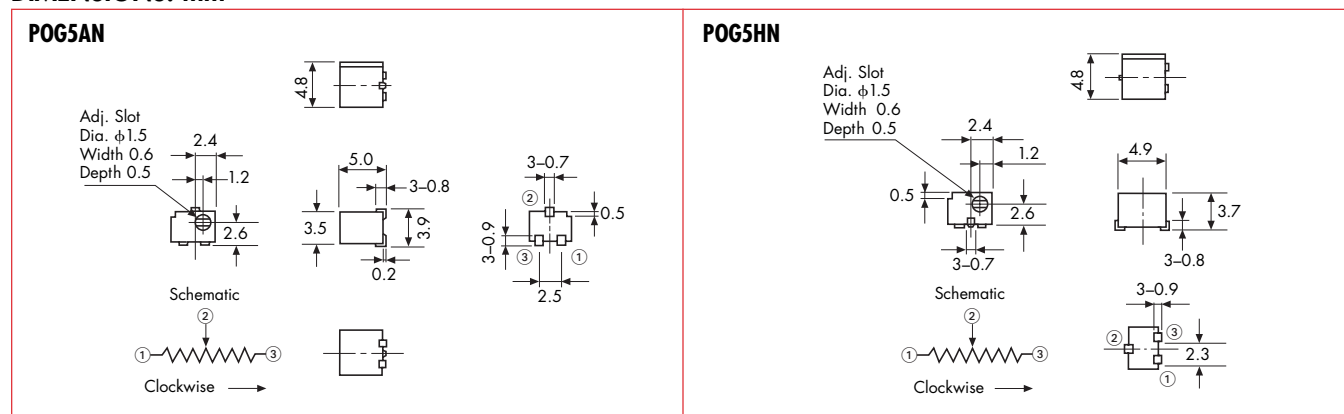
#### FEATURES

- 11-turn cermet; square; 5.0mm package
- High resolution design enables precise adjustment
- Miniature size offer high density PCB mounting
- Compatible with VPS reflow soldering method
- Compatible with ultrasonic cleaning
- Clutch mechanism prevents excessive wiper rotation

#### APPLICATIONS

- Measuring instruments
- Sensors
- CPUs
- Industrial machines

#### DIMENSIONS: mm



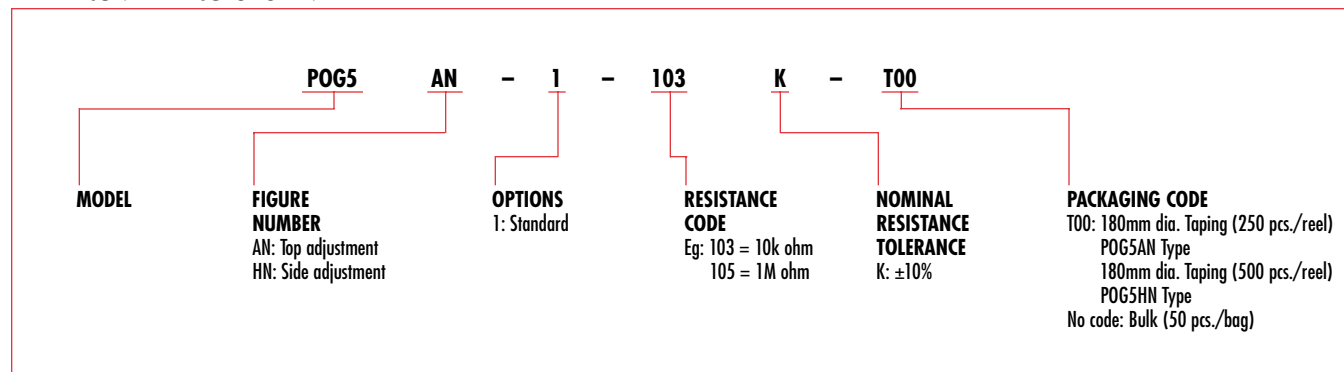
Standard Tolerance:  $\pm 0.3$

#### SPECIFICATIONS

Item	
Standard Resistance Range	10 $\Omega$ ~ 2M $\Omega$ (1, 2, 5 step)
Nominal Resistance Tolerance	$\pm 10\%$
Power Rating	70°C – 0.25W 125°C – 0W
Maximum Working Voltage	300V
Maximum Wiper Current	100mA max.
Operating Temperature Range	-55°C ~ +125°C
Effective Electrical Number of Turn	11 $\pm$ 2 turns
Residual Resistance	1% or 2 $\Omega$ max., whichever is greater
Contact Resistance Variation	3% or 3 $\Omega$ max., whichever is greater
Dielectric Strength	600VAC
Insulation Resistance	100M $\Omega$ min. (500VDC)
Torque	17.6mNm (180gf • cm) max.

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#### PART NUMBERING SYSTEM



\*Applicable in North American market only. ▼Applicable in European market only.  
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 For more detailed information regarding this product line in Europe, see Catalog No. R50E-7.



