

LOW PROFILE AVIONICS MOUNTS

AM SERIES

LOW PROFILE, ALL-DIRECTION VIBRATION AND SHOCK MOUNTS FOR AVIONICS EQUIPMENT AND OTHER SENSITIVE DEVICES

LORD Corporation Low Profile Avionics Mounts (AM Series) set the standard for compact, high-load, high-capacity isolators. They are designed to support and protect avionics equipment in all types of aircraft. Inertial guidance and navigation systems and radar components are examples of applications where these mounts are used. In addition, AM Series Mounts are used to isolate engine/aircraft accessories such as fuel controls, pressure sensors and oil coolers.

The Low Profile Avionics Mounts are tested and approved to the environmental tests appearing in MIL-STD-810 or MIL-E-5400. Tables show the sizes, capacities and the spring rates of these vibration isolators. They may be used in a temperature range of -65°F to +300°F (-54°C to +149°C) for BTR® Silicone and -40°F to +300°F (-40°C to +149°C) for BTR® II Silicone.

Low Profile Avionics Mounts are made with specially compounded silicone elastomers which exhibit excellent resonant control. This is evidenced by the low transmissibility at resonance. These designs also provide linear deflection characteristics.

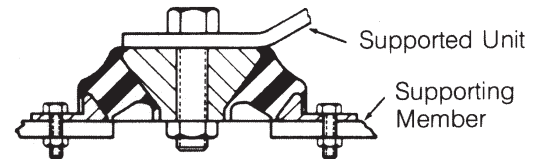


FIGURE 1 – TYPICAL INSTALLATION OF AM SERIES MOUNT*

* Requires small attachment holes and a large clearance hole for the through bolt and nut. The clearance hole diameter should be equal to the nut width (across corners) + $T_R \times$ (max. D.A. input at resonance).

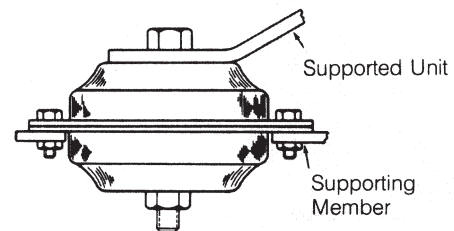


FIGURE 2 – TYPICAL INSTALLATION OF BACK-TO-BACK MOUNT**

** When the load per support point exceeds the load rating of a single mount, the mounts can be installed back-to-back thereby doubling the capacity and the spring rate.

LOW PROFILE AVIONICS MOUNTS

AM-001 SERIES

- **Maximum static load per mount:**

3 lb (1.4 kg)

- **Maximum dynamic input at resonance:**

0.036 in (0.91 mm) D.A.

- **Weight:**

0.21 oz (6.0 g)

- **Materials:**

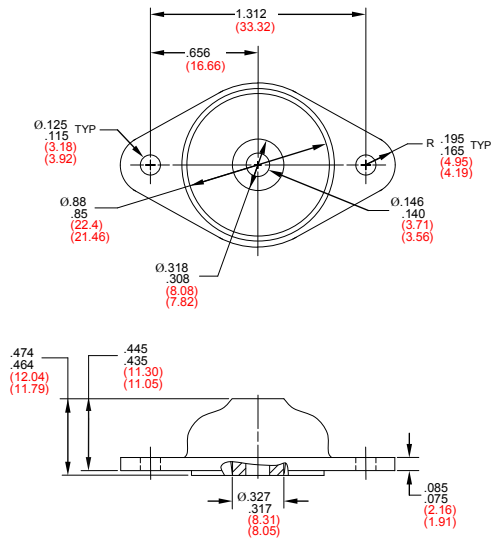
Metal parts and finish – aluminum alloy, chromate treated per MIL-DTL-5541, Class 1A

Inner member – 2024-T4 aluminum

Plate – 2024-T3 aluminum

Elastomer – LORD BTR® or BTR® II Silicone

FIGURE 1 – PART DIMENSIONS



Metric values in parenthesis.

TABLE 1 – PERFORMANCE CHARACTERISTICS

Part Number	Axial Natural Frequency* - f _n (Hz)	Dynamic Axial Spring Rate		Dynamic Radial Spring Rate	
		lb/in	N/mm	lb/in	N/mm
BTR®					
AM-001-2	17	89	16	74	13
AM-001-3	19	104	18	87	15
AM-001-4	20	122	21	102	18
AM-001-5	22	143	25	119	21
AM-001-6	23	164	29	137	24
AM-001-7	25	187	33	156	27
AM-001-8	27	215	38	179	31
AM-001-9	29	247	43	206	36
AM-001-10	31	284	50	237	41
BTR® II					
AM-001-17	15	68	12	57	10
AM-001-18	17	90	16	75	13
AM-001-19	20	117	20	98	17
AM-001-20	22	146	26	122	21
AM-001-21	25	195	34	163	28

* At 0.036 in (0.91 mm) D.A. input and maximum static load.

