



Features

- Carbon element
- Insulated shaft
- Wide variety of mounting styles
- Center detent option
- RoHS compliant*



PTV09 Series - 9 mm Potentiometer

Electrical Characteristics

Taper..... Linear, audio
Standard Resistance Range
..... 1 K ohms to 1 M ohms
Standard Resistance Tolerance..... $\pm 20\%$
Residual Resistance
..... 500 ohms or $\pm 1\%$ max.

Environmental Characteristics

Operating Temperature..... -10°C to $+50^\circ\text{C}$
Power Rating
(Linear and Audio)..... 0.05 watt
Maximum Operating Voltage
(Linear and Audio)..... 20 VDC, 50 VAC
Sliding Noise 100 mV max.

Mechanical Characteristics

Mechanical Angle $280^\circ \pm 10^\circ$
Rotational Torque 10 to 100 g-cm
Detent Torque 20 to 200 gf-cm
Stop Strength 2 kg-cm min.
Rotational Life 10,000 cycles
Soldering Condition
..... 300°C max. within 3 seconds
Hardware One flat washer and one
hex nut supplied with bushing version

How To Order

PTV09A - 2 0 20 F - B 203

Model _____
Terminal Configuration _____
(Pin Layout)
1 = Horizontal/Rear Mount
w/Sleeve Bushing
2 = Vertical/Side Mount,
Bushingsless,
10 mm Height
3 = Vertical/Side Mount,
Bushingsless,
6.5 mm Height
4 = Horizontal/Rear Mount,
Bushingsless
5 = Horizontal/Rear Mount
w/Plastic Plain Bushing
6 = Horizontal/Rear Mount
w/Metal Threaded
Bushings
7 = Vertical/Side Mount
w/Sleeve Bushing,
6.5 mm Height
8 = Vertical/Side Mount
w/Sleeve Bushing,
10 mm height

Option _____
0 = No Detent 2 = Center

Standard Shaft Length
15 = 15 mm** 25 = 25 mm
20 = 20 mm 30 = 30 mm

Shaft Style _____
F = Flat Type Insulated Shaft
S = Insulated Knurled (18 Teeth)
U = Insulated Knurled (40 Teeth)

Resistance Taper _____
Taper Series followed by Curve Number

Resistance Code (See Table) _____

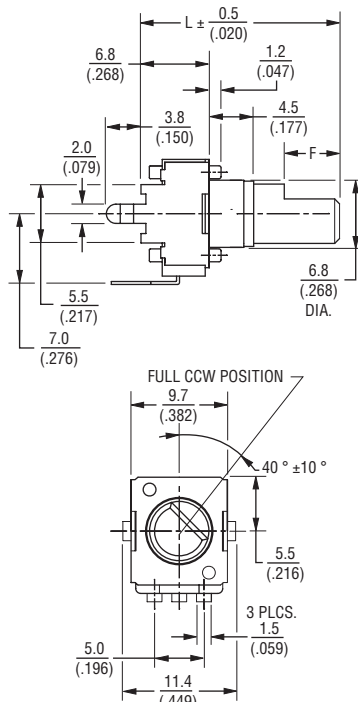
Other styles available.

** Bushingsless version only.

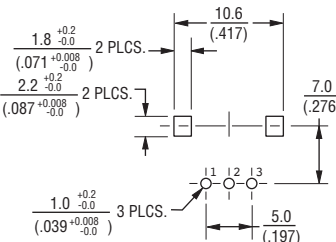
Product Dimensions

PTV09A-1

(Horizontal/Rear Mount w/Sleeve Bushing)

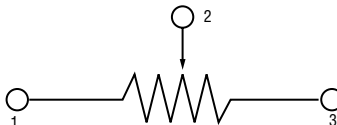


RECOMMENDED PCB LAYOUT
(HORIZONTAL/REAR MOUNT)



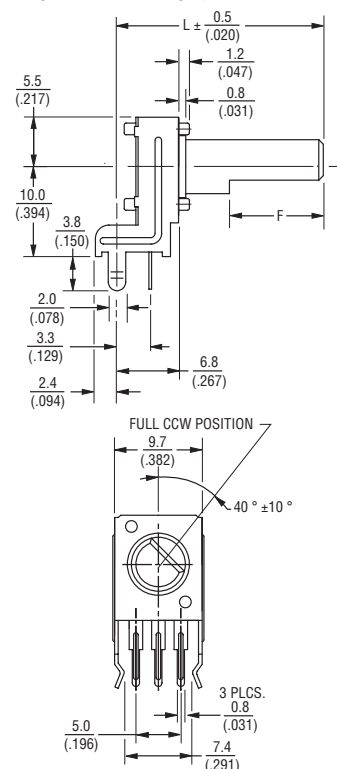
DIMENSIONS: MM
(INCHES)

