



Q-Zorb RFSW surface wave absorbers are thin, magnetically loaded elastomeric sheets designed to provide attenuation at high angles of incidence for surface wave attenuation. They are nominally manufactured in the thickness range of 0.015" to 0.125" (0.4 mm to 3.2 mm). They are elastomer-based with a variety of choices available. For example, silicone is chosen for high-temperature applications, nitrile for fuel and oil resistance and natural rubber for commercial applications. Several magnetic fillers are available; carbonyl iron powder is standard, but other materials such as iron silicide (FeSi) are used for corrosion-resistant applications. The materials are available in UL fire retardant versions for use in commercial devices. R&F can provide the material die-cut and with a pressure-sensitive adhesive for ease of installations. Sheets are offered in nominal sizes of 24" x 24" (609.6 mm x 609.6 mm), although custom sizes and molded components are available.

APPLICATIONS

The material can be used inside of microwave housings to reduce internal resonance and to lower the "Q" of the microwave cavity. They are also effective in isolating antennas from ground plane reflections. Q-Zorb can be used with board level shielding and other types of EMI shielding to enhance the shielding effectiveness at frequencies from 2-40GHz.



FIGURE 3.

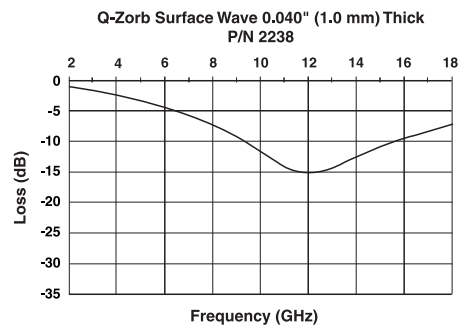


FIGURE 4.

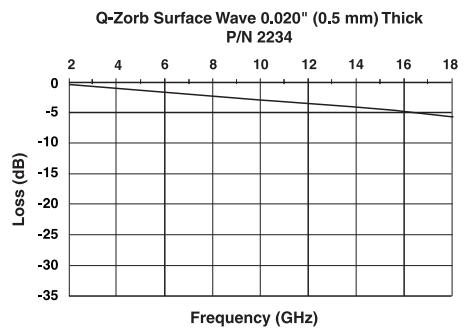


FIGURE 1.

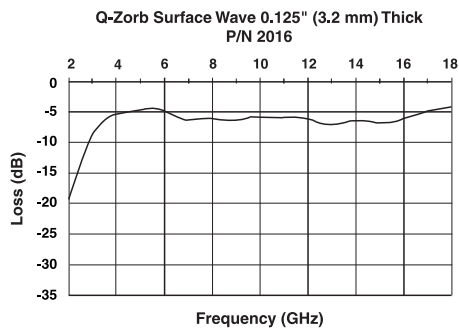
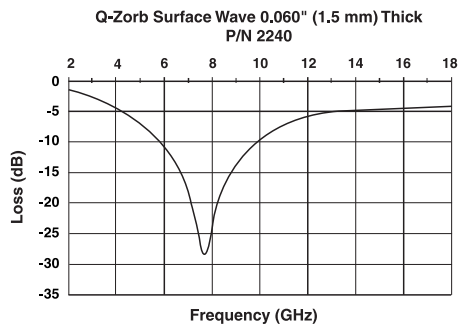


FIGURE 2.



ORDERING INFORMATION

Select desired frequency of operation (listed in ascending order) from Table 1 on the next page. This selection will govern dB loss and thickness. Then choose material type and other options including flame retardant (FR), pressure-sensitive adhesive (PSA), ground plane (GP), or iron silicide (FeSi) and select a part number.

- Material Types Available:**
- S – Silicone
 - N – Nitrile
 - R – Natural Rubber
 - U – Urethane
 - V – Viton®
 - W – Neoprene
 - H – Hypalon®

All dimensions shown are in inches (millimeters) unless otherwise specified.

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TABLE 1: RFSW – SURFACE WAVE ABSORBER PART NUMBERS

Note: Other materials or combinations of attributes are available; please contact sales for assistance.