To correct for loads below rated loads, use:

$$f_n = f_{nn} \sqrt{P_R / P_A}$$

where:

f_n = natural frequency at actual load

f_{nn} = nominal natural frequency

P_A = actual load

P_R = rated load

FIGURE 2 – TRANSMISSIBILITY VS. FREQUENCY

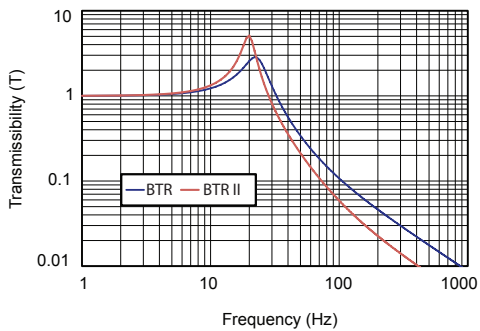
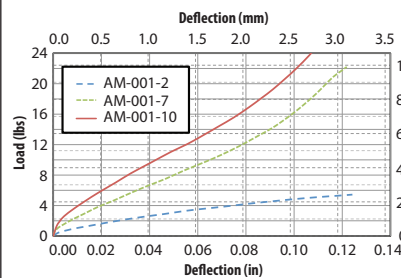
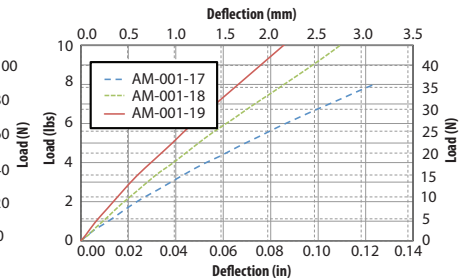


FIGURE 3 – TYPICAL LOAD VS. DEFLECTION VALUES

BTR ON AM-001 SERIES



BTR II ON AM-001 SERIES



LOW PROFILE AVIONICS MOUNTS

AM-002 SERIES

- **Maximum static load per mount:**
3.5 lb (1.6 kg)
- **Maximum dynamic input at resonance:**
0.060 in (1.52 mm) D.A.
- **Weight:**
0.27 oz (7.7 g)

Materials:

Metal parts and finish – aluminum alloy, chromate treated per MIL-DTL-5541, Class 1A

Inner member – 2024-T315 or 2024-T4 aluminum

Plate – 2024-T315 or 2024-T4 aluminum

Elastomer – LORD BTR® or BTR® II Silicone

TABLE 1 – PERFORMANCE CHARACTERISTICS

Part Number	Axial Natural Frequency* - f_n (Hz)	Dynamic Axial Spring Rate		Dynamic Radial Spring Rate	
		lb/in	N/mm	lb/in	N/mm
BTR®					
AM-002-2	14	71	12	71	12
AM-002-3	15	84	15	84	15
AM-002-4	17	98	17	98	17
AM-002-5	18	114	20	114	20
AM-002-6	19	131	23	131	23
AM-002-7	20	150	26	150	26
AM-002-8	22	173	30	173	30
AM-002-9	23	197	35	197	35
AM-002-10	25	226	40	226	40
BTR® II					
AM-002-11	13	63	11	63	11
AM-002-12	15	82	14	82	14
AM-002-13	17	107	19	107	19
AM-002-14	19	134	23	134	23
AM-002-15	22	179	31	179	31

* At 0.036 in (0.91 mm) D.A. input and maximum static load.

To correct for loads below rated loads, use:

$$f_n = f_{nn} \sqrt{P_R / P_A}$$

where:

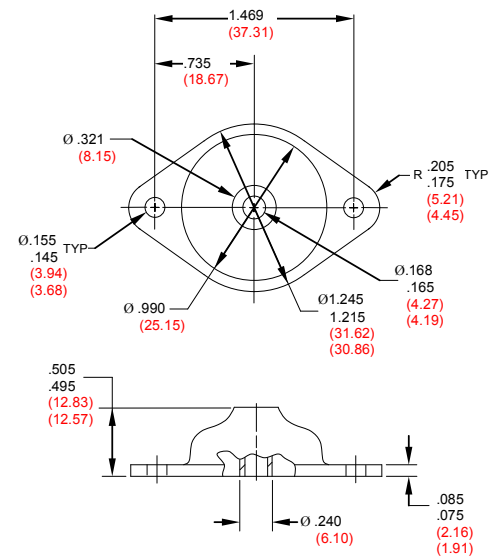
f_n = natural frequency at actual load

f_{nn} = nominal natural frequency

P_A = actual load

P_R = rated load

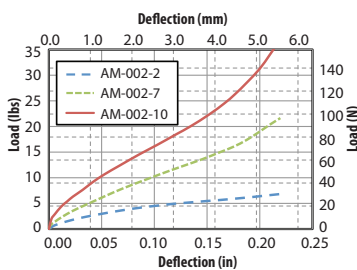
FIGURE 1 – PART DIMENSIONS



Metric values in parenthesis.