Schematic

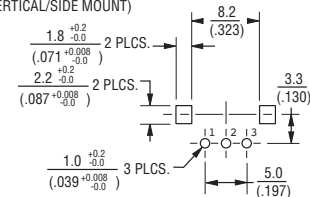


PTV09A-2

(Vertical/Side Mount,
Bushingsless, 10 mm Height)



RECOMMENDED PCB LAYOUT
(VERTICAL/SIDE MOUNT)



Standard Resistance Table

Resistance (Ohms)	Resistance Code
1,000	102
2,000	202
5,000	502
10,000	103
20,000	203
50,000	503
100,000	104
200,000	204
500,000	504
1,000,000	105

Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.



WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

Applications

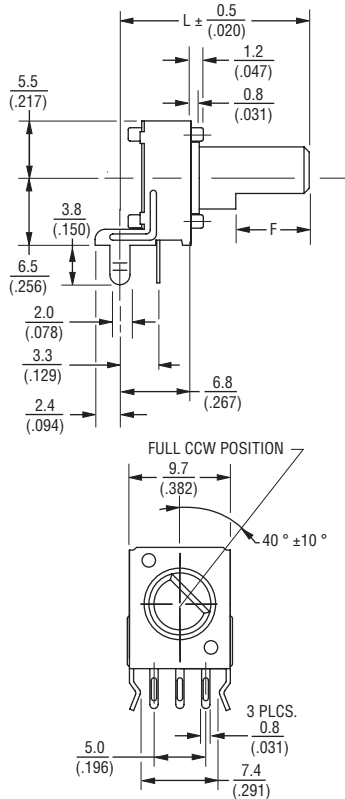
- Commercial communications equipment
- Portable electronics
- Amplifiers/mixers/drum machines/synthesizers
- Consumer goods
- Commercial appliances

PTV09 Series - 9 mm Potentiometer

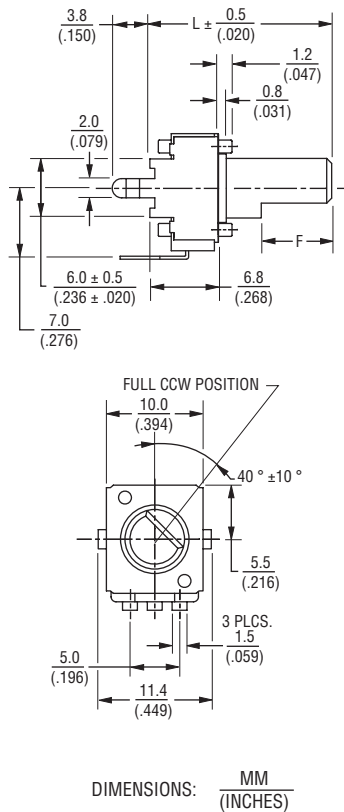
BOURNS®

Product Dimensions (Continued)

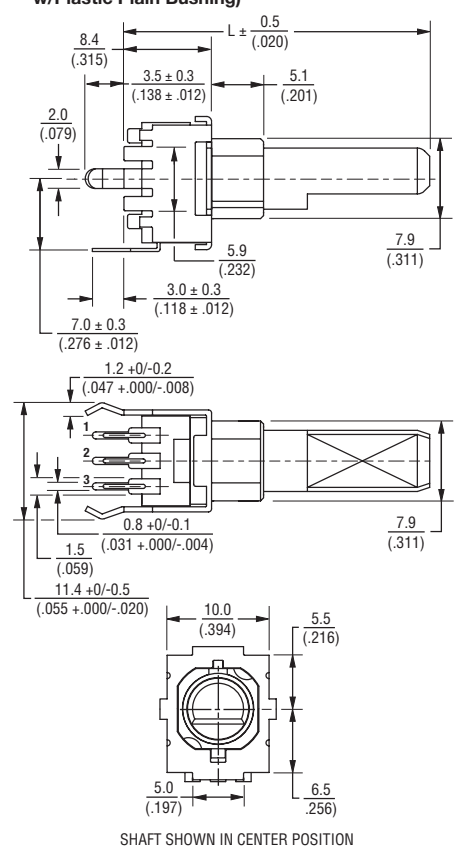
PTV09A-3
(Vertical/Side Mount,
Bushings, 6.5 mm Height)



