

EMI/RFI Shielded Environmental Sealing Boots for Toggle, Pushbutton and Rotary-Actuated Switches



DESCRIPTION:

APM HEXSEAL's proprietary shielded toggle, pushbutton and rotary-actuated switch boots:

- protect the switch mechanism from damage and/or performance degradation due to environmental contaminants such as oil, grease, water, cleaning solvents, dust and dirt.
- seal the panel cutout in which the switch is mounted ... thus protecting behind-panel components from damage due to leakage.
- provide up to 120dB of shielding effectiveness to contain spurious EMI/RFI that might be transmitted through the switch or panel cutout.

Each is fabricated from a rugged, high-tear resistant silicone rubber with an integral EMI/RFI shielding screen.

FEATURES AND BENEFITS:

- **UL & CSA-recognized** ... facilitates easier "listing" of the equipment in which they are used.
- **MIL-qualified** ... many standard models are QPL-approved under MIL-B-5423.
- **Up to 120dB of shielding effectiveness** ... to protect against spurious EMI/RFI.
- **Rugged silicone rubber material** ... resists tearing and most environmental contaminants. Won't discolor, crack or dry out.
- **Patented perimeter sealing rib** ... seals the panel cutout in which the switch is mounted.
- **Vibration-resistant mounting** ... resists switch loosening due to vibration/shock.
- **Wide operating temperature range** ... assures long-term performance in the toughest thermal environments.
- **Wide range of available colors** ... units can be molded in an array of colors to meet your needs.

TYPICAL APPLICATIONS:

- Avionics • Communications • Computer • Medical • Other EMI/RFI-sensitive applications

SPECIFICATIONS

Material: HEXSEALS: Silicone rubber conforms to ZZ-R-765 Class III, GR 50 (unless otherwise specified) with integral MONEL shielding screen. MONEL meets requirements of QQN-281 Class A.

Mounting Nut: HEXSEALS: Brass, nickel-plated

Temperature Range: HEXSEALS: -94°F to +400°F

Pressure Range: Exceeds 15 psi internal and 1500 psi external.

Operational Life: 15,000 actuations (minimum).

Shelf Life: Excess of 25 years.

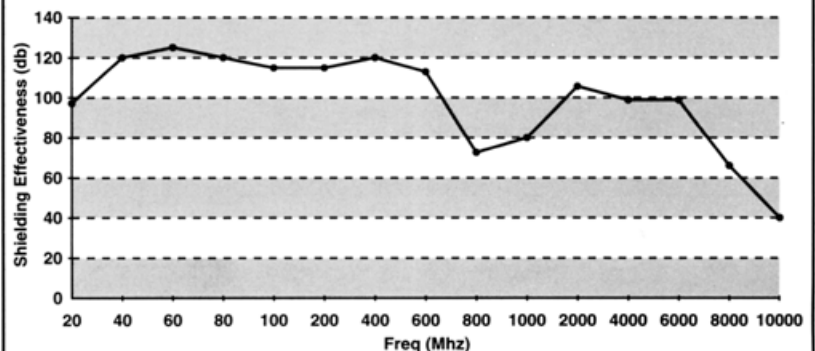
Resistant to: Salt spray, sunlight, ozone, weather, fungus, and most acids and lubricating oils

Military Approvals: Most HEXSEALS are QPL-approved to MIL-B-5423. (Ask for QPL listings, or see page 5 in Catalog HEX.)

Agency Recognition: HEXSEALS are UL-listed to UL Std. 50 types 1-13, and meet CSA standards, C22.2 No. 94.

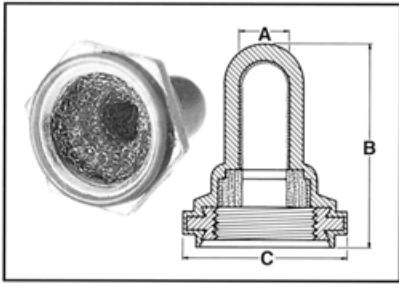
SHIELDING EFFECTIVENESS

(of MONEL shielding material)



Source: Intertek Testing Services

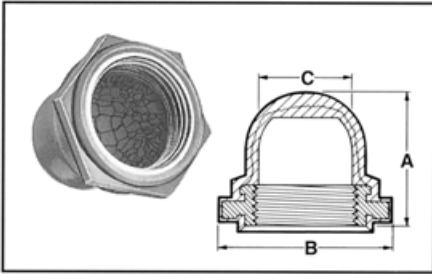
EMI/RFI Shielded Toggle Boots



Thread Size	Max. Toggle Height Above Bushing (in.)	A Throat or I.D.		B Height		C Flat		Military Part Number	APM Boot Part Number	Color*	HEXSEAL	E-SEAL
		in.	mm	in.	mm	in.	mm					
1/4-40NS-2B	.36	.062	1.58	.500	12.70	.375	9.52	—	N-5030L RFI	Gray	•	
1/2-32NS-2B	.66	.219	5.55	.844	21.44	.625	15.88	M5423/01-02	IN-1030 RFI	Gray	•	
1/2-32NS-2B	.66	.219	5.55	.844	21.44	.625	15.88	—	IN-1030 RFI 1/2-32	Gray	•	
1/4-40NS-2B	.28	.062	1.58	.390	9.90	.375	9.52	—	N-5030R RFI	Gray	•	
1/4-40NS-2B	.50	.062	1.58	.594	15.08	.375	9.52	—	N-5030S RFI	Gray	•	

*Other colors available. Please consult factory.