# THERMISTORS/RESISTORS

## TRIMMER POTENTIOMETERS—SINGLE-TURN CERMET LEADED

### POT3321 SERIES

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Innovator in Electronics



#### FEATURES

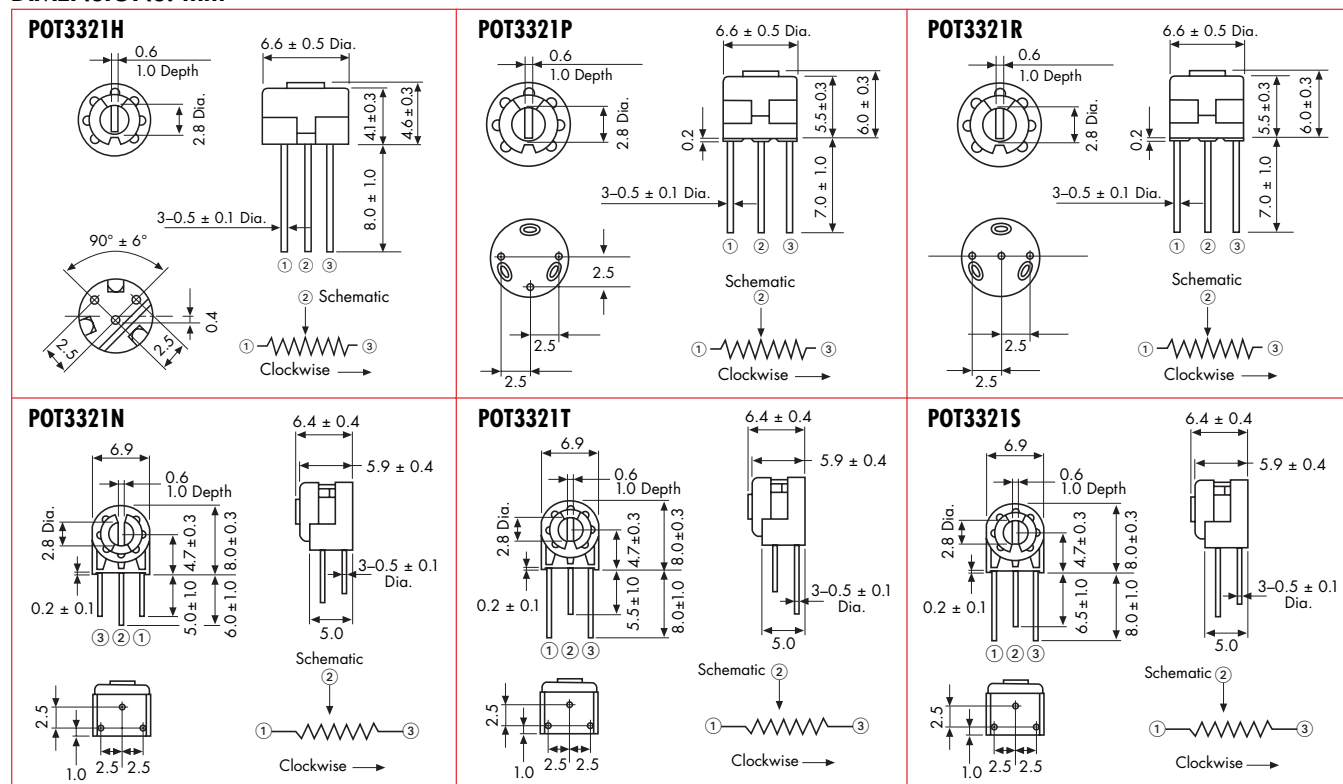
- Single-turn cermet; round; 6.6mm package
- 6 standard terminal styles
- Compatible with ultrasonic cleaning
- Flammability: UV94V-0

- Printers
- CPUs
- Switching power supplies

#### APPLICATIONS

- TVs
- HDTVs
- Professional cameras
- Facsimile machines

#### DIMENSIONS: mm



Standard Tolerance:  $\pm 0.3$

#### SPECIFICATIONS

Item	Item
<b>Standard Resistance Range</b>	10 $\Omega$ ~ 5M $\Omega$ (1, 2, 5 step)
<b>Nominal Resistance Tolerance</b>	$\pm 20\%$ ( $\pm 10\%$ available)
<b>Power Rating</b>	70°C – 0.5W, 125°C – 0W
<b>Maximum Working Voltage</b>	300V
<b>Maximum Wiper Current</b>	100mA max.
<b>Operating Temperature Range</b>	-55°C ~ +125°C
<b>Effective Rotational Angle</b>	230 $\pm$ 5°
<b>Residual Resistance</b>	2 $\Omega$ max.
<b>Contact Resistance Variation</b>	3% or 3 $\Omega$ max., whichever is greater
<b>Dielectric Strength</b>	600VAC
<b>Insulation Resistance</b>	1000M $\Omega$ min. (500VDC)
<b>Torque</b>	19.6mNm (200gf • cm) max.
<b>Stop Strength</b>	49mNm (500gf • cm) min.

#### PART NUMBERING SYSTEM

<b>MODEL NUMBER</b>	<b>TERMINAL STYLE</b>	<b>OPTIONS</b> 1: Standard (M tol.) 2: K tol.	<b>RESISTANCE CODE</b> Eg: 103 = 10k ohm 105 = 1M ohm	<b>RESISTANCE TOLERANCE</b> M: $\pm 20\%$ (STD) K: $\pm 10\%$ (Available)
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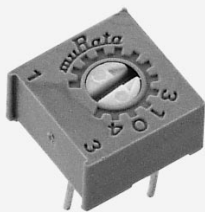
For more detailed information regarding this product line in Europe, see Catalog No. R50E-7.