PTV09A-4
(Horizontal/Rear Mount, Bushingless)

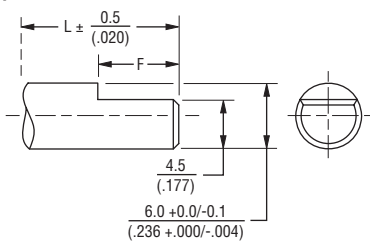


PTV09A-5
(Horizontal/Rear Mount
w/Plastic Plain Bushing)



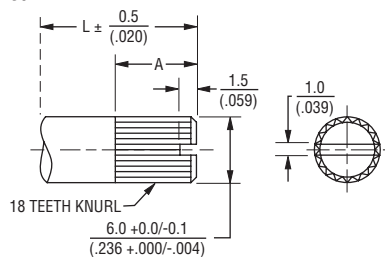
Shaft Styles

F-Type



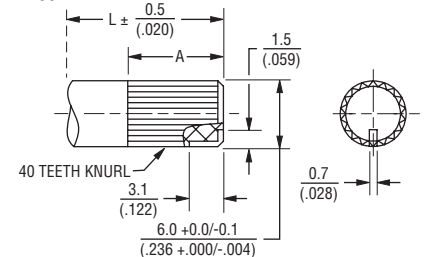
L	15 (.591)	20 (.787)	25 (.984)	30 (1.181)
F	6 (.236)	7 (.275)	12 (.472)	12 (.472)

S-Type



L	15 (.591)	20 (.787)	25 (.984)	30 (1.181)
A	7 (.275)	7 (.275)	7 (.275)	7 (.275)

U-Type



L	15 (.591)	20 (.787)	25 (.984)	30 (1.181)
A	6 (.236)	7 (.275)	7 (.275)	7 (.275)

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

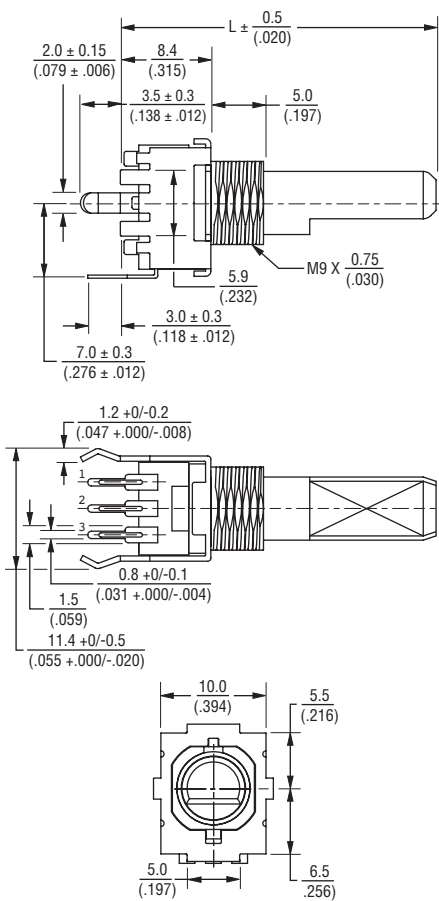
The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

PTV09 Series - 9 mm Potentiometer

BOURNS®

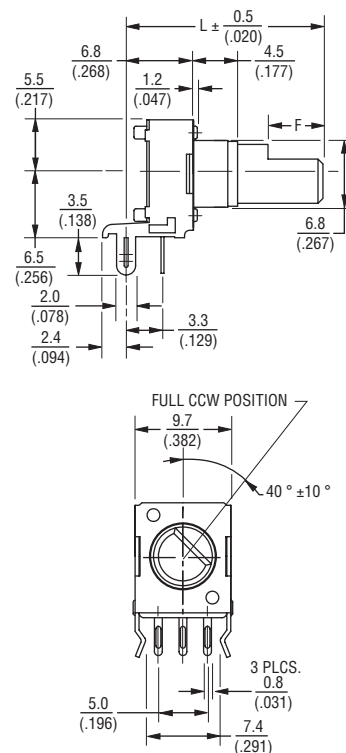
Product Dimensions (Continued)

