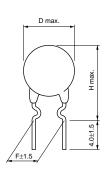
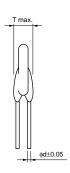
## PTC (POSISTOR®) for Circuit Protection

16V/30V/140V Series







(in mm)

	Max. Voltage	Max. Voltage	Non-operating	Non-operating	Operating	Max.	Resistance	Curie	Body	Thikness	Lead	Lead	Heiaht
Part Number	-40°C to-30°C	-30°C to+105°C	Current at +85°C	Current at +105°C	Current at -40°C	Current	at 25°C	Point	Diameter (D)	(T)	Space (F)	Diameter	(H)
PTGL4SAS100K2N51A0	(VDC)	(VDC) 30	(mA) 92	(mA) 65	(mA) 261	(A) 1.5	(ohm) 10 ±10%	(°C) 130 (AS)	(mm) 4.5	(mm) 3.5	5.0	(phi d)(mm) 0.5	9.5
PTGL4SAS100K2B51A0	16	30	127	89	359	2.0	10 ±10%	130 (AS)	4.5	3.5	5.0	0.5	9.5
								· , ,				-	-
PTGL5SAS3R9K2B51A0	16	30	204	143	576	3.5	3.9 ±10%	130 (AS)	5.5	3.5	5.0	0.6	10.5
PTGL7SAS2R7K2B51A0	16	30	255	179	720	4.5	2.7 ±10%	( -/	7.3	3.5	5.0	0.6	12.3
PTGL7SAS1R8K2B51A0	16	30	319	223	902	5.0	1.8 ±10%	· ,	7.3	3.5	5.0	0.6	12.3
PTGL9SAS1R2K2B51A0	16	30	422	296	1193	6.0	1.2 ±10%	130 (AS)	9.3	3.5	5.0	0.6	14.3
PTGLCSAS0R8K2B51A0	16	30	520	364	1470	7.0	0.8 ±10%	130 (AS)	11.5	3.5	5.0	0.6	16.5
PTGL4SAS100K3B51A0	16	51	128	89	361	1.0	10 ±10%	130 (AS)	4.5	3.5	5.0	0.6	9.5
PTGL5SAS6R8K3B51A0	16	51	149	105	422	1.5	6.8 ±10%	130 (AS)	5.5	3.5	5.0	0.6	10.5
PTGL7SAS3R3K3B51A0	16	51	233	163	659	3.0	3.3 ±10%	130 (AS)	7.3	3.5	5.0	0.6	12.3
PTGL9SAS2R2K3B51A0	16	51	313	219	885	4.0	2.2 ±10%	130 (AS)	9.3	3.5	5.0	0.6	14.3
PTGLCSAS1R2K3B51A0	16	51	449	315	1270	5.0	1.2 ±10%	130 (AS)	11.5	3.5	5.0	0.6	16.5
PTGL4SAS220K4N51A0	30	60	67	47	190	1.0	22 ±10%	130 (AS)	4.5	3.5	5.0	0.5	9.5
PTGL4SAS220K4B51A0	30	60	87	61	246	1.0	22 ±10%	130 (AS)	4.5	3.5	5.0	0.6	9.5
PTGL5SAS100K4B51A0	30	60	129	90	364	1.5	10 ±10%	130 (AS)	5.5	3.5	5.0	0.6	10.5
PTGL7SAS5R6K4N51A0	30	60	142	99	400	2.2	5.6 ±10%	130 (AS)	7.3	3.5	5.0	0.5	12.3
PTGL7SAS5R6K4B51A0	30	60	174	122	492	3.0	5.6 ±10%	130 (AS)	7.3	3.5	5.0	0.6	12.3
PTGL9SAS3R3K4B51A0	30	60	253	177	714	4.0	3.3 ±10%	130 (AS)	9.3	3.5	5.0	0.6	14.3
PTGLCSAS2R2K4B51A0	30	60	334	234	942	5.0	2.2 ±10%	130 (AS)	11.5	3.5	5.0	0.6	16.5
PTGL4SAS560K6B51A0	140	140	56	39	159	0.5	56 ±10%	130 (AS)	5.5	4.5	5.0	0.6	10.5
PTGL5SAS270K6B51A0	140	140	80	56	227	1.0	27 ±10%	130 (AS)	5.5	4.5	5.0	0.6	10.5
PTGL7SAS150K6B51A0	140	140	112	79	317	1.5	15 ±10%	130 (AS)	7.3	4.5	5.0	0.6	12.3
PTGL9SAS120K6B51A0	140	140	146	102	413	2.0	12 ±10%	130 (AS)	9.3	4.5	5.0	0.6	14.3
PTGL9SAS7R6K6B51A0	140	140	172	121	486	2.2	7.6 ±10%	130 (AS)	9.3	4.5	5.0	0.6	14.3
PTGLCSAS4R7K6B51A0	140	140	236	165	666	3.5	4.7 ±10%	130 (AS)	11.5	4.5	5.0	0.6	16.5



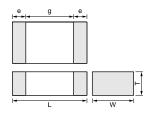
### Resistors/Thermistors

# PTC (POSISTOR®) for Circuit Protection

Chip Type





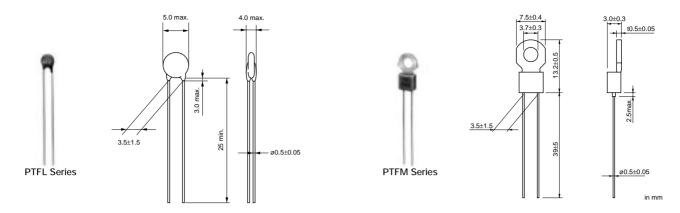


Part Number		Dimensions (mm)							
Part Number	L	W	Т	е	g				
PRG18_RB	1.6±0.15	0.8±0.15	0.8±0.15	0.1 to 0.6	-				
PRG21_RA	2.0±0.2	1.25±0.2	0.9±0.2	0.2 min.	0.5 min.				
PRG21 RK	2.0±0.2	1.25±0.2	1.25±0.2	0.2 min.	0.5 min.				