# THERMISTORS/RESISTORS

## TRIMMER POTENTIOMETERS—SINGLE-TURN CERMET LEADED

### POT3104 SERIES



#### FEATURES

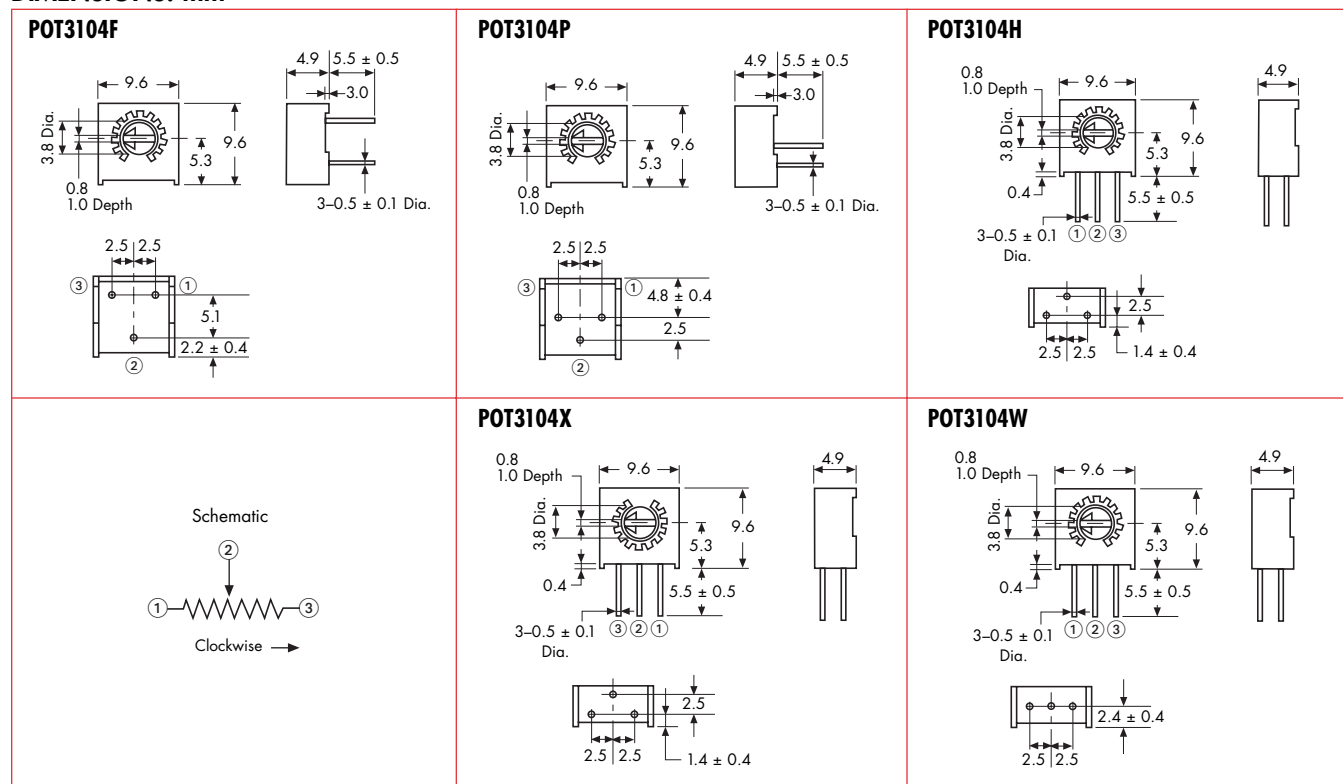
- Single-turn cermet; square; 9.6mm package
- Compatible with ultrasonic cleaning
- Flammability: UL94V-0

- CPU's
- Switching power supplies

#### APPLICATIONS

- TV's
- HDTV's
- Professional cameras
- Facsimile machines
- Printers

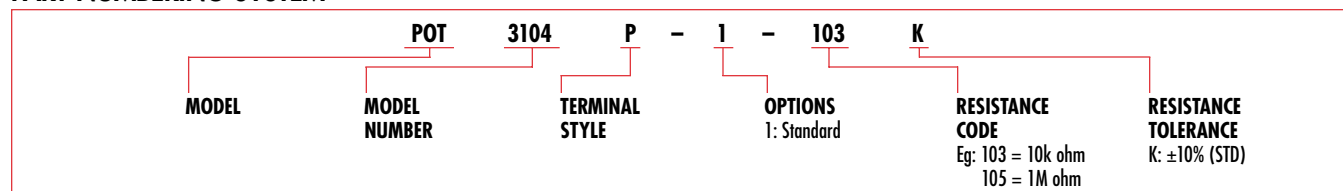
#### DIMENSIONS: mm



#### SPECIFICATIONS

Item		Item	
Standard Resistance Range	10Ω ~ 2MΩ (1, 2, 5 step)	Residual Resistance	2Ω max.
Nominal Resistance Tolerance	±10%	Contact Resistance Variation	1% or 1Ω max., whichever is greater
Power Rating	70°C – 0.5W, 125°C – 0W	Dielectric Strength	900VAC
Maximum Working Voltage	300V	Insulation Resistance	100MΩ min. (500VDC)
Maximum Wiper Current	100mA max.	Torque	35.3mNm (360gf • cm) max.
Operating Temperature Range	–55°C ~ 125°C	Stop Strength	68.6mNm (700gf • cm) min.
Effective Rotational Angle	280° ± 15°		