FIGURE 3 – TYPICAL LOAD VS. DEFLECTION VALUES

BTR ON AM-002 SERIES



BTR II ON AM-002 SERIES

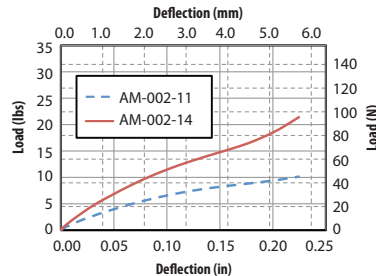
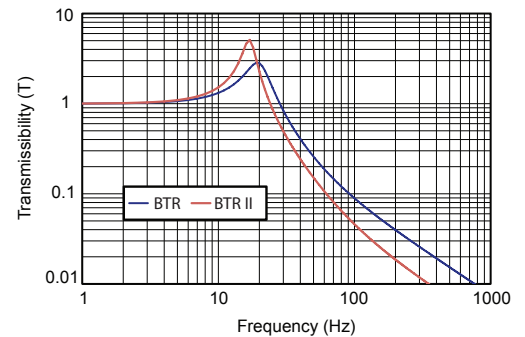


FIGURE 2 – TRANSMISSIBILITY VS. FREQUENCY



LOW PROFILE AVIONICS MOUNTS

AM-003 SERIES

- **Maximum static load per mount:**
4.5 lb (2.0 kg)

- **Maximum dynamic input at resonance:**
0.036 in (0.91 mm) D.A.

- **Weight:**
0.34 oz (9.6 g)

Materials:

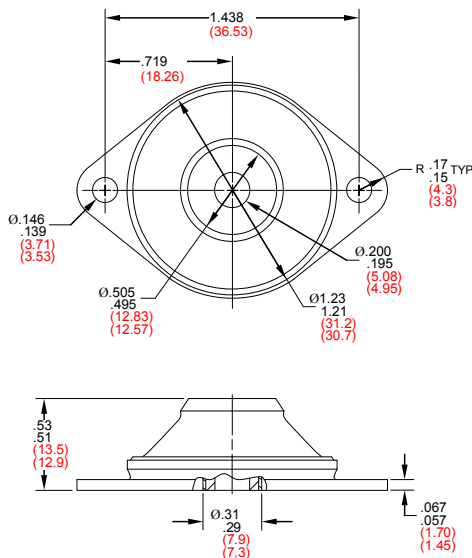
Metal parts and finish – aluminum alloy, chromate treated per MIL-DTL-5541, Class 1A

Inner member – 2024-T4 aluminum

Plate – 2024-T315 aluminum

Elastomer – LORD BTR® or BTR® II Silicone

FIGURE 1 – PART DIMENSIONS



Metric values in parenthesis.

FIGURE 2 – TRANSMISSIBILITY VS. FREQUENCY

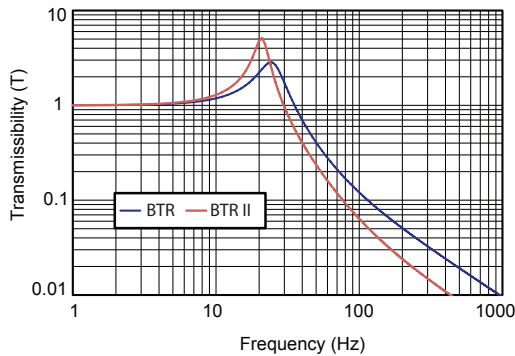


TABLE 1 – PERFORMANCE CHARACTERISTICS

Part Number	Axial Natural Frequency* - f _n (Hz)	Dynamic Axial Spring Rate		Dynamic Radial Spring Rate	
		lb/in	N/mm	lb/in	N/mm
BTR®					
AM-003-2	18	152	27	169	30
AM-003-3	20	178	31	198	35
AM-003-4	21	209	37	232	41
AM-003-5	23	244	43	271	47
AM-003-6	25	278	49	309	54
AM-003-7	26	319	56	354	62
AM-003-8	28	367	64	408	71
AM-003-9	30	421	74	468	82
AM-003-10	33	482	84	536	94
BTR® II					
AM003-11	16	117	20	130	23
AM003-12	18	153	27	170	30
AM003-13	21	200	35	222	39
AM003-14	23	251	44	279	49
AM003-15	27	333	58	370	65

* At 0.036 in (0.91 mm) D.A. input and maximum static load.

To correct for loads below rated loads, use:

$$f_n = f_{nm} \sqrt{P_R / P_A}$$

where:

f_n = natural frequency at actual load

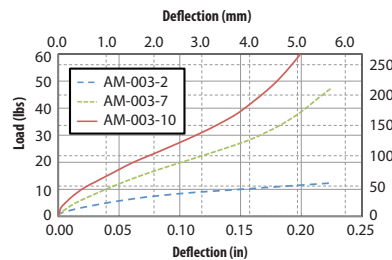
f_{nm} = nominal natural frequency

P_A = actual load

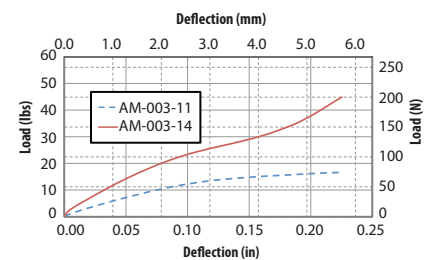
P_R = rated load

FIGURE 3 – TYPICAL LOAD VS. DEFLECTION VALUES

BTR ON AM-003 SERIES



BTR II ON AM-003 SERIES



LOW PROFILE AVIONICS MOUNTS

AM-004 SERIES

- **Maximum static load per mount:**
4 lb (1.8 kg)
- **Maximum dynamic input at resonance:**
0.10 in (2.54 mm) D.A.
- **Weight:**
0.46 oz (13.0 g)