Part Number	Max. Voltage (VDC)	Non-operating Current at +105°C (mA)	Max. Current (A)	Resistance at 25°C (ohm)	Operating Temperature Range (°C)
PRG21AR220MS1RK	16	25	0.9	22 ±20%	-40 to +105
PRG21AR420MS1RA	20	10	0.6	42 ±20%	-40 to +105

## PTC (POSISTOR®) for Overheat Sensing

Lead Type



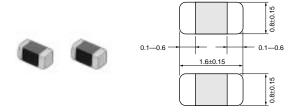
Part Number	Max. Voltage (V)	Curie Point (°C)	Sensing Temp. (TS) (°C)	Resistance Value at 25°C (ohm)	Resistance Value (Sensing Temp10°C)	Resistance Value at Sensing Temp. (TS°C)	
PTF□04BH471Q2N34B0	16	40 (BH)	60	100 max.	330ohm max.	470ohm min.	
PTF□04BG471Q2N34B0	16	50 (BG)	70	100 max.	330ohm max.	470ohm min.	
PTF□04BF471Q2N34B0	16	60 (BF)	80	100 max.	330ohm max.	470ohm min.	
PTF□04BE471Q2N34B0	16	70 (BE)	90	100 max.	330ohm max.	470ohm min.	
PTF□04BD471Q2N34B0	16	80 (BD)	100	100 max.	330ohm max.	470ohm min.	
PTF□04BC471Q2N34B0	16	90 (BC)	110	100 max.	330ohm max.	470ohm min.	
PTF□04BB471Q2N34B0	16	100 (BB)	120	100 max.	330ohm max.	470ohm min.	
PTF□04BH222Q2N34B0	16	40 (BH)	60	330 max.	1.5k ohm max.	2.2k ohm min.	
PTF□04BG222Q2N34B0	16	50 (BG)	70	330 max.	1.5k ohm max.	2.2k ohm min.	
PTF□04BF222Q2N34B0	16	60 (BF)	80	330 max.	1.5k ohm max.	2.2k ohm min.	
PTF□04BE222Q2N34B0	16	70 (BE)	90	330 max.	1.5k ohm max.	2.2k ohm min.	
PTF□04BD222Q2N34B0	16	80 (BD)	100	330 max.	1.5k ohm max.	2.2k ohm min.	
PTF□04BC222Q2N34B0	16	90 (BC)	110	330 max.	1.5k ohm max.	2.2k ohm min.	
PTF□04BB222Q2N34B0	16	100 (BB)	120	330 max.	1.5k ohm max.	2.2k ohm min.	

A blank is filled with type codes. (L: Lead type, M: with Lug-terminal)

Operating temperature: Lower temperature is -30 deg. C. Upper temperature is 10 deg. C. higher than sensing temperature (Ts).

## PTC (POSISTOR®) for Overheat Sensing

Chip Type



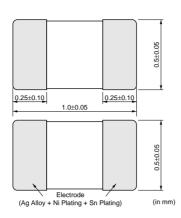
(in mm)

Part Number	Sensing Temperature (at 4.7k ohm) (°C)	Maximum Voltage (V)	Resistance (at 25 degree) (ohm)	Operating Temperature Range (°C)
PRF18BG471QS2RB	65 ±5	32	470 ±50%	-40 to 150
PRF18BF471QS2RB	75 ±5	32	470 ±50%	-40 to 150
PRF18BE471QS2RB	85 ±5	32	470 ±50%	-40 to 150
PRF18BD471QS2RB	95 ±5	32	470 ±50%	-40 to 150
PRF18BC471QS2RB	105 ±5	32	470 ±50%	-40 to 150
PRF18BB471QS2RB	115 ±5	32	470 ±50%	-40 to 150
PRF18BA471QS2RB	125 ±5	32	470 ±50%	-40 to 150
PRF18AR471QS2RB	135 ±5	32	470 ±50%	-40 to 150
PRF18AS471QS2RB	145 ±5	32	470 ±50%	-40 to 150

## **NTC for Temperature Compensation**

0402(1005) Size





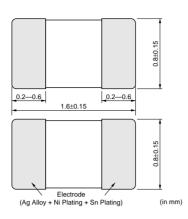
Part Number	Resistance (25°C)	B-Constant (25-50°C) (K)	Max. Operating Current (25°C) (mA)	Rated Electric Power (25°C) (mW)	Typical Dissipation Constant (25°C) (mW/°C)	Operating Temperature Range (°C)
NCP15XC220□0SRC	22ohm	3100 ±3%	6.70	100	1	-40 to 125
NCP15XC330□0SRC	33ohm	3100 ±3%	5.50	100	1	-40 to 125
NCP15XC470□0SRC	47ohm	3100 ±3%	4.60	100	1	-40 to 125
NCP15XC680□0SRC	68ohm	3100 ±3%	3.80	100	1	-40 to 125
NCP15XF101□0SRC	100ohm	3250 ±3%	3.10	100	1	-40 to 125
NCP15XF151□0SRC	150ohm	3250 ±3%	2.50	100	1	-40 to 125
NCP15XM221□0SRC	220ohm	3500 ±3%	2.10	100	1	-40 to 125
NCP15XM331□0SRC	330ohm	3500 ±3%	1.70	100	1	-40 to 125
NCP15XQ471□0SRC	470ohm	3650 ±3%	1.40	100	1	-40 to 125
NCP15XQ681□0SRC	680ohm	3650 ±3%	1.20	100	1	-40 to 125
NCP15XQ102□0SRC	1.0k ohm	3650 ±3%	1.00	100	1	-40 to 125
NCP15XW152□0SRC	1.5k ohm	3950 ±3%	0.81	100	1	-40 to 125
NCP15XW222□0SRC	2.2k ohm	3950 ±3%	0.67	100	1	-40 to 125
NCP15XW332□0SRC	3.3k ohm	3950 ±3%	0.55	100	1	-40 to 125
NCP15XM472□0SRC	4.7k ohm	3500 ±3%	0.46	100	1	-40 to 125
NCP15XW682□0SRC	6.8k ohm	3950 ±3%	0.38	100	1	-40 to 125
NCP15XH103□0SRC	10k ohm	3380 ±3%	0.31	100	1	-40 to 125
NCP15XW153□0SRC	15k ohm	3950 ±3%	0.25	100	1	-40 to 125
NCP15XW223□0SRC	22k ohm	3950 ±3%	0.21	100	1	-40 to 125
NCP15WB333□0SRC	33k ohm	4050 ±3%	0.17	100	1	-40 to 125
NCP15WB473□0SRC	47k ohm	4050 ±3%	0.14	100	1	-40 to 125
NCP15WD683□0SRC	68k ohm	4150 ±3%	0.12	100	1	-40 to 125
NCP15WF104□0SRC	100k ohm	4250 ±3%	0.10	100	1	-40 to 125
NCP15WM154□0SRC	150k ohm	4500 ±3%	0.08	100	1	-40 to 125
NCP15WM224□0SRC	220k ohm	4500 ±3%	0.06	100	1	-40 to 125
NCP15WM474□0SRC	470k ohm	4500 ±3%	0.04	100	1	-40 to 125