#### PART NUMBERING SYSTEM



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# THERMISTORS/RESISTORS

## TRIMMER POTENTIOMETERS—MULTI-TURN CERMET LEADED

### POT1102 SERIES



#### FEATURES

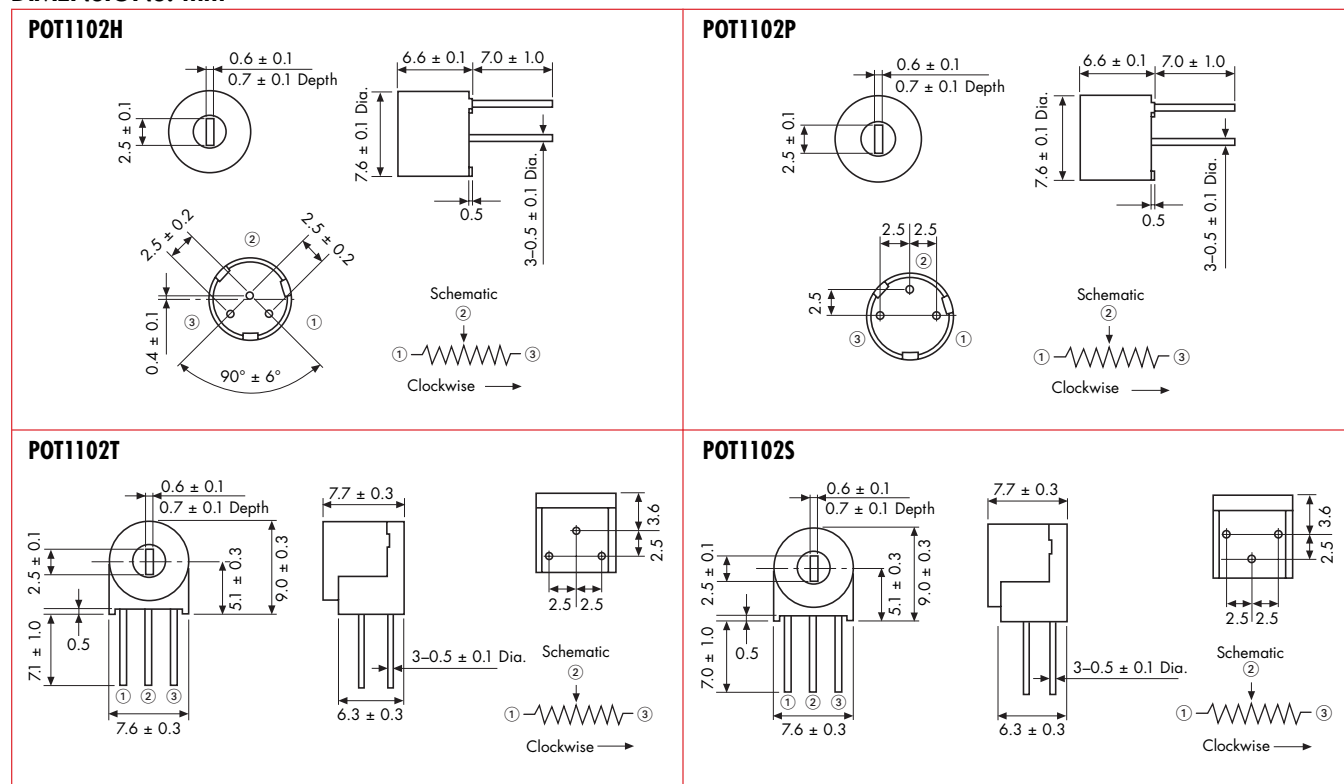
- 4-turn cermet; round; 7.6mm package
- Unique planetary drive enables precise wiper setting
- Clutch mechanism prevents excessive wiper rotation
- Compatible with ultrasonic cleaning

- CPUs
- PPCs
- Printers

#### APPLICATIONS

- Measuring instruments
- Facsimile machines

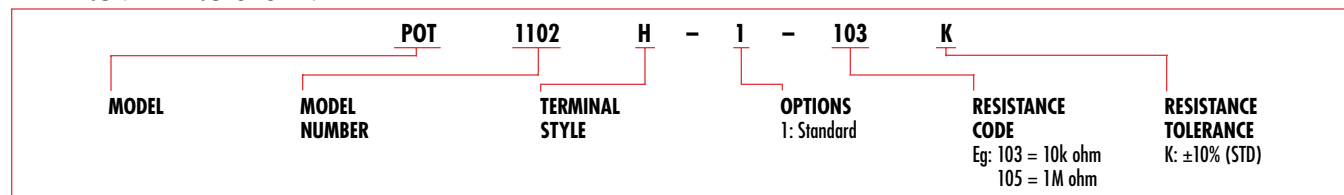
#### DIMENSIONS: mm



#### SPECIFICATIONS

Item		Item	
Standard Resistance Range	10Ω ~ 2MΩ (1, 2, 5 step)	Effective Number of Turns	4 ± 0.5 turns
Nominal Resistance Tolerance	±10%	Residual Resistance	2Ω max.
Power Rating	70°C – 0.5W, 125°C – 0W	Contact Resistance Variation	3% or 3Ω max., whichever is greater
Maximum Working Voltage	300V	Dielectric Strength	600VAC
Maximum Wiper Current	100mA max.	Insulation Resistance	1000MΩ min. (500VDC)
Operating Temperature Range	–55°C ~ +125°C	Torque	14.7mNm (150gh • cm) max.

#### PART NUMBERING SYSTEM



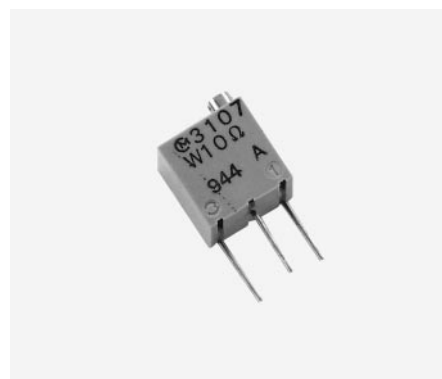
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# THERMISTORS/RESISTORS