Materials:

Metal parts and finish – stainless steel, passivated

Inner member – 304 stainless steel

Plate – 301 stainless steel annealed

Elastomer – LORD BTR® or BTR® II Silicone

TABLE 1 – PERFORMANCE CHARACTERISTICS

Part Number	Axial Natural Frequency* - f_n (Hz)	Dynamic Axial Spring Rate		Dynamic Radial Spring Rate	
		lb/in	N/mm	lb/in	N/mm
BTR®					
AM-004-2	13	71	12	79	14
AM-004-3	14	84	15	93	16
AM-004-4	15	98	17	109	19
AM-004-5	17	114	20	127	22
AM-004-6	18	131	23	146	25
AM-004-7	19	150	26	167	29
AM-004-8	21	173	30	192	34
AM-004-9	22	197	35	219	38
AM-004-10	23	226	40	251	44
BTR® II					
AM-004-14	12	61	11	68	12
AM-004-15	14	80	14	89	16
AM-004-16	16	104	18	116	20
AM-004-17	18	130	23	144	25
AM-004-18	21	173	30	192	34

* At 0.036 in (0.91 mm) D.A. input and maximum static load.

To correct for loads below rated loads, use:

$$f_n = f_{nm} \sqrt{P_R / P_A}$$

where:

f_n = natural frequency at actual load

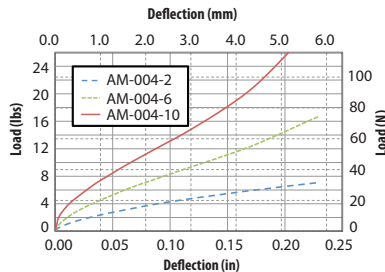
f_{nm} = nominal natural frequency

P_A = actual load

P_R = rated load

FIGURE 3 – TYPICAL LOAD VS. DEFLECTION VALUES

BTR ON AM-004 SERIES



BTR II ON AM-004 SERIES

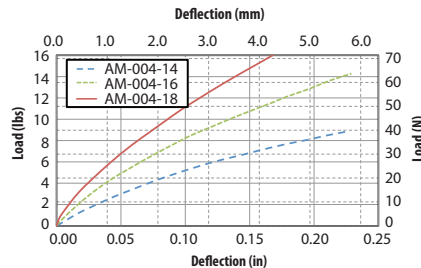
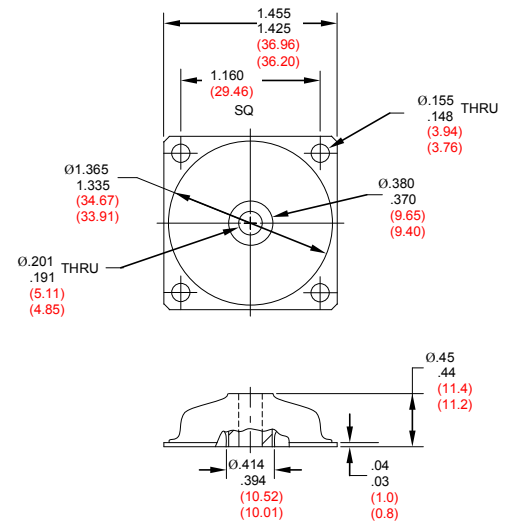
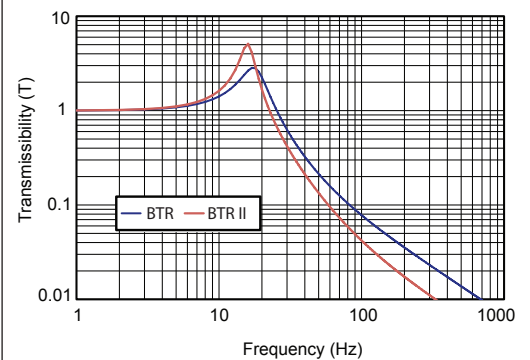


FIGURE 1 – PART DIMENSIONS



Metric values in parenthesis.

FIGURE 2 – TRANSMISSIBILITY VS. FREQUENCY



LOW PROFILE AVIONICS MOUNTS

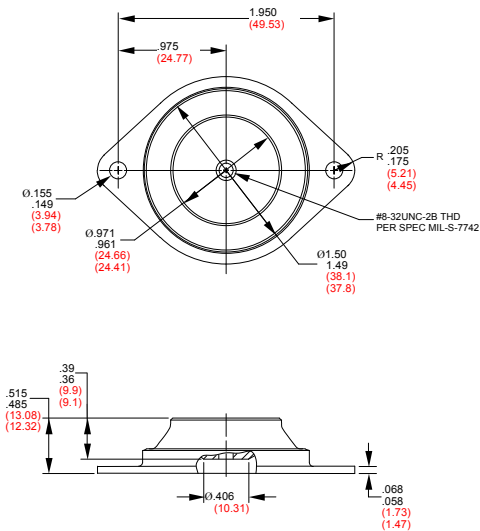
AM-005 SERIES

- **Maximum static load per mount:**
6 lb (2.7 kg)
- **Maximum dynamic input at resonance:**
0.036 in (0.91 mm) D.A.
- **Weight:**
0.67 oz (19.0 g)