A blank column is filled with resistance tolerance codes. (J:  $\pm 5\%$ , K:  $\pm 10\%$ ) Tolerance ±1% NCP15XH103F0SRC is also available for 10k ohm type.

## **NTC for Temperature Compensation**

0603(1608) Size





Part Number	Resistance (25°C)	B-Constant (25-50°C) (K)	Max. Operating Current (25°C) (mA)	Rated Electric Power (25°C) (mW)	Typical Dissipation Constant (25°C) (mW/°C)	Operating Temperature Range (°C)
NCP18XF101□0SRB	100ohm	3250 ±3%	3.10	100	1	-40 to 125
NCP18XF151□0SRB	150ohm	3250 ±3%	2.50	100	1	-40 to 125
NCP18XM221□0SRB	220ohm	3500 ±3%	2.10	100	1	-40 to 125
NCP18XM331□0SRB	330ohm	3500 ±3%	1.70	100	1	-40 to 125
NCP18XQ471□0SRB	470ohm	3650 ±3%	1.40	100	1	-40 to 125
NCP18XQ681□0SRB	680ohm	3650 ±3%	1.2	100	1	-40 to 125
NCP18XQ102□0SRB	1.0k ohm	3650 ±3%	1.00	100	1	-40 to 125
NCP18XW152□0SRB	1.5k ohm	3950 ±3%	0.81	100	1	-40 to 125
NCP18XW222□0SRB	2.2k ohm	3950 ±3%	0.67	100	1	-40 to 125
NCP18XW332□0SRB	3.3k ohm	3950 ±3%	0.55	100	1	-40 to 125
NCP18XM472□0SRB	4.7k ohm	3500 ±3%	0.46	100	1	-40 to 125
NCP18XW682□0SRB	6.8k ohm	3950 ±3%	0.38	100	1	-40 to 125
NCP18XH103□0SRB	10k ohm	3380 ±3%	0.31	100	1	-40 to 125
NCP18XW153□0SRB	15k ohm	3950 ±3%	0.25	100	1	-40 to 125
NCP18XW223□0SRB	22.0k ohm	3950 ±3%	0.21	100	1	-40 to 125
NCP18WB333□0SRB	33k ohm	4050 ±3%	0.17	100	1	-40 to 125
NCP18WB473□0SRB	47k ohm	4050 ±3%	0.14	100	1	-40 to 125
NCP18WD683□0SRB	68k ohm	4150 ±3%	0.12	100	1	-40 to 125
NCP18WF104□0SRB	100k ohm	4250 ±3%	0.10	100	1	-40 to 125
NCP18WM154□0SRB	150k ohm	4500 ±3%	0.08	100	1	-40 to 125
NCP18WM224□0SRB	220k ohm	4500 ±3%	0.06	100	1	-40 to 125
NCP18WM474□0SRB	470k ohm	4500 ±3%	0.04	100	1	-40 to 125

Both flow and reflow soldering methods can be employed.

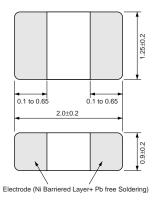
A blank column is filled with resistance tolerance codes. (J:  $\pm 5\%$ , K:  $\pm 10\%$ )

Tolerance  $\pm 1\%$  NCP18XH103F0SRB is also available for 10k ohm type.

## NTC for Temperature Compensation

0805(2012) Size





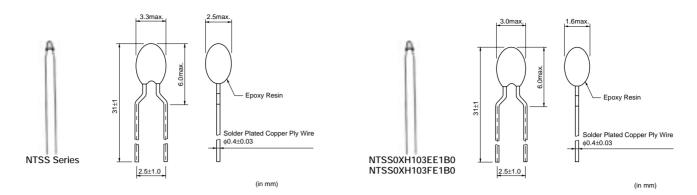
(in mm)

Part Number	Resistance at 25°C	B-Constant (25/50°C) (K)	Permissive Operating Current (25°C) (mA)	Rated Electric Power (25°C) (mW)	Typical Dissipation Constant (25°C) (mW/°C)	Operating Temperature Range (°C)
NCM21XQ103□0SRA	10kohm	3650	0.44	200	2.0	-40 to +125
NCM21XW223□0SRA	22kohm	3950	0.30	200	2.0	-40 to +125
NCM21WB473□0SRA	47kohm	4050	0.20	200	2.0	-40 to +125
NCM21WF104□0SRA	100kohm	4250	0.14	200	2.0	-40 to +125