## TRIMMER POTENTIOMETERS—MULTI-TURN CERMET LEADED

### POT3107 SERIES



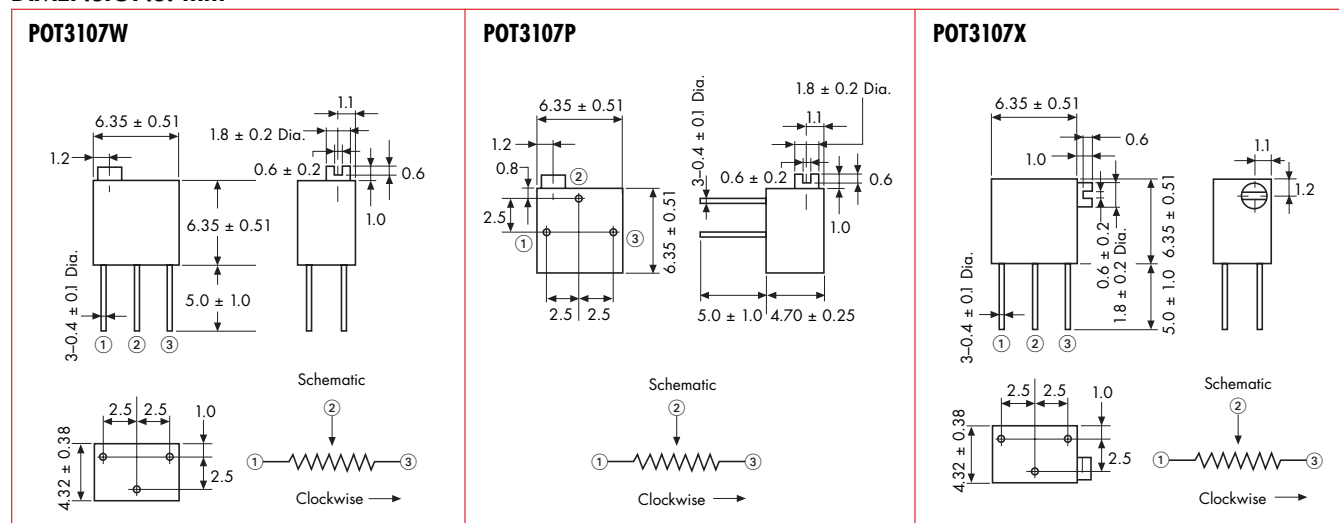
#### FEATURES

- 12-turn cermet; square; 6.35mm package
- Compatible with ultrasonic cleaning
- Clutch mechanism prevents excessive wiper rotation

#### APPLICATIONS

- Measuring instruments
- Facsimile machines
- CPUs
- PPCs
- Printers
- Sensors

#### DIMENSIONS: mm

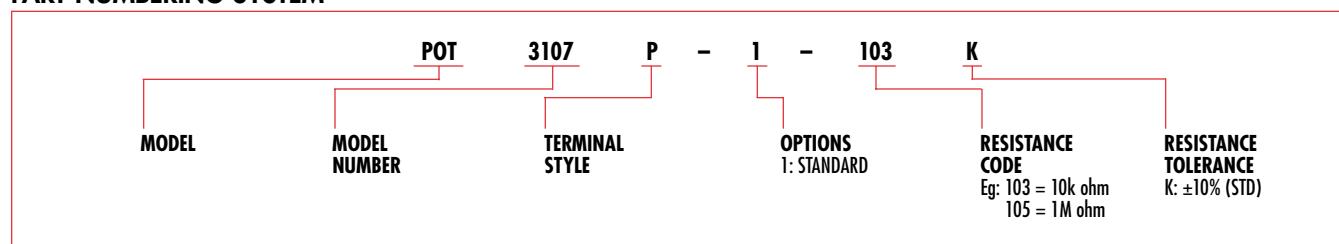


Standard Tolerance:  $\pm 0.3$

#### SPECIFICATIONS

Item	
Standard Resistance Range	10 $\Omega$ ~ 1M $\Omega$ (1, 2, 5 step)
Nominal Resistance Tolerance	$\pm 10\%$
Power Rating	85°C – 0.25W, 125°C – 0W
Maximum Working Voltage	200V
Maximum Wiper Current	100mA max.
Operating Temperature Range	–55°C ~ +125°C
Effective Number of Turns	12 $\pm$ 2 turns
Residual Resistance	2 $\Omega$ max.
Contact Resistance Variation	3% or 3 $\Omega$ max., whichever is greater
Dielectric Strength	600VAC
Insulation Resistance	100M $\Omega$ min. (500VDC)
Torque	21.2mNm (216gf • cm) max.

#### PART NUMBERING SYSTEM



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For more detailed information regarding this product line in Europe, see Catalog No. R50E-7.

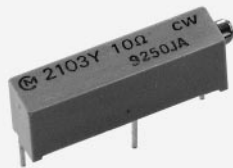
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# THERMISTORS/RESISTORS

