

# Multiplane Mounts

## Economical protection from lower frequency vibration

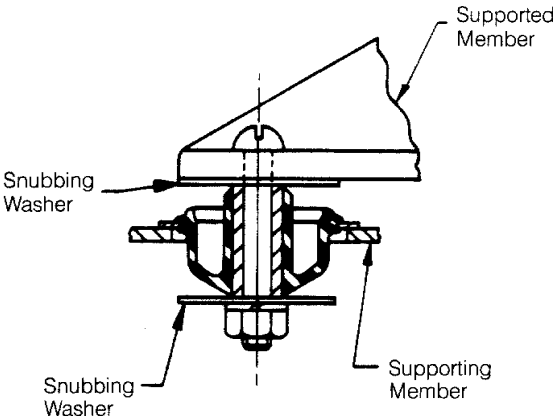
Standard stock Multiplane Mounts are recommended for the isolation of vibration. Lightweight and compact, they provide economical protection from lower frequency disturbances regardless of directions of the forces. They are not recommended where severe, frequently recurring shock is encountered.

These mounts are available in load ratings from 0.25 to 8 lbs. per unit. When loaded to their capacity, a system natural frequency of approximately 10 Hz results, providing effective isolation in applications where disturbing frequencies are above 20 Hz. The radial stiffness is the same as that in the axial direction.

Multiplane Mounts are easy to install. They are available in square or diamond configurations to suit a variety of design requirements.

The contour of the flexing element provides uniform stress distribution.

Snubbing washers provide an interlocking system of metal parts which act to prevent damage from overload or excessive shock impact.



## 106APL SERIES

(Metric values in parenthesis)

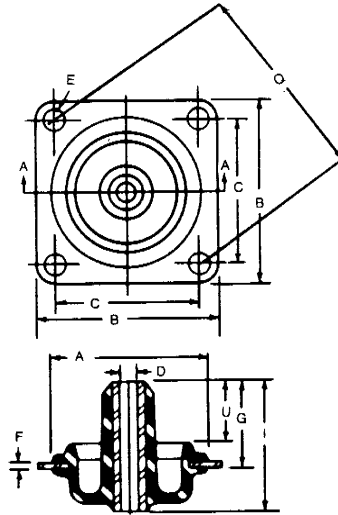
**Load capacity:** 0.25 to 2 lbs. (0.10 to 0.90 kg)

**Materials:**

Metal Parts — 2024-T3 or 2024-T4 aluminum alloy per QQ-A-225

Elastomer — Lord BTR® or BTR® II

**Finish:** Metal Parts — chromate treated per MIL-C-5541, Class 1A



## Performance Characteristics

Part Number	Static rate		Nominal axial natural frequency (Hz) <sup>†</sup>	Axial spring rate <sup>†</sup>	
	lbs	kg		lbs/in	N/mm
106APL*-A	1/4	.10	13	3	.5
106APL*-B	1/2	.20	13	5	.9
106APL*-C	3/4	.34	13	8	1.4
106APL*-1	1	.45	13	11	1.9
106APL*-1B	1 1/2	.70	13	16	2.8
106APL*-2	2	.90	13	20	3.5

<sup>†</sup>At .036 in. (.91 mm) D.A. input and rated load.

\*When ordering, use the following in place of the (\*):

Q = BTR II Elastomer

W = BTR Elastomer

## Dimensions Under No Load

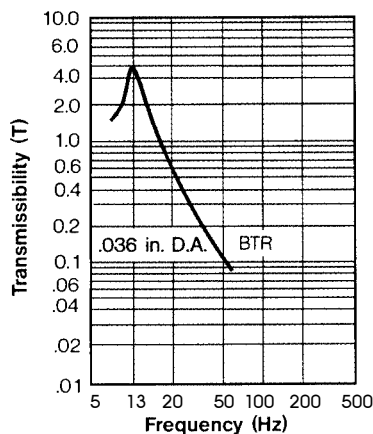
	A*	B	C	D +.008/-0.005 +.20/-0.12	E +.003/-0.002 +.07/-0.05	F	G*	I	Q	U*
in	1.00	1.25	1.000	.166	.141	.032	.53	.84	1.414	.38
mm	25.4	31.7	25.40	4.22	3.58	.81	13.4	21.3	35.92	9.6