A blank column is filled with resistance tolerance codes. (J:±5%, K:±10%)

## **NTC for Temperature Sensor**

Resin Coated Radial Lead Type



Part Number	Resistance (25°C) (k ohm)	B-Constant (25-50°C) (K)	Max. Operating Current (25°C) (mA)	Rated Electric Power (25°C) (mW)	Typical Dissipation Constant (25°C) (mW/°C)	Thermal Time Constant(s)	Operating Temperature Range (°C)
NTSS0XM202□E1B0	2.0	3500 ±1%	1.05	21	2.1	less than7	-40 to 125
NTSS0XR502□E1B0	5.0	3700 ±1%	0.68	21	2.1	less than7	-40 to 125
NTSS0XH103□E1B0	10	3380 ±1%	0.38	15	1.5	less than7	-40 to 125
NTSS0XV103□E1B0	10	3900 ±1%	0.46	21	2.1	less than7	-40 to 125
NTSS0WB203□E1B0	20	4050 ±1%	0.31	21	2.1	less than7	-40 to 125
NTSS0WC303□E1B0	30	4100 ±1%	0.26	21	2.1	less than7	-40 to 125
NTSS0WD503□E1B0	50	4150 ±1%	0.20	21	2.1	less than7	-40 to 125
NTSS0WF104□E1B0	100	4250 ±1%	0.14	21	2.1	less than7	-40 to 125

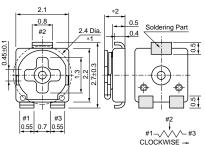
A blank column is filled with resistance tolerance codes. (F:  $\pm 1\%$ , E:  $\pm 3\%$ )

Taping type of part numbers with "A0" is available.

SMD Open Type 2mm Size



PVZ2A Series

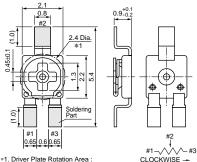


Driver Plate Rotation Area :

Please do not place any components more than 0.7mm in height within this area 
\*2 PVZ2A : 0.9±0.1
PVZ2A\_A04 : 0.8±0.05



PVZ2K Series



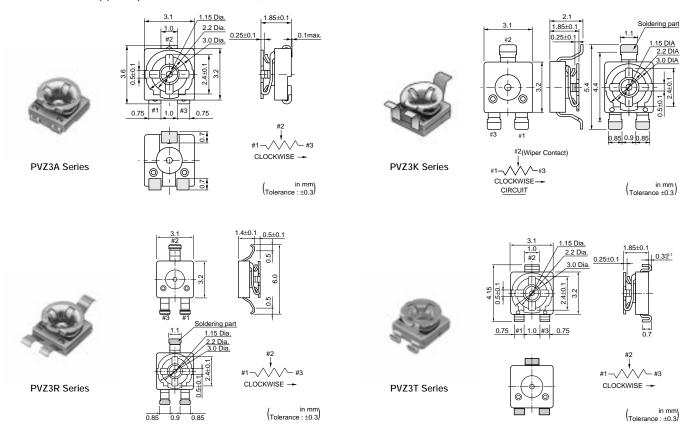
\*1. Driver Plate Rotation Area : Please do not place any components more than 0.7mm in height within this

	#1-\\\\-#3 CLOCKWISE -	
area.	(n mm) Tolerance : ±0.2	

Part Number	Power Rating (W)	Soldering Method	Number of Turns (Effective Rotation Angle)	Total Resistance Value	TCR (ppm/°C)
PVZ2A	0.1(50°C)	Reflow	1(240°±10°)	500ohm to 1M ohm ±30%	±500
PVZ2K	0.1(50°C)	Reflow	1(240°±10°)	500ohm to 1M ohm ±30%	±500

SMD Open Type 3mm Size

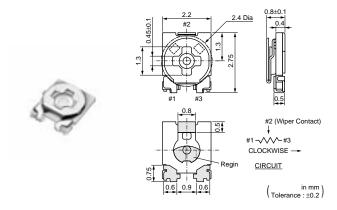
#### PVZ3 Series (Applied product to ELV. RoHS)



Part Number	Power Rating (W)	Soldering Method	Number of Turns (Effective Rotation Angle)	Total Resistance Value	TCR (ppm/°C)
PVZ3A	0.1(50°C)	Reflow	1(230°±10°)	200ohm to 2M ohm ±30%	±500
PVZ3K	0.1(50°C)	Reflow	1(230°±10°)	200ohm to 2M ohm ±30%	±500
PVZ3R	0.1(50°C)	Reflow	1(230°±10°)	200ohm to 2M ohm ±30%	±500
PVZ3T	0.1(50°C)	Reflow	1(230°±10°)	200ohm to 2M ohm ±30%	±500

SMD Open Type 2mm Size

#### PVA2 Series



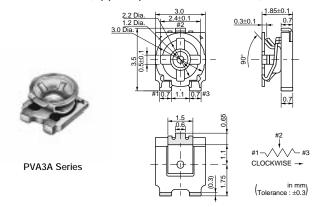
Part Number	Power Rating (W)	Soldering Method	Number of Turns (Effective Rotation Angle)	Total Resistance Value	TCR (ppm/°C)
PVA2A	0.1(70°C)	Reflow/Soldering Iron	1(260°±10°)	100ohm to 2.2M ohm ±25%	±250

Operating Temperature : -55 to +125°C

The order quantity should be an integral multiple of the "Minimum Quantity" shown in the beginning of this catalog.