## TRIMMER POTENTIOMETERS—MULTI-TURN CERMET LEADED

### POT2103 SERIES



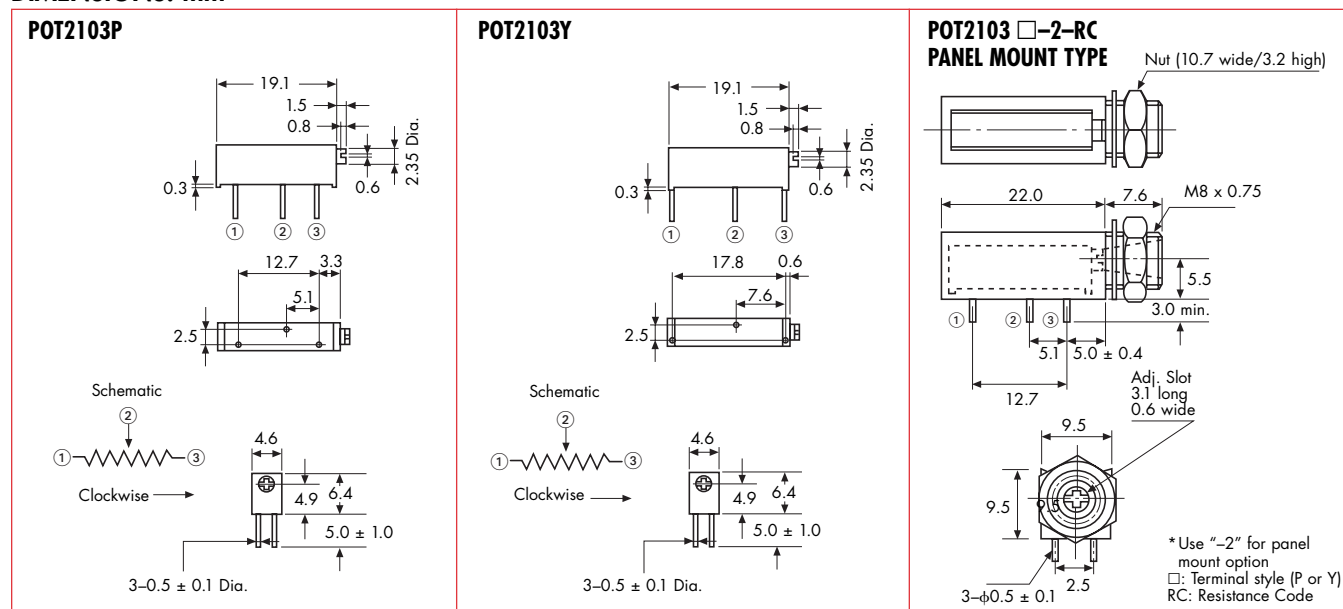
#### FEATURES

- 15-turn cermet; rectangle; 19.1mm package
- Recommended for applications requiring side adjustment
- Compatible with ultrasonic cleaning
- Clutch mechanism prevents excessive wiper rotation

#### APPLICATIONS

- Measuring instruments
- Facsimile machines
- CPUs
- PPCs
- Printers
- Sensors

#### DIMENSIONS: mm

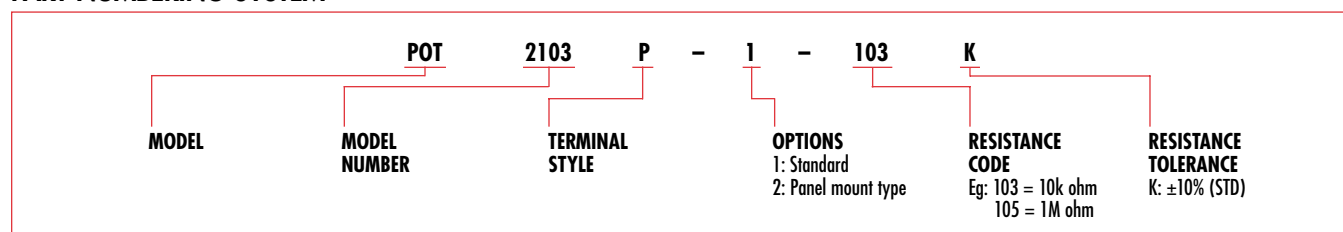


Standard Tolerance:  $\pm 0.3$

#### SPECIFICATIONS

Item	
Standard Resistance Range	10 $\Omega$ ~ 2M $\Omega$ (1, 2, 5 step)
Nominal Resistance Tolerance	$\pm 10\%$
Power Rating	70°C – 0.75W, 125°C – 0W
Maximum Working Voltage	300V
Maximum Wiper Current	100mA max.
Operating Temperature Range	-55°C ~ 125°C
Effective Number of Turns	15 $\pm$ 3 turns
Residual Resistance	2 $\Omega$ max.
Contact Resistance Variation	3% or 3 $\Omega$ max., whichever is greater
Dielectric Strength	1000VAC
Insulation Resistance	1000M $\Omega$ min. (500VDC)
Torque	14.7mNm (150gf • cm) max.

#### PART NUMBERING SYSTEM



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For more detailed information regarding this product line in Europe, see Catalog No. R50E-7.