Materials:

Metal parts and finish – aluminum alloy, chromate treated per MIL-DTL-5541, Class 1A
Inner member – 2024-T315 or 2024-T4 aluminum
Plate – 2024-T315 or 2024-T4 aluminum
Elastomer – LORD BTR® or BTR® II Silicone

FIGURE 1 – PART DIMENSIONS



Metric values in parenthesis.

FIGURE 2 – TRANSMISSIBILITY VS. FREQUENCY

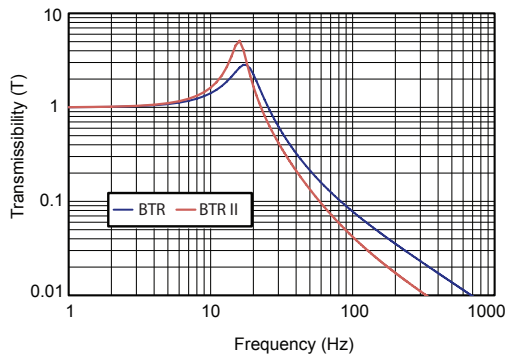


TABLE 1 – PERFORMANCE CHARACTERISTICS

Part Number	Axial Natural Frequency* - f _n (Hz)	Dynamic Axial Spring Rate		Dynamic Radial Spring Rate	
		lb/in	N/mm	lb/in	N/mm
BTR®					
AM-005-2	24	353	62	272	48
AM-005-3	26	414	73	318	56
AM-005-4	28	485	85	373	65
AM-005-5	31	566	99	435	76
AM-005-6	33	647	113	498	87
AM-005-7	35	743	130	572	100
AM-005-8	37	854	150	657	115
AM-005-9	40	979	171	753	132
AM-005-10	43	1121	196	862	151
BTR® II					
AM-005-11	26	426	75	328	57
AM-005-12	30	557	98	428	75
AM-005-13	35	726	127	558	98
AM-005-14	39	905	158	696	122
AM-005-15	45	1210	212	931	163

* At 0.036 in (0.91 mm) D.A. input and maximum static load.

To correct for loads below rated loads, use:

$$f_n = f_{nn} \sqrt{P_R / P_A}$$

where:

f_n = natural frequency at actual load

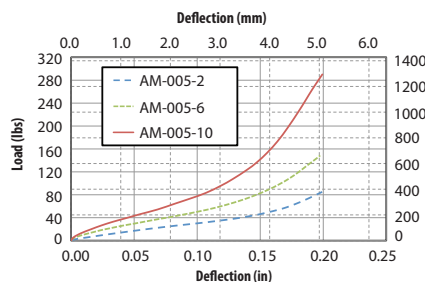
f_{nn} = nominal natural frequency

P_A = actual load

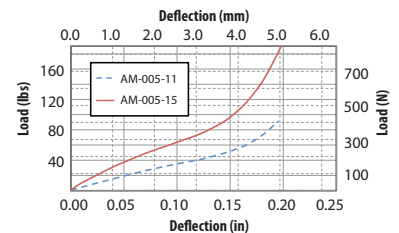
P_R = rated load

FIGURE 3 – TYPICAL LOAD VS. DEFLECTION VALUES

BTR ON AM-005 SERIES



BTR II ON AM-005 SERIES



LOW PROFILE AVIONICS MOUNTS

AM-006 SERIES

- **Maximum static load per mount:**
10 lb (4.5 kg)
- **Maximum dynamic input at resonance:**
0.036 in (0.91 mm) D.A.
- **Weight:**
0.82 oz (23.3 g)

Materials:

Metal parts and finish – aluminum alloy, chromate treated per MIL-DTL-5541, Class 1A

Inner member – 2024-T315 aluminum

Outer member – 2024-T315 aluminum

Elastomer – LORD BTR® or BTR® II Silicone

TABLE 1 – PERFORMANCE CHARACTERISTICS

Part Number	Axial Natural Frequency* - f _n (Hz)	Dynamic Axial Spring Rate		Dynamic Radial Spring Rate	
		lb/in	N/mm	lb/in	N/mm
BTR®					
AM-006-7	24	581	102	528	93
AM-006-8	26	681	119	619	108
AM-006-9	28	798	140	725	127
AM-006-10	30	932	163	847	148
AM-006-11	32	1065	187	968	170
AM-006-12	35	1221	214	1110	194
AM-006-13	37	1405	246	1277	224
AM-006-14	40	1611	282	1465	256
AM-006-15	43	1844	323	1676	294
BTR® II					
AM-006-1	23	550	96	500	88
AM-006-2	27	719	126	654	114
AM-006-3	30	938	164	853	149
AM-006-4	34	1169	205	1063	186
AM-006-5	39	1563	274	1421	249

* At 0.036 in (0.91 mm) D.A. input and maximum static load.