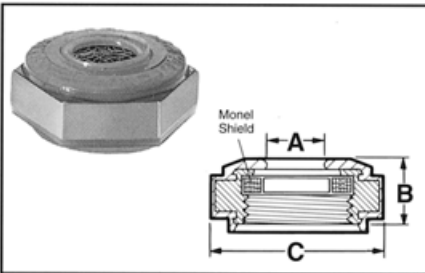
EMI/RFI Shielded Pushbutton Switch Boots



Thread Size	Plunger Height		A		B Flat		C I.D.		Military Part Number	APM Boot Part Number	Color*	HEXSEAL	E-SEAL
	inch	mm	inch	mm	inch	mm	inch	mm					
1/8-32NS-2B	.281	7.14	.547	13.89	.625	15.88	.422	10.72	M5423/07-06	N3030RFI	Gray	•	
1/8-32NS-2B	.438	11.11	.719	18.26	.625	15.88	.422	10.72	M5423/07-07	NC3030RFI	Gray	•	
1/8-32NS-2B	.281	7.14	.547	13.89	.625	15.88	.422	10.72	M5423/07-08	NH3030RFI	Gray	•	
1/8-32NS-2B	.188	4.76	.547	13.89	.625	15.88	.422	10.72	M5423/07-10	NH3030SRFI	Gray	•	
1/8-24NEF-2B	.281	7.14	.609	15.48	.750	19.05	.516	13.10	M5423/07-09	N3040RFI	Gray	•	
1/8-32NS-2B	.469	11.91	.734	18.65	.625	15.88	.422	10.72	—	NC3030HRFI	Gray	•	

*Other colors available. Please consult factory.

EMI/RFI Shielded Rotary Shaft Seals



Thread Size	A Shaft Size		B Height		C Flat		Military Part Number	APM Boot Part Number	Color*	HEXSEAL	E-SEAL
	inch	mm	inch	mm	inch	mm					
1/4-32NF2B	.125	3.18	.219	5.56	.375	9.53	M5423/09-09	N9040 x 1/4 RFI	Gray	•	
1/4-32NEF-2B	.125	3.18	.219	5.56	.500	12.70	M5423/09-07	N9030 x 1/4 RFI	Gray	•	
1/4-32NEF-2B	.250	6.35	.219	5.56	.500	12.70	M5423/09-08	N9030 x 1/4 RFI	Gray	•	
1/4-32NEF-2B	.250	6.35	.359	9.12	.500	12.70	M5423/09-14	N9033 x 1/4 RFI	Gray	•	
1/4-32NS-2B	.250	6.35	.219	5.56	.625	15.88	M5423/09-10	N9060 x 1/4 RFI	Gray	•	
1/4-24NEF-2B	.375	9.53	.219	5.56	.750	19.05	M5423/09-11†	N9065 x 1/4 RFI	Gray	•	
1/4-32NS-2B	.250	6.35	.219	5.56	.625	15.88	M5423/09-12	N9063 x 1/4 RFI	Gray	•	
1/4-28NF-2B	.125	3.18	.219	5.56	.375	9.53	—	N9042 x 1/4 RFI	Gray	•	
1/4-32NEF-2B	.125	3.18	.531	13.49	.625	15.88	—	NLK9030 x 1/4 RFI	Gray	•	
1/4-32NEF-2B	.250	6.35	.531	13.49	.625	15.88	—	NLK9030 x 1/4 RFI	Gray	•	

*Other colors available. Please consult factory. †Inactive for new designs.

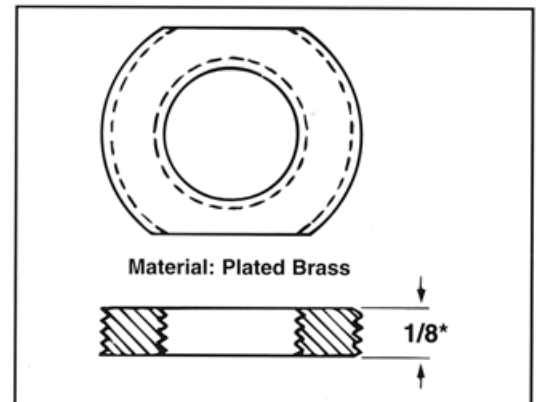
HOW TO ORDER

Specify APM boot part number and, if necessary, the appropriate bushing adaptor part number.

Optional Threaded Bushing Adaptors

Inside (Bushing) Thread Size (Class 2B)	Outside (Boot) Thread Size (Class 2A)	APM Part Number
3/8-32	15/32-32	2500/1/5*
15/32-32	11/16-32	2500/1/7
1/2-32	11/16-32	2500/1/10
15/32-32	13/16-32	2500/1/8
1/2-24	13/16-32	2500/1/9
5/8-24	13/16-32	2500/1/11
5/8-24	7/8-32	2500/1/12
3/4-32	7/8-32	2500/1/13*
3/4-20	7/8-32	2500/1/14*

*5/32" thick.
Additional sizes, including metric, available. Please consult factory.



APM HEXSEAL® Sealing Specialists

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