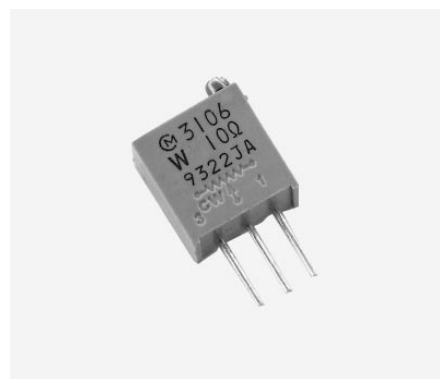




# THERMISTORS/RESISTORS

## TRIMMER POTENTIOMETERS—MULTI-TURN CERMET LEADED

### POT3106 SERIES



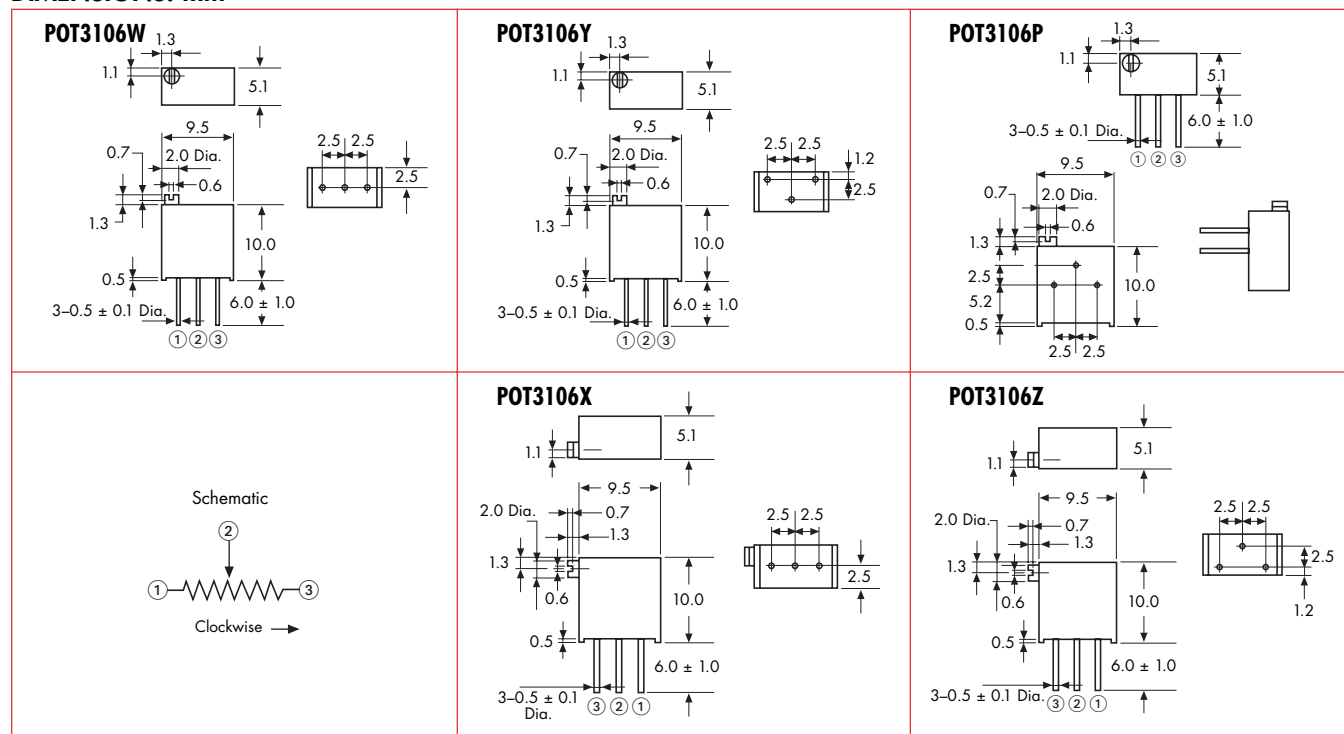
#### FEATURES

- 25-turn cermet; square; 9.5mm package
- 5 terminal styles, top and side adjustment
- Compatible with ultrasonic cleaning
- Clutch mechanism prevents excessive wiper rotation

#### APPLICATIONS

- Measuring instruments
- Facsimile machines
- CPUs
- PPCs
- Printers
- Sensors

#### DIMENSIONS: mm

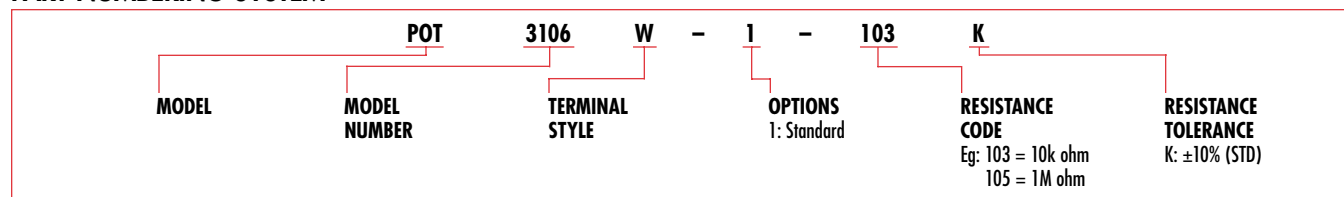


Standard Tolerance: ±0.3

#### SPECIFICATIONS

Item		Item	
Standard Resistance Range	10Ω ~ 2MΩ (1, 2, 5 Step)	Effective Number of Turns	25 ± 5 turns
Nominal Resistance Tolerance	±10%	Residual Resistance	2Ω max.
Power Rating	70°C – 0.5W, 125°C – 0W	Contact Resistance Variation	3% or 3Ω max., whichever is greater
Maximum Working Voltage	300V	Dielectric Strength	1000VAC
Maximum Wiper Current	100mA max.	Insulation Resistance	1000MΩ min. (500VDC)
Operating Temperature Range	–55°C ~ +125°C	Torque	14.7mNm (150gf • cm) max.