\*Reference dimensions

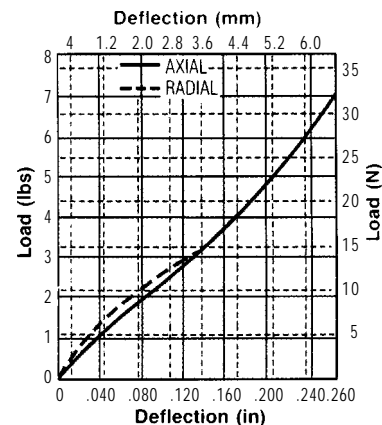
## Snubbing Washer Dimensions

Part Number is	Outside Diameter	Inside Diameter	Thickness
J-2049-1D			
in	.88	.17	.03
mm	22.3	4.3	.8

## Transmissibility vs. frequency



## Load vs. deflection for 106APLW-2



## 106APDL SERIES

(Metric values in parenthesis)

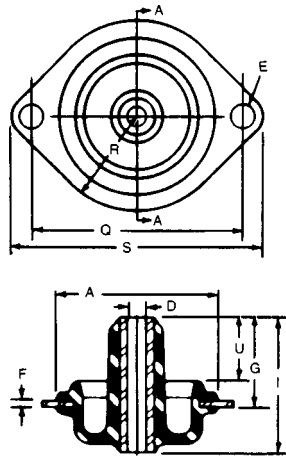
**Load capacity:** 0.25 to 2 lbs. (0.10 to 0.90 kg)

### Materials:

Metal Parts — 2024-T3 or 2024-T4 aluminum alloy per QQ-A-225

Elastomer — Lord BTR® or BTR® II

**Finish:** Metal Parts — chromate treated per MIL-C-5541, Class 1A



## Performance Characteristics

Part Number	Static rate		Nominal axial natural frequency (Hz) <sup>†</sup>	Axial spring rate <sup>†</sup>	
	lbs	kg		lbs/in	N/mm
106APDL*-A	1/4	.10	13	3	.5
106APDL*-B	1/2	.20	13	5	.9
106APDL*-C	3/4	.34	13	8	1.4
106APDL*-1	1	.45	13	11	1.9
106APDL*-1B	1 1/2	.70	13	16	2.8
106APDL*-2	2	.90	13	20	3.5

<sup>†</sup>At .036 in. (.91 mm) D.A. input and rated load.

\*When ordering, use the following in place of the (\*):

Q = BTR II Elastomer

W = BTR Elastomer

## Dimensions Under No Load

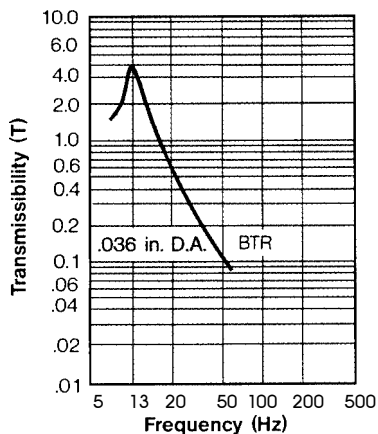
	A*	D	E	F	G*	I	Q	R	S	U*
	$+.008/-0.005$	$+.003/-0.002$	$+.003/-0.002$							
	$+.20/-0.12$	$+.07/-0.05$								
in	1.00	1.66	.141	.032	.53	.84	1.414	.62	1.66	.38
mm	25.4	4.22	3.58	.81	13.4	21.3	35.92	15.7	42.2	9.6