PTV09A-6
(Horizontal/Rear Mount
w/Metal Threaded Bushing)



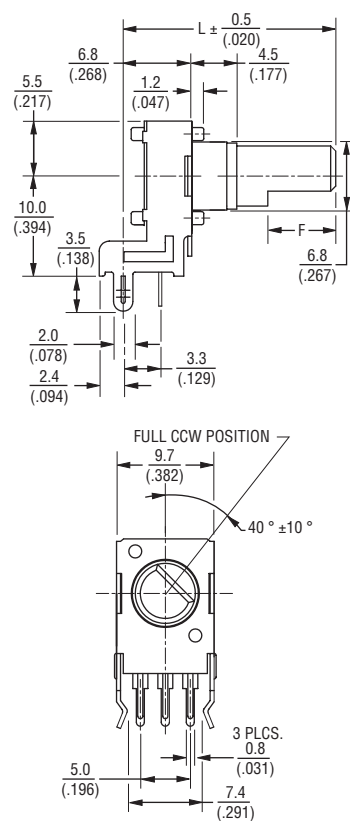
SHAFT SHOWN IN CENTER POSITION

PTV09A-7
(Vertical/Side Mount
w/Sleeve Bushing, 6.5 mm Height)

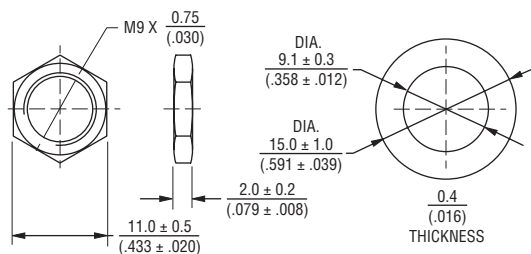


DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

PTV09A-8
(Vertical/Side Mount
w/Sleeve Bushing, 10 mm Height)



Mounting Hardware



Specifications are subject to change without notice.

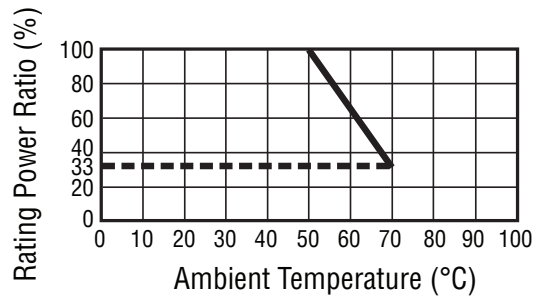
Users should verify actual device performance in their specific applications.

The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

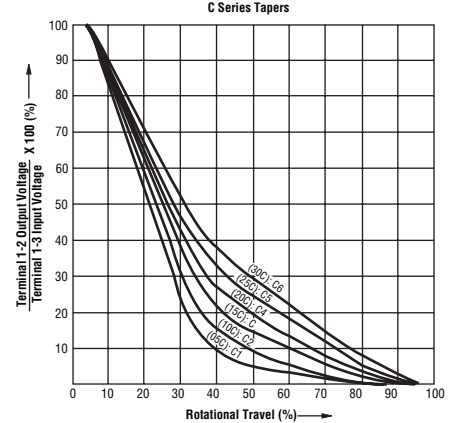
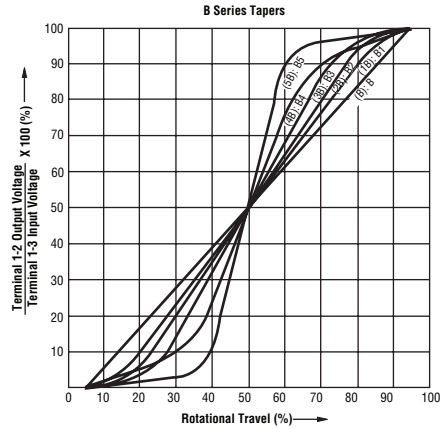
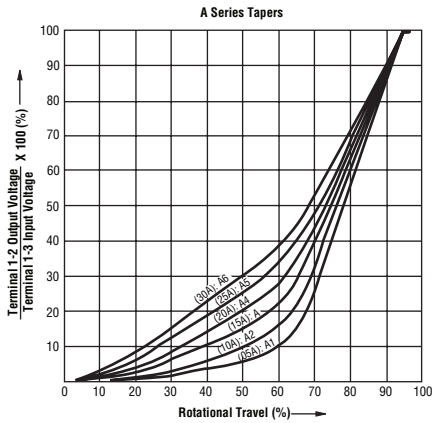
PTV09 Series - 9 mm Potentiometer