#### PART NUMBERING SYSTEM



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# THERMISTORS/RESISTORS

## TRIMMER POTENTIOMETERS—SINGLE-TURN CERMET

### POM6 SERIES

**Murata**

Innovator in Electronics

**NEW**

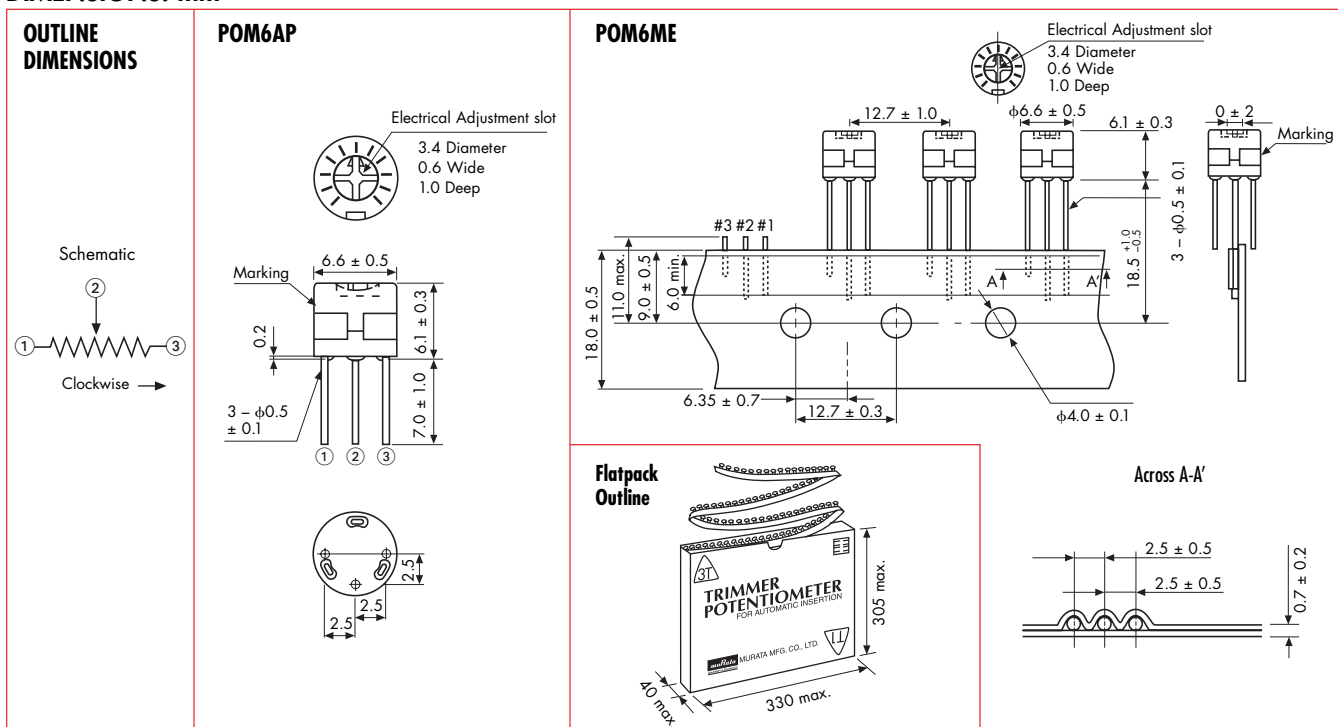
#### FEATURES

- Enlarged adjustment part (Roter) provides superior adjustability.
- 11-scales are easy to see adjustment position.
- Colored adjustment part (Roter) provides superior adjustability.
- Available for ultrasonic cleaning after soldering.
- Flammability: UV94V-0
- Radial tapping

#### APPLICATIONS

- DY, CRT display
- Power supply
- Professional cameras
- CATV
- FAX
- Printers
- Sensors
- Industrial machines

#### DIMENSIONS: mm



Standard Tolerance:  $\pm 0.3$

#### SPECIFICATIONS

Item		Item	
Standard Resistance Range	10 $\Omega$ ~ 5M $\Omega$ (1, 2, 5 Step)	Residual Resistance	2 $\Omega$ max.
Nominal Resistance Tolerance	$\pm 20\%$	Contact Resistance Variation	3% or 3 $\Omega$ max., whichever is greater
Power Rating	70°C – 0.5W, 125°C – 0W	Dielectric Strength	600VAC
Maximum Working Voltage	300V	Insulation Resistance	1000M $\Omega$ min. (500VDC)
Maximum Wiper Current	100mA max.	Torque	1.96 to 19.6mNm (20 to 200gf • cm)
Operating Temperature Range	-55°C ~ +125°C	Stop Strength	49mNm (500gf • cm) min.
Effective Rotational Angle	230 $\pm$ 5°		

#### PART NUMBERING SYSTEM

<b>POM6</b>		<b>ME</b>	<b>- 1 -</b>	<b>103</b>	<b>M</b>	<b>-</b>	<b>R00</b>
<b>MODEL NUMBER</b>	<b>FIGURE NUMBER</b> AP: Triangular terminal arrangement ME: Straight terminal arrangement (for taping)	<b>OPTIONS</b> 1: Standard	<b>RESISTANCE CODE</b> Eg: 103 = 10k ohm 105 = 1M ohm	<b>NOMINAL RESISTANCE TOLERANCE</b> M: ±20%	<b>PACKAGING CODE</b> R00: Radial taping (1,000pcs./pack) No codes: Bulk (100pcs./bag)		

All products on this page are available as standard through authorized Murata Electronics distributors. \*Applicable in North American market only. ▼Applicable in European market only.  
For more detailed information regarding this product line in North America, see Catalog No. C-22-C. To receive additional information on Murata Products call 1-800-831-9172.  
For more detailed information regarding this product line in Europe, see Catalog No. R50E-7.

THERMISTORS/  
RESISTORS



## RECOMMENDABLE ADJUSTMENT TOOLS

Model	Manufacturers	Model Number	MURATA Model Number	Blade
<b>For Manual Adjustment</b>				
POZ3	VESSEL MFG.	No. 9000 + 1.7 X 30	KMPOT12V	⊕ cross
	TORAY INDUSTRIES, INC.	SA-2225	KMPOT13T	⊖ minus
RVG3A08	VESSEL MFG.	No. 9000 + 1.7 X 30	KMPOT12V	⊕ cross
	TORAY INDUSTRIES, INC.	SA-2225	KMPOT13T	⊖ minus
RVG3S08	TORAY INDUSTRIES, INC.	SA-2225	KMPOT13T	⊖ minus
RVG4M	VESSEL MFG.	No. 9000 – 2.6 X 30	KMPOT15V	⊖ minus
3321 POT□□□□	VESSEL MFG.	No. 9000 – 1.8 X 30	KMPOT14V	⊖ minus
	FUTABA TOOL MFG.	DA55	—	⊖ minus
	MURATA MFG.	PPTZ-0022	PPTZ-0022	⊖ minus
POG5	VESSEL MFG.	No. 9000 – 1.3 X 30	KMPOT16V	⊕ cross
	FUTABA TOOL MFG.	DA54	—	⊖ minus
<b>For Automatic Adjustment</b>				
POZ3 RVG3A08 RVG3S08 POM6	TORAY INDUSTRIES, INC.	JB-2225	KMPOT31T	⊖ minus

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