SMD Open Type 3mm Size

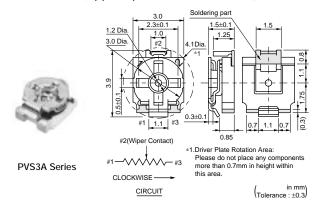
#### PVA3A Series (Applied product to ELV. RoHS)



Part Number	Power Rating (W)	Soldering Method	Number of Turns (Effective Rotation Angle)	Total Resistance Value	TCR (ppm/°C)
PVA3A	0.1(70°C)	Flow/Reflow	1(270°±10°)	100ohm to 2M ohm ±25%	±250

SMD Open Type 3mm Size

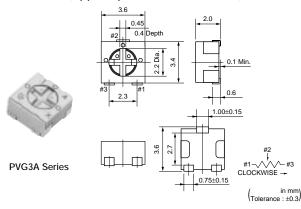
#### PVS3A Series (Applied product to ELV. RoHS)

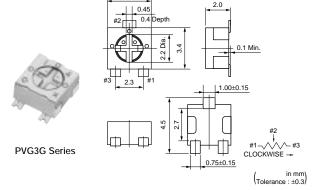


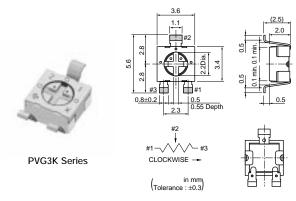
Part Numb	Power Rating (W)	Soldering Method	Number of Turns (Effective Rotation Angle)	Total Resistance Value	TCR (ppm/°C)
PVS3A	0.1(70°C)	Reflow	1(270°±10°)	100ohm to 2M ohm ±25%	±250

SMD Sealed Type 3mm Size

#### PVG3 Series (Applied product to ELV. RoHS)





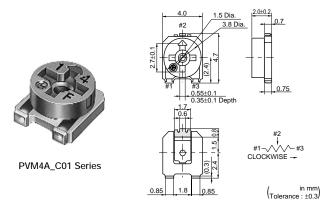


Part Number	Power Rating (W)	Soldering Method	Number of Turns (Effective Rotation Angle)	Total Resistance Value	TCR (ppm/°C)
PVG3A□□□C	0.25(70°C)	Reflow	1(210°±10°)	10ohm to 2M ohm ±20%	±150
PVG3G□□□C	0.25(70°C)	Reflow	1(210°±10°)	10ohm to 2M ohm ±20%	±150
PVG3K□□□C	0.25(70°C)	Reflow	1(210°±10°)	10ohm to 2M ohm ±20%	±150

Operating Temperature Range: -55 to 125  $^{\circ}\text{C}$ 

SMD Sealed Type 4mm Size

#### PVM4 Series (Applied product to ELV. RoHS)



Part Number	Power Rating (W)	Soldering Method	Number of Turns (Effective Rotation Angle)	Total Resistance Value	TCR (ppm/°C)
PVM4A□□□C01	0.1(70°C)	Flow/Reflow	1(240°±10°)	100ohm to 2M ohm ±25%	±250

Operating Temperature Range: -55 to 125 °C

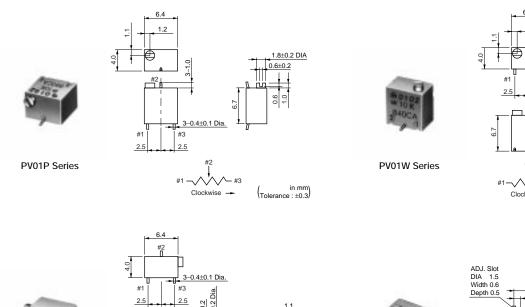
### SMD Sealed Type Multi-turns

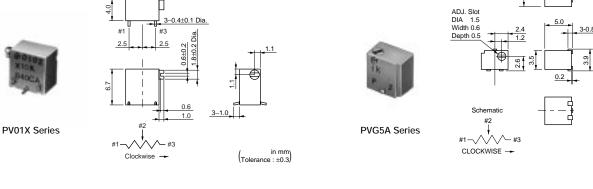
1.8±0.2 Dia. 0.6±0.2

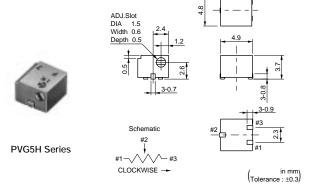
(n mm) Tolerance : ±0.3)

(n mm) Tolerance : ±0.3

#### PV01/PVG5 Series (Applied product to ELV. RoHS)





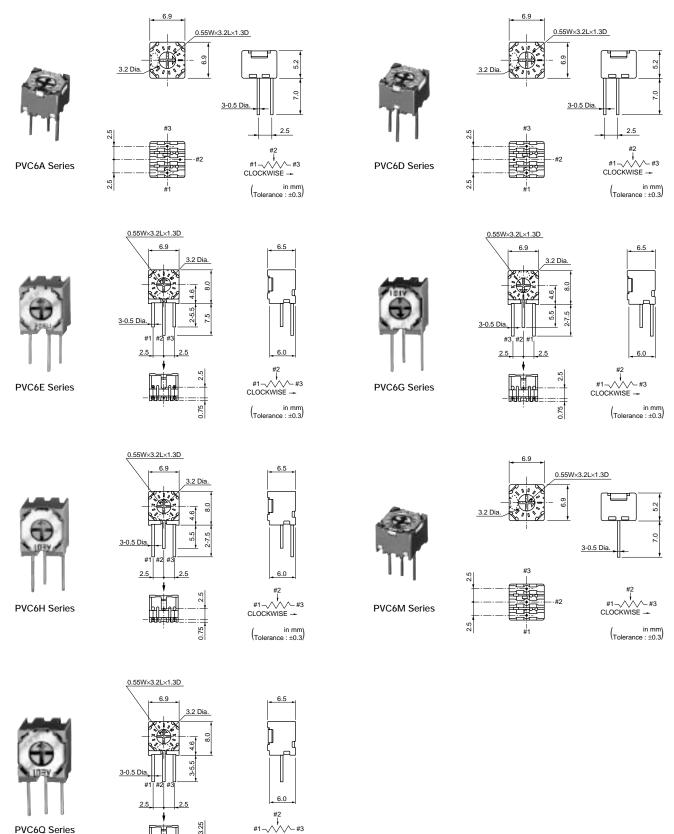


Part Number	Power Rating (W)	Soldering Method	Number of Turns (Effective Rotation Angle)	Total Resistance Value	TCR (ppm/°C)
PV01P□□□C	0.25(85°C)	Reflow	12	10ohm to 1M ohm ±10%	±150
PV01W□□□C	0.25(85°C)	Reflow	12	10ohm to 1M ohm ±10%	±150
PV01X□□□C	0.25(85°C)	Reflow	12	10ohm to 1M ohm ±10%	±150
PVG5A□□□C	0.25(70°C)	Reflow	11	10ohm to 2M ohm ±10%	±150
PVG5H□□□C	0.25(70°C)	Reflow	11	10ohm to 2M ohm ±10%	±150