\*Reference dimensions

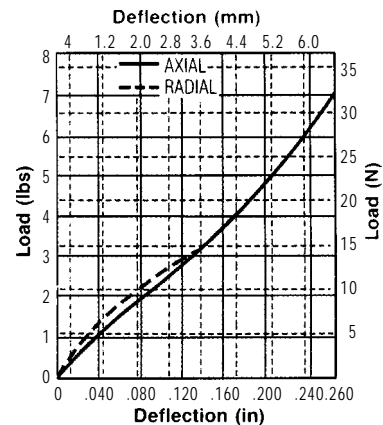
## Snubbing Washer Dimensions

Part Number is	Outside Diameter	Inside Diameter	Thickness
J-2049-1D			
in	.88	.17	.03
mm	22.3	4.3	.8

## Transmissibility vs. frequency



## Load vs. deflection for 106APDLW-2



## 156APL SERIES

(Metric values in parenthesis)

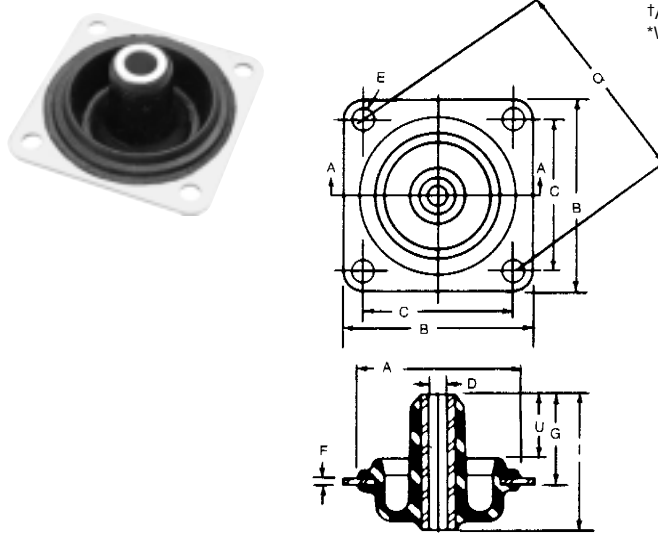
**Load capacity:** 3 to 8 lbs. (1.4 to 3.6 kg)

### Materials:

Metal Parts — 2024-T3 or 2024-T4 aluminum alloy per QQ-A-225

Elastomer — Lord BTR® or BTR® II

**Finish:** Metal Parts — chromate treated per MIL-C-5541, Class 1A



## Performance Characteristics

Part Number	Static rate		Nominal axial natural frequency (Hz) <sup>†</sup>	Axial spring rate <sup>†</sup>	
	lbs	kg		lbs/in	N/mm
156APL*-3	3	1.40	13	30	5.2
156APL*-4B	4.5	2.00	13	45	7.8
156APL*-6B	6.5	2.95	13	65	11
156APL*-8	8	3.60	13	80	14

<sup>†</sup>At .036 in. (.91 mm) D.A. input and rated load.

\*When ordering, use the following in place of the (\*):

Q = BTR II Elastomer

W = BTR Elastomer

## Dimensions Under No Load

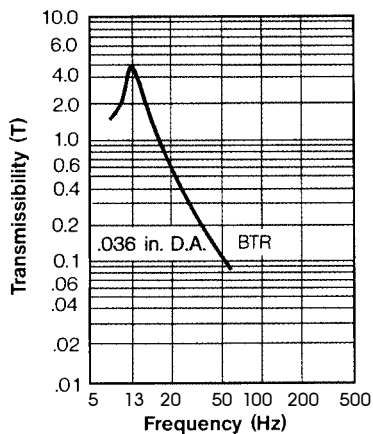
	A <sup>♣</sup>	B	C	D +.008/-005 +.20/-12	E +.003/-002 +.07/-05	F	G <sup>♣</sup>	I	Q	U <sup>♣</sup>
in	1.50	1.75	1.375	.257	.166	.050	.55	.97	1.945	.38
mm	38.1	44.4	34.92	6.53	4.22	1.27	13.9	24.6	49.40	9.6