To correct for loads below rated loads, use:

$$f_n = f_{nn} \sqrt{P_R / P_A}$$

where:

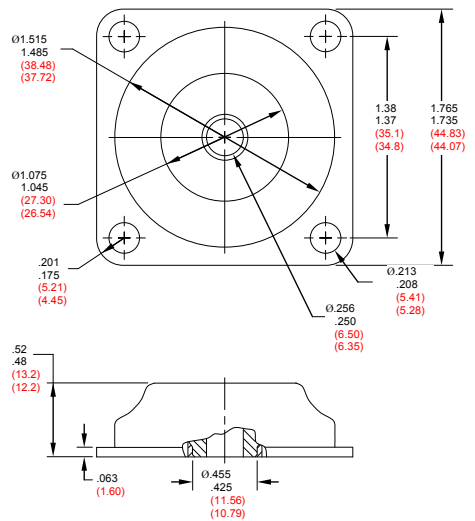
f_n = natural frequency at actual load

f_{nn} = nominal natural frequency

P_A = actual load

P_R = rated load

FIGURE 1 – PART DIMENSIONS



Metric values in parenthesis.

FIGURE 2 – TRANSMISSIBILITY VS. FREQUENCY

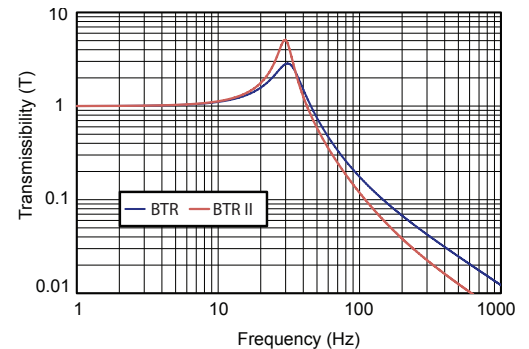
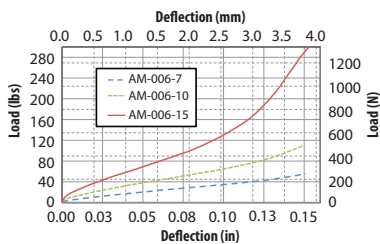
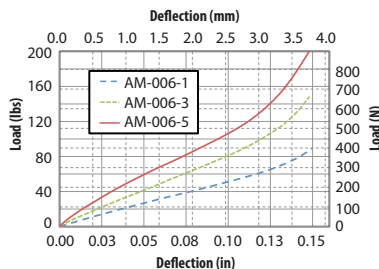


FIGURE 3 – TYPICAL LOAD VS. DEFLECTION VALUES

BTR ON AM-006 SERIES



BTR II ON AM-006 SERIES



LOW PROFILE AVIONICS MOUNTS

AM-007 SERIES

- **Maximum static load per mount:**
15 lb (6.8 kg)

- **Maximum dynamic input at resonance:**
0.036 in (0.91 mm) D.A.

- **Weight:**
1.60 oz (45.4 g)

Materials:

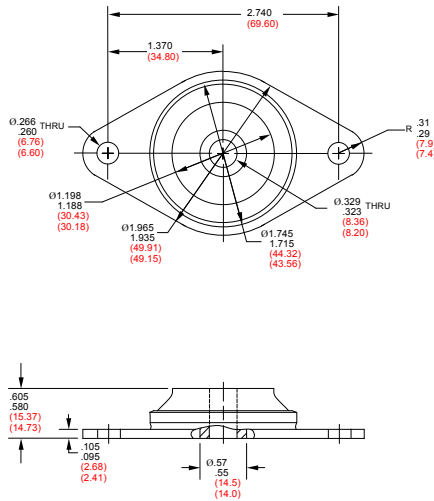
Metal parts and finish – aluminum alloy, chromate treated per MIL-DTL-5541, Class 1A

Inner member – 2024-T315 aluminum

Outer member – 2024-T315 aluminum

Elastomer – LORD BTR® or BTR® II or MEA Silicone

FIGURE 1 – PART DIMENSIONS



Metric values in parenthesis.

FIGURE 2 – TRANSMISSIBILITY VS. FREQUENCY

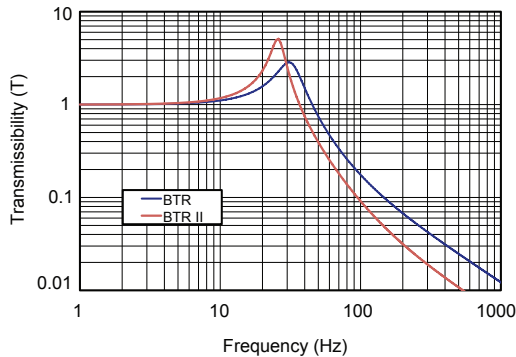


TABLE 1 – PERFORMANCE CHARACTERISTICS

Part Number	Axial Natural Frequency* - f_n (Hz)	Dynamic Axial Spring Rate		Dynamic Radial Spring Rate	
		lb/in	N/mm	lb/in	N/mm
BTR®					
AM-007-6	23	830	145	830	145
AM-007-7	26	1000	175	1000	175
AM-007-8	28	1170	205	1170	205
AM-007-9	30	1360	238	1360	238
AM-007-10	32	1610	282	1610	282
AM-007-11	35	1870	327	1870	327
AM-007-12	37	2130	373	2130	373
AM-007-13	40	2430	426	2430	426
AM-007-14	43	2800	490	2800	490
MEA					
AM-007-1	21	700	123	700	123
BTR® II					
AM-007-2	24	890	156	890	156
AM-007-3	26	1060	186	1060	186
AM-007-4	29	1260	221	1260	221
AM-007-5	31	1500	263	1500	263

* At 0.036 in (0.91 mm) D.A. input and maximum static load.