Operating Temperature Range: -55 to 125  $^{\circ}\text{C}$ 

Lead Sealed Type Single-turn

#### PVC6 Series (Applied product to EVL. RoHS)



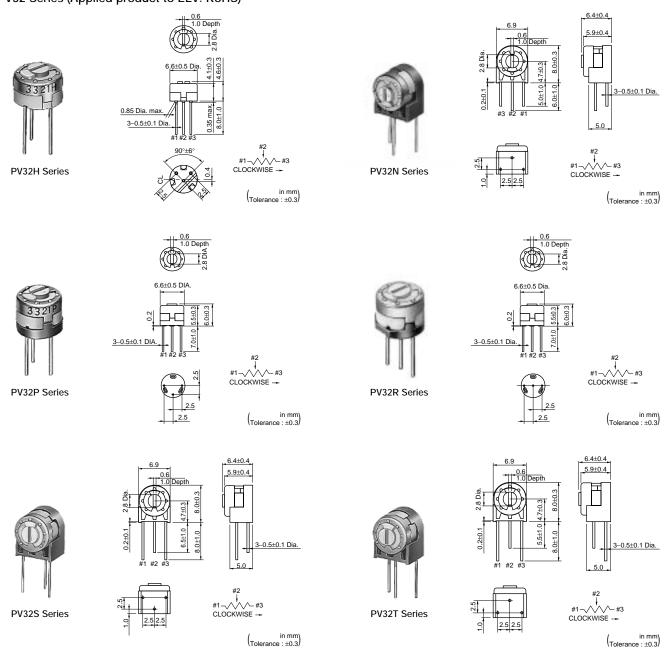
(n mm) Tolerance : ±0.3)

Part Number	Power Rating (W)	Soldering Method	Number of Turns (Effective Rotation Angle)	Total Resistance Value	TCR (ppm/°C)
PVC6A□□□C	0.5(70°C)	Flow/Soldering Iron	1(240°±5°)	10ohm to 5M ohm ±10%	
PVC6D□□□C	0.5(70°C)	Flow/Soldering Iron	1(240°±5°)	10ohm to 5M ohm ±10%	
PVC6E□□□C	0.5(70°C)	Flow/Soldering Iron	1(240°±5°)	10ohm to 5M ohm ±10%	10ohm to 25kohm ±100
PVC6G□□□C	0.5(70°C)	Flow/Soldering Iron	1(240°±5°)	10ohm to 5M ohm ±10%	50kohm to 1Mohm ±150
PVC6H□□□C	0.5(70°C)	Flow/Soldering Iron	1(240°±5°)	10ohm to 5M ohm ±10%	2Mohm to 5Mohm ±100
PVC6M□□□C	0.5(70°C)	Flow/Soldering Iron	1(240°±5°)	10ohm to 5M ohm ±10%	
PVC6Q□□□C	0.5(70°C)	Flow/Soldering Iron	1(240°±5°)	10ohm to 5M ohm ±10%	

Operating Temperature Range: -55 to 125 °C

The order quantity should be an integral multiple of the "Minimum Quantity".

#### PV32 Series (Applied product to ELV. RoHS)



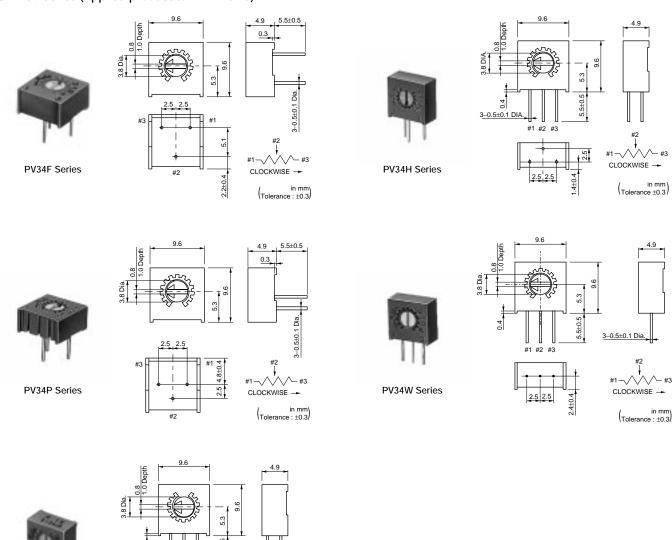
Part Number	Power Rating (W)	Soldering Method	Number of Turns (Effective Rotation Angle)	Total Resistance Value	TCR (ppm/°C)
PV32H□□□A	0.5(70°C)	Flow/Soldering Iron	1(230°±5°)	10ohm to 5M ohm ±20%	±100
PV32N□□□A	0.5(70°C)	Flow/Soldering Iron	1(230°±5°)	10ohm to 5M ohm ±20%	±100
PV32P□□□A	0.5(70°C)	Flow/Soldering Iron	1(230°±5°)	10ohm to 5M ohm ±20%	±100
PV32R□□□A	0.5(70°C)	Flow/Soldering Iron	1(230°±5°)	10ohm to 5M ohm ±20%	±100
PV32S□□□A	0.5(70°C)	Flow/Soldering Iron	1(230°±5°)	10ohm to 5M ohm ±20%	±100
PV32T□□□A	0.5(70°C)	Flow/Soldering Iron	1(230°±5°)	10ohm to 5M ohm ±20%	±100