♣Reference dimensions

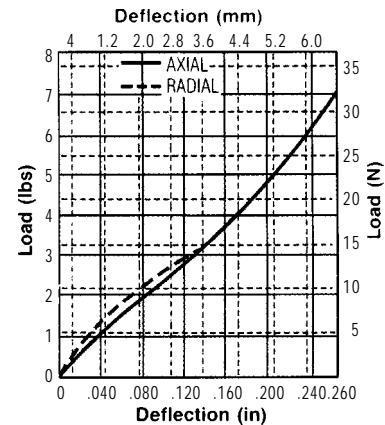
## Snubbing Washer Dimensions

Part Number is	Outside Diameter	Inside Diameter	Thickness
J-2049-2D			
in	1.38	.26	.05
mm	35.0	6.6	1.3

## Transmissibility vs. frequency



## Load vs. deflection for 156APLW-3



## 156APDL SERIES

(Metric values in parenthesis)

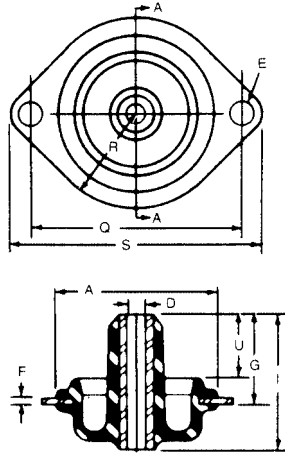
**Load capacity:** 3 to 8 lbs. (1.4 to 3.6 kg)

**Materials:**

Metal Parts — 2024-T3 or 2024-T4 aluminum alloy per QQ-A-225

Elastomer — Lord BTR® or BTR® II

**Finish:** Metal Parts — chromate treated per MIL-C-5541, Class 1A



**Dimensions Under No Load**

	A <sup>♣</sup>	D +.008/- .005 +.20/- .12	E +.003/- .002 +.07/- .05	F	G <sup>♣</sup>	I	Q	R	S	U <sup>♣</sup>
in	1.50	.257	.166	.050	.55	.97	1.945	.88	2.32	.38
mm	38.1	6.53	4.22	1.27	13.9	24.6	49.40	22.4	58.9	9.6

♣Reference dimensions

**Performance Characteristics**

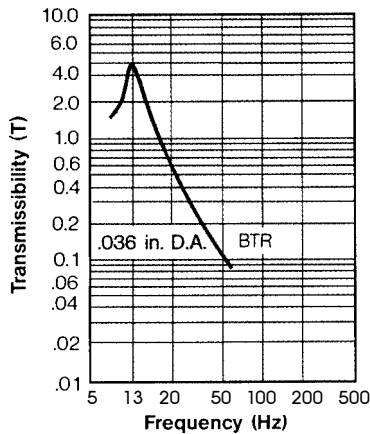
Part Number	Static rate		Nominal axial natural frequency (Hz) <sup>†</sup>	Axial spring rate <sup>†</sup>	
	lbs	kg		lbs/in	N/mm
156APDL*-3	3	1.40	13	30	5.2
156APDL*-4B	4.5	2.00	13	45	7.8
156APDL*-6B	6.5	2.95	13	65	11
156APDL*-8	8	3.60	13	80	14

<sup>†</sup>At .036 in. (.91 mm) D.A. input and rated load.  
 \*When ordering, use the following in place of the (\*):  
 Q = BTR II Elastomer  
 W = BTR Elastomer

**Snubbing Washer Dimensions**

Part Number	Outside Diameter	Inside Diameter	Thickness
is J-2049-2D			
in	1.38	.26	.05
mm	35.0	6.6	1.3

**Transmissibility vs. frequency**



**Load vs. deflection for 156APDLW-3**