BOURNS®

Derating Curve



Tapers



BOURNS®

Asia-Pacific: Tel: +886-2 2562-4117 • Email: asiacus@bourns.com

EMEA: Tel: +36 88 885 877 • Email: eurocus@bourns.com

The Americas: Tel: +1-951 781-5500 • Email: americus@bourns.com

www.bourns.com

REV. 01/20

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

This legal disclaimer applies to purchasers and users of Bourns® products manufactured by or on behalf of Bourns, Inc. and its affiliates (collectively, "Bourns").

Unless otherwise expressly indicated in writing, Bourns® products and data sheets relating thereto are subject to change without notice. Users should check for and obtain the latest relevant information and verify that such information is current and complete before placing orders for Bourns® products.

The characteristics and parameters of a Bourns® product set forth in its data sheet are based on laboratory conditions, and statements regarding the suitability of products for certain types of applications are based on Bourns' knowledge of typical requirements in generic applications. The characteristics and parameters of a Bourns® product in a user application may vary from the data sheet characteristics and parameters due to (i) the combination of the Bourns® product with other components in the user's application, or (ii) the environment of the user application itself. The characteristics and parameters of a Bourns® product also can and do vary in different applications and actual performance may vary over time. Users should always verify the actual performance of the Bourns® product in their specific devices and applications, and make their own independent judgments regarding the amount of additional test margin to design into their device or application to compensate for differences between laboratory and real world conditions.

Unless Bourns has explicitly designated an individual Bourns® product as meeting the requirements of a particular industry standard (e.g., ISO/TS 16949) or a particular qualification (e.g., UL listed or recognized), Bourns is not responsible for any failure of an individual Bourns® product to meet the requirements of such industry standard or particular qualification. Users of Bourns® products are responsible for ensuring compliance with safety-related requirements and standards applicable to their devices or applications.

Bourns® products are not recommended, authorized or intended for use in nuclear, lifesaving, life-critical or life-sustaining applications, nor in any other applications where failure or malfunction may result in personal injury, death, or severe property or environmental damage. Unless expressly and specifically approved in writing by two authorized Bourns representatives on a case-by-case basis, use of any Bourns® products in such unauthorized applications might not be safe and thus is at the user's sole risk. Life-critical applications include devices identified by the U.S. Food and Drug Administration as Class III devices and generally equivalent classifications outside of the United States.

Bourns expressly identifies those Bourns® standard products that are suitable for use in automotive applications on such products' data sheets in the section entitled "Applications." Unless expressly and specifically approved in writing by two authorized Bourns representatives on a case-by-case basis, use of any other Bourns® standard products in an automotive application might not be safe and thus is not recommended, authorized or intended and is at the user's sole risk. If Bourns expressly identifies a sub-category of automotive application in the data sheet for its standard products (such as infotainment or lighting), such identification means that Bourns has reviewed its standard product and has determined that if such Bourns® standard product is considered for potential use in automotive applications, it should only be used in such sub-category of automotive applications. Any reference to Bourns® standard product in the data sheet as compliant with the AEC-Q standard or "automotive grade" does not by itself mean that Bourns has approved such product for use in an automotive application.

Bourns® standard products are not tested to comply with United States Federal Aviation Administration standards generally or any other generally equivalent governmental organization standard applicable to products designed or manufactured for use in aircraft or space applications. Bourns expressly identifies Bourns® standard products that are suitable for use in aircraft or space applications on such products' data sheets in the section entitled "Applications." Unless expressly and specifically approved in writing by two authorized Bourns representatives on a case-by-case basis, use of any other Bourns® standard product in an aircraft or space application might not be safe and thus is not recommended, authorized or intended and is at the user's sole risk.

The use and level of testing applicable to Bourns® custom products shall be negotiated on a case-by-case basis by Bourns and the user for which such Bourns® custom products are specially designed. Absent a written agreement between Bourns and the user regarding the use and level of such testing, the above provisions applicable to Bourns® standard products shall also apply to such Bourns® custom products.