Operating Temperature Range: -55 to 125  $^{\circ}\text{C}$ 

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PV34X Series

#### PV34 Series (Applied product to ELV. RoHS)



Part Number	Power Rating (W)	Soldering Method	Number of Turns (Effective Rotation Angle)	Total Resistance Value	TCR (ppm/°C)
PV34F□□□C	0.5(70°C)	Flow/Soldering Iron	1(280°±15°)	10ohm to 2M ohm ±10%	40.1.1.400.1.1450
PV34H□□□C	0.5(70°C)	Flow/Soldering Iron	1(280°±15°)	10ohm to 2M ohm ±10%	100hm to 1000hm ±150 2000hm to 2M0hm ±100
PV34P□□□C	0.5(70°C)	Flow/Soldering Iron	1(280°±15°)	10ohm to 2M ohm ±10%	200011111 to 2141011111 ±100

CLOCKWISE -

 $\binom{\text{in mm}}{\text{Tolerance}: \pm 0.3}$ 

The order quantity should be an integral multiple of the "Minimum Quantity".



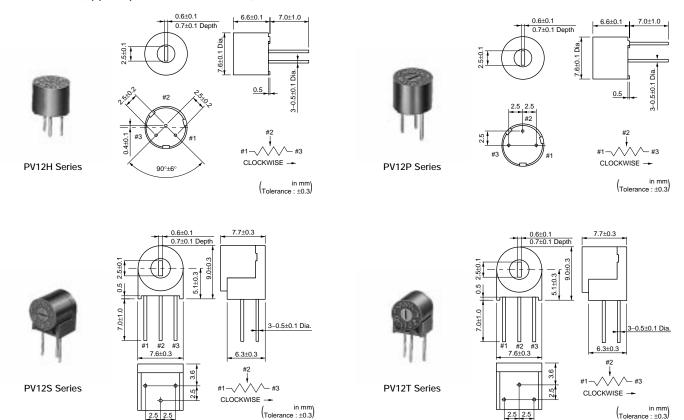
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Part Number	Power Rating (W)	Soldering Method	Number of Turns (Effective Rotation Angle)	Total Resistance Value	TCR (ppm/°C)	
PV34W	0.5(70°C)	Flow/Soldering Iron	1(280°±15°)	10ohm to 2M ohm ±10%	10ohm to 100ohm ±150	
PV34X	0.5(70°C)	Flow/Soldering Iron	1(280°±15°)	10ohm to 2M ohm ±10%	200ohm to 2Mohm ±100	

Operating Temperature Range: -55 to 125 °C

### Lead Sealed Type Multi-turns

#### PV12 Series (Applied product to ELV. RoHS)



Part Number	Power Rating (W)	Soldering Method	Number of Turns (Effective Rotation Angle)	Total Resistance Value	TCR (ppm/°C)
PV12H□□□A	0.5(70°C)	Flow/Soldering Iron	4	10ohm to 2M ohm ±10%	±100
PV12P□□□A	0.5(70°C)	Flow/Soldering Iron	4	10ohm to 2M ohm ±10%	±100
PV12S□□□A	0.5(70°C)	Flow/Soldering Iron	4	10ohm to 2M ohm ±10%	±100
PV12T□□□A	0.5(70°C)	Flow/Soldering Iron	4	10ohm to 2M ohm ±10%	±100

Operating Temperature Range: -55 to 125 °C

### Lead Sealed Type Multi-turns

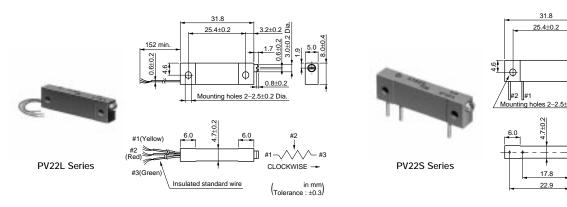
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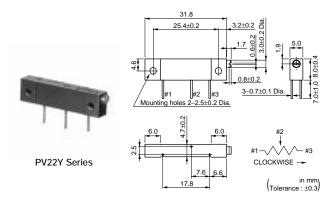
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(n mm) Tolerance : ±0.3)

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#### PV22 Series (Applied product to ELV. RoHS)



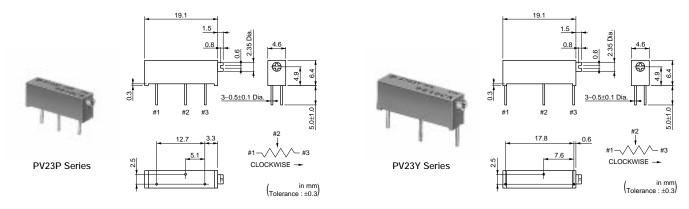


Part Number	Power Rating (W)	Soldering Method	Number of Turns (Effective Rotation Angle)	Total Resistance Value	TCR (ppm/°C)
PV22L□□□C	1.0(70°C)	Flow/Soldering Iron	22	10ohm to 2M ohm ±10%	±100
PV22S□□□C	1.0(70°C)	Flow/Soldering Iron	22	10ohm to 2M ohm ±10%	±100
PV22Y□□□C	1.0(70°C)	Flow/Soldering Iron	22	10ohm to 2M ohm ±10%	±100