To correct for loads below rated loads, use:

$$f_n = f_{nm} \sqrt{P_R / P_A}$$

where:

f_n = natural frequency at actual load

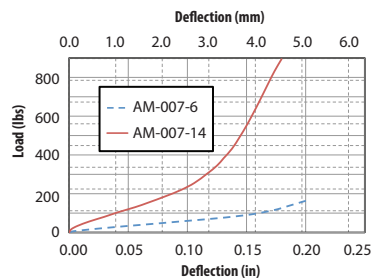
f_{nm} = nominal natural frequency

P_A = actual load

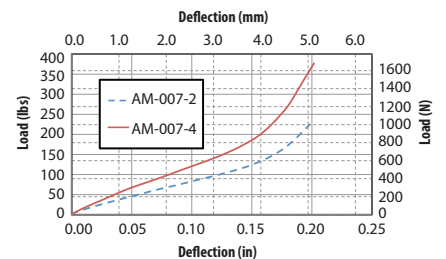
P_R = rated load

FIGURE 3 – TYPICAL LOAD VS. DEFLECTION VALUES

BTR ON AM-007 SERIES



BTR II ON AM-007 SERIES



LOW PROFILE AVIONICS MOUNTS

AM-008 SERIES

- **Maximum static load per mount:**
20 lb (9.1 kg)

- **Maximum dynamic input at resonance:**
0.036 in (0.91 mm) D.A.

- **Weight:**
2.08 oz (59.0 g)

Materials:

Metal parts and finish – aluminum alloy, chromate treated per MIL-DTL-5541, Class 1A

Inner member – 2024-T315 aluminum

Outer member – 2024-T315 aluminum

Elastomer – LORD BTR® or BTR® II or MEA Silicone

TABLE 1 – PERFORMANCE CHARACTERISTICS

Part Number	Axial Natural Frequency* - f _n (Hz)	Dynamic Axial Spring Rate		Dynamic Radial Spring Rate	
		lb/in	N/mm	lb/in	N/mm
BTR®					
AM-008-6	23	1100	193	1100	193
AM-008-7	26	1330	233	1330	233
AM-008-8	28	1560	273	1560	273
AM-008-9	30	1810	317	1810	317
AM-008-10	32	2150	377	2150	377
AM-008-11	35	2490	436	2490	436
AM-008-12	37	2840	497	2840	497
AM-008-13	40	3240	567	3240	567
AM-008-14	43	3700	648	3700	648
MEA					
AM-008-1	21	940	165	940	165
BTR® II					
AM-008-2	24	1180	207	1180	207
AM-008-3	26	1410	247	1410	247
AM-008-4	28	1680	294	1680	294
AM-008-5	31	2020	354	2020	354

* At 0.036 in (0.91 mm) D.A. input and maximum static load.

To correct for loads below rated loads, use:

$$f_n = f_{nm} \sqrt{P_R / P_A}$$

where:

f_n = natural frequency at actual load

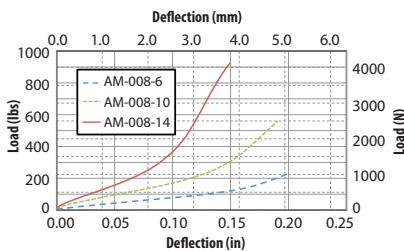
f_{nm} = nominal natural frequency

P_A = actual load

P_R = rated load

FIGURE 3 – TYPICAL LOAD VS. DEFLECTION VALUES

BTR ON AM-008 SERIES



BTR II ON AM-008 SERIES

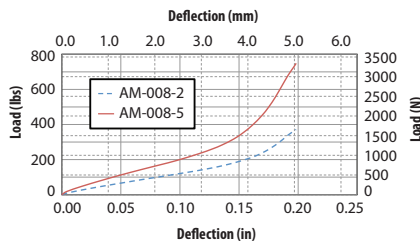
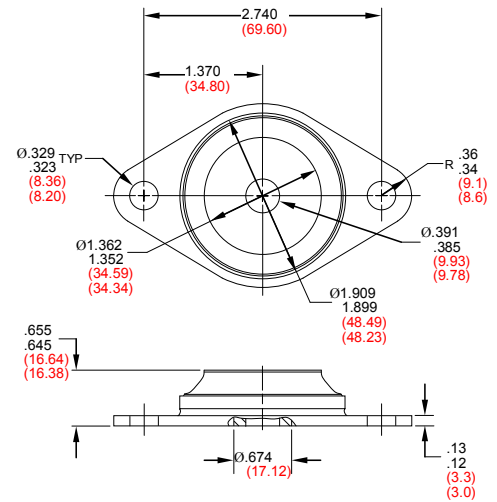
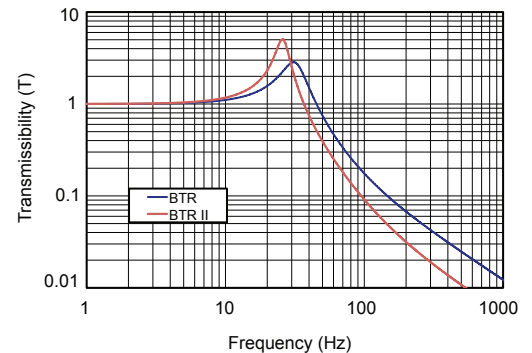


FIGURE 1 – PART DIMENSIONS



Metric values in parenthesis.

FIGURE 2 – TRANSMISSIBILITY VS. FREQUENCY



LOW PROFILE AVIONICS MOUNTS

AM-009 SERIES

- **Maximum static load per mount:**

25 lb (11.4 kg)

- **Maximum dynamic input at resonance:**

0.036 in (0.91 mm) D.A.

- **Weight:**

2.88 oz (81.6 g)

- **Materials:**

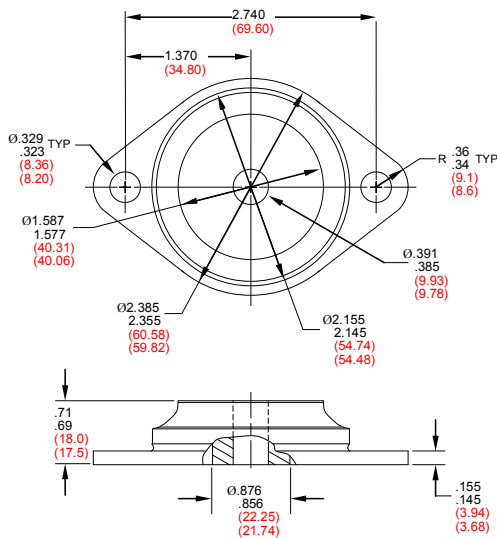
Metal parts and finish – aluminum alloy, chromate treated per MIL-DTL-5541, Class 1A

Inner member – 2024-T315 aluminum

Outer member – 2024-T315 aluminum

Elastomer – LORD BTR® or BTR® II or MEA Silicone

FIGURE 1 – PART DIMENSIONS



Metric values in parenthesis.

FIGURE 2 – TRANSMISSIBILITY VS. FREQUENCY

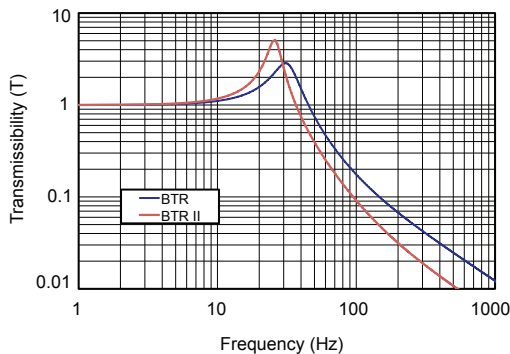


TABLE 1 – PERFORMANCE CHARACTERISTICS

Part Number	Axial Natural Frequency* - f _n (Hz)	Dynamic Axial Spring Rate		Dynamic Radial Spring Rate	
		lb/in	N/mm	lb/in	N/mm
BTR®					
AM-009-6	23	1350	236	1350	236
AM-009-7	26	1630	285	1630	285
AM-009-8	28	1910	334	1910	334
AM-009-9	30	2220	389	2220	389
AM-009-10	32	2640	462	2640	462
AM-009-11	35	3050	534	3050	534
AM-009-12	37	3480	609	3480	609
AM-009-13	39	3980	697	3980	697
AM-009-14	42	4550	797	4550	797
MEA					
AM-009-1	21	1150	201	1150	201
BTR® II					
AM-009-2	24	1450	254	1450	254
AM-009-3	26	1730	303	1730	303
AM-009-4	28	2060	361	2060	361
AM-009-5	31	2470	433	2470	433

* At 0.036 in (0.91 mm) D.A. input and maximum static load.

To correct for loads below rated loads, use:

$$f_n = f_{nm} \sqrt{P_R / P_A}$$

where:

f_n = natural frequency at actual load

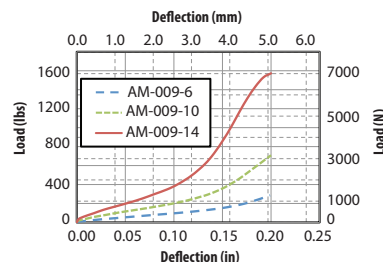
f_{nm} = nominal natural frequency

P_A = actual load

P_R = rated load

FIGURE 3 – TYPICAL LOAD VS. DEFLECTION VALUES

BTR ON AM-009 SERIES



BTR II ON AM-009 SERIES