Users shall not sell, transfer, export or re-export any Bourns® products or technology for use in activities which involve the design, development, production, use or stockpiling of nuclear, chemical or biological weapons or missiles, nor shall they use Bourns® products or technology in any facility which engages in activities relating to such devices. The foregoing restrictions apply to all uses and applications that violate national or international prohibitions, including embargos or international regulations. Further, Bourns® products and Bourns technology and technical data may not under any circumstance be exported or re-exported to countries subject to international sanctions or embargoes. Bourns® products may not, without prior authorization from Bourns and/or the U.S. Government, be resold, transferred, or re-exported to any party not eligible to receive U.S. commodities, software, and technical data.

To the maximum extent permitted by applicable law, Bourns disclaims (i) any and all liability for special, punitive, consequential, incidental or indirect damages or lost revenues or lost profits, and (ii) any and all implied warranties, including implied warranties of fitness for particular purpose, non-infringement and merchantability.

For your convenience, copies of this Legal Disclaimer Notice with German, Spanish, Japanese, Traditional Chinese and Simplified Chinese bilingual versions are available at:

Web Page: <http://www.bourns.com/legal/disclaimers-terms-and-policies>

PDF: <http://www.bourns.com/docs/Legal/disclaimer.pdf>

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Bourns:

PTV09A-4020F-B203	PTV09A-4025F-B103	PTV09A-4025F-B503	PTV09A-4020U-B104	PTV09A-2025F-B103
PTV09A-2020U-A102	PTV09A-4015U-B103	PTV09A-4020U-B103	PTV09A-4025U-B103	PTV09A-4220U-B103
PTV09A-2015F-B103	PTV09A-2015F-B502	PTV09A-2015F-B503	PTV09A-2015F-B504	PTV09A-2020F-A102
PTV09A-2020F-A103	PTV09A-2020F-A104	PTV09A-2020F-A203	PTV09A-2020F-A502	PTV09A-2020F-A503
PTV09A-2020F-B102	PTV09A-2020F-B103	PTV09A-2020F-B104	PTV09A-2020F-B502	PTV09A-2020F-B503
PTV09A-2025U-A104	PTV09A-4015F-A103	PTV09A-4015F-B102	PTV09A-4015F-B103	PTV09A-4015F-B104
PTV09A-4015F-B502	PTV09A-4015U-A204	PTV09A-4020F-A103	PTV09A-4020F-A203	PTV09A-4020F-A502
PTV09A-4020F-A504	PTV09A-4020F-B102	PTV09A-4020F-B103	PTV09A-4020F-B104	PTV09A-4020F-B202
PTV09A-4020F-B502	PTV09A-4020F-B503	PTV09A-4025F-A203	PTV09A-4025F-B102	PTV09A-4030U-A204
PTV09A-4030U-B203	PTV09A-4030U-B204	PTV09A-4030U-B502	PTV09A-40AAF-B503	PTV09A-40AAG-B503
PTV09A-40AAJ-B502	PTV09A-40ACF-B503	PTV09A-40CAA-B503	PTV09A-40CCB-B503	PTV09A-40CFF-B503
PTV09A-4220F-B103	PTV09A-4220F-B502	PTV09A-4225F-A503	PTV09A-4225F-B102	PTV09A-4225F-B103
PTV09A-4225F-B104	PTV09A-4225F-B203	PTV09A-4225F-B502	PTV09A-4225K-A103	PTV09A-4225U-B103
PTV09A-4230U-B502	PTV09A-4015F-B503	PTV09A-4020U-A503	PTV09A-4030U-A503	PTV09A-4025U-A104
PTV09A-4020U-B102	PTV09A-2030U-B102	PTV09A-2030U-B104	PTV09A-2015S-B253	PTV09A-2025U-A102
PTV09A-2215S-A103	PTV09A-4030F-A104	PTV09A-4030S-A102	PTV09A-2020S-B502	PTV09A-4020S-A105
PTV09A-4020U-B203	PTV09A-1020F-A203	PTV09A-4030F-B103	PTV09A-4020S-B504	PTV09A-2015S-B102
PTV09A-3020F-B104	PTV09A-4020S-B503	PTV09A-4020F-B105	PTV09A-4020S-A104	PTV09A-2015F-A503
PTV09A-3020S-B103	PTV09A-4015F-B203	PTV09A-4015F-B204	PTV09A-2015S-A105	PTV09A-4025F-A105
PTV09A-2030U-A102	PTV09A-8020F-B203	PTV09A-2015S-B254	PTV09A-4030F-B503	PTV09A-7020F-B203