Operating Temperature Range: -55 to 150  $^{\circ}\text{C}$ 

### Lead Sealed Type Multi-turns

#### PV23 Series (Applied product to ELV. RoHS)



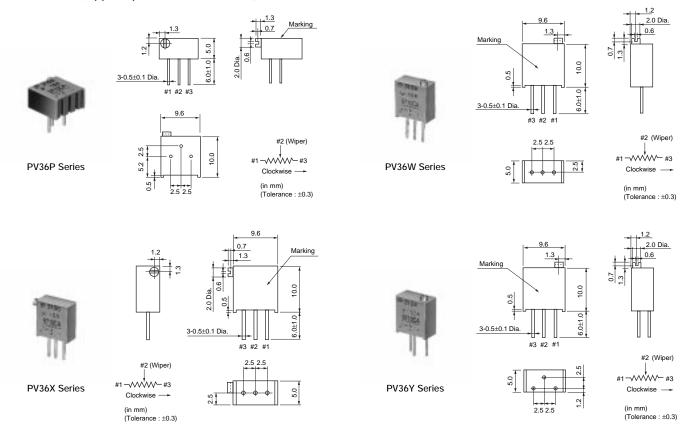
Part Number	Power Rating (W)	Soldering Method	Number of Turns (Effective Rotation Angle)	Total Resistance Value	TCR (ppm/°C)	
PV23P□□□C	0.75(70°C)	Flow/Soldering Iron	15	10ohm to 2M ohm ±10%	10ohm to 100ohm ±150	
PV23Y□□□C	0.75(70°C)	Flow/Soldering Iron	15	10ohm to 2M ohm ±10%	200ohm to 2Mohm ±100	

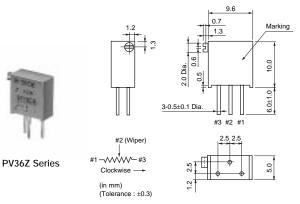
Operating Temperature Range: -55 to 125  $^{\circ}\text{C}$ 

The order quantity should be an integral multiple of the "Minimum Quantity" shown in the beginning of this catalog.

### Lead Sealed Type Multi-turns

#### PV36 Series (Applied product to ELV. RoHS)



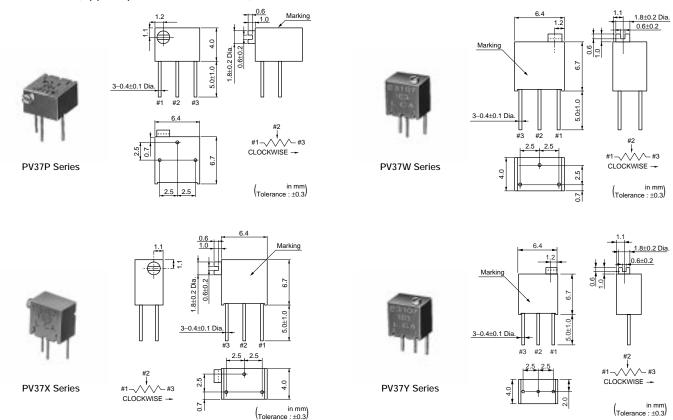


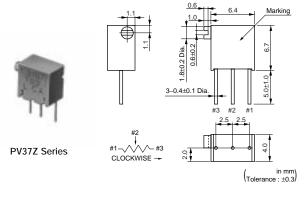
Part Number	Power Rating (W)	Soldering Method	Number of Turns (Effective Rotation Angle)	Total Resistance Value	TCR (ppm/°C)	
PV36P□□□C	0.5(70°C)	Flow/Soldering Iron	25	10ohm to 2M ohm ±10%		
PV36W□□□C	0.5(70°C)	Flow/Soldering Iron	25	10ohm to 2M ohm ±10%	10ohm to 100ohm ±150 200ohm to 2Mohm ±100	
PV36X□□□C	0.5(70°C)	Flow/Soldering Iron	25	10ohm to 2M ohm ±10%		
PV36Y□□□C	0.5(70°C)	Flow/Soldering Iron	25	10ohm to 2M ohm ±10%		
PV36Z□□□C	0.5(70°C)	Flow/Soldering Iron	25	10ohm to 2M ohm ±10%		

Operating Temperature Range: -55 to 125  $^{\circ}\text{C}$ 

### Lead Sealed Type Multi-turns

#### PV37 Series (Applied product to ELV. RoHS)



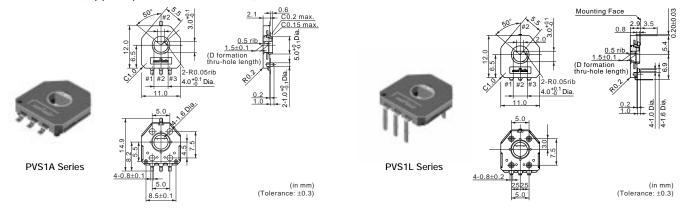


Part Number	Power Rating (W)	Soldering Method	Number of Turns (Effective Rotation Angle)	Total Resistance Value	TCR (ppm/°C)
PV37P□□□C	0.25(85°C)	Flow/Soldering Iron	12	10ohm to 2M ohm ±10%	±150
PV37W□□□C	0.25(85°C)	Flow/Soldering Iron	12	10ohm to 2M ohm ±10%	±150
PV37X□□□C	0.25(85°C)	Flow/Soldering Iron	12	10ohm to 2M ohm ±10%	±150
PV37Y□□□C	0.25(85°C)	Flow/Soldering Iron	12	10ohm to 2M ohm ±10%	±150
PV37Z□□□C	0.25(85°C)	Flow/Soldering Iron	12	10ohm to 2M ohm ±10%	±150

Operating Temperature Range: -55 to 125  $^{\circ}\text{C}$ 

SMD Dust-proof Type 12mm Size

#### PVS1 Series (Applied product to ELV. RoHS)



Part Number	Total Resistance Value (k ohm)	Linearity (%)	Effective Rotational Angle	TCR	Rotational Life
PVS1A103A01	10 ±30%	±2	333.3° (Ref.)	±500ppm/°C	1M cycles
PVS1L103A01	10 ±30%	±2	333.3° (Ref.)	±500ppm/°C	1M cycles

Operating Temperature Range: -40 to 85 °C