2000 – 2999 RFSW – SURFACE WAVE ABSORBERS

NUMBER	MATERIAL TYPE	THICKNESS IN (MM)	OPT. FREQ. RANGE (GHZ) *	OTHER
2194	S	0.375 (9.5)	< 2	
2138	S	0.187 (4.7)	< 2	
2130	N	0.180 (4.6)	< 2	
2062	R	0.180 (4.6)	< 2	PSA
2178	R	0.180 (4.6)	< 2	
2049	R	0.175 (4.4)	< 2	PSA
2247	R	0.175 (4.4)	< 2	
2032	R	0.170 (4.3)	< 2	
2222	S	0.138 (3.5)	< 2	
2129	N	0.125 (3.2)	2-4	PSA
2171	N	0.125 (3.2)	2-4	GP
2170	N	0.125 (3.2)	2-4	
2016	R	0.125 (3.2)	2-4	PSA
2196	R	0.125 (3.2)	2-4	
2142	S	0.125 (3.2)	2-4	PSA
2242	S	0.125 (3.2)	2-4	FR-PSA
2241	S	0.125 (3.2)	2-4	FR
2264	S	0.125 (3.2)	2-4	
2162	N	0.115 (2.9)	2-4	PSA
2161	N	0.115 (2.9)	2-4	
2041	N	0.110 (2.8)	2-4	PSA
2044	R	0.110 (2.8)	2-4	PSA
2258	R	0.110 (2.8)	2-4	
2021	N	0.100 (2.5)	2-4	
2220	R	0.100 (2.5)	2-4	PSA
2094	R	0.100 (2.5)	2-4	
2272	S	0.100 (2.5)	2-4	FR-PSA
2271	S	0.100 (2.5)	2-4	FR
2230	S	0.100 (2.5)	2-4	
2167	N	0.095 (2.4)	4-8	
2034	R	0.095 (2.4)	4-8	PSA
2190	S	0.093 (2.4)	4-8	
2068	R	0.090 (2.3)	4-8	PSA
2087	R	0.090 (2.3)	4-8	
2042	N	0.085 (2.2)	4-8	PSA
2002	N	0.085 (2.2)	4-8	
2123	N	0.080 (2.0)	4-8	PSA
2122	N	0.080 (2.0)	4-8	
2023	R	0.080 (2.0)	4-8	PSA
2095	S	0.080 (2.0)	4-8	PSA
2257	S	0.080 (2.0)	4-8	FR-PSA
2256	S	0.080 (2.0)	4-8	FR
2141	S	0.078 (2.0)	4-8	PSA
2231	S	0.078 (2.0)	4-8	
2248	N	0.075 (1.9)	4-8	
2047	R	0.075 (1.9)	4-8	
2225	R	0.072 (1.8)	4-8	
2266	N	0.070 (1.8)	4-8	PSA
2265	N	0.070 (1.8)	4-8	
2080	N	0.065 (1.7)	8-12	PSA
2082	N	0.065 (1.7)	8-12	GP-PSA
2081	N	0.065 (1.7)	8-12	GP
2097	N	0.065 (1.7)	8-12	
2184	U	0.065 (1.7)	8-12	
2185	V	0.065 (1.7)	8-12	
2005	R	0.062 (1.6)	8-12	PSA
2039	N	0.060 (1.5)	8-12	PSA
2147	N	0.060 (1.5)	8-12	
2038	R	0.060 (1.5)	8-12	PSA
2263	R	0.060 (1.5)	8-12	
2261	S	0.060 (1.5)	8-12	PSA
2240	S	0.060 (1.5)	8-12	FR-PSA
2239	S	0.060 (1.5)	8-12	FR
2221	S	0.060 (1.5)	8-12	
2116	W	0.060 (1.5)	8-12	PSA
2117	W	0.060 (1.5)	8-12	GP

NUMBER	MATERIAL TYPE	THICKNESS IN (MM)	OPT. FREQ. RANGE (GHZ) *	OTHER
2115	W	0.060 (1.5)	8-12	
2134	R	0.055 (1.4)	8-12	PSA
2133	R	0.055 (1.4)	8-12	
2158	U	0.055 (1.4)	8-12	
2113	N	0.052 (1.3)	8-12	PSA
2003	N	0.052 (1.3)	8-12	FESI
2169	N	0.052 (1.3)	8-12	
2269	V	0.052 (1.3)	8-12	FESI
2008	V	0.052 (1.3)	8-12	
2056	N	0.050 (1.3)	8-12	PSA
2057	N	0.050 (1.3)	8-12	GP-PSA
2281	N	0.050 (1.3)	8-12	FESI
2098	N	0.045 (1.1)	8-12	FESI
2093	N	0.045 (1.1)	8-12	
2036	V	0.045 (1.1)	8-12	FESI
2035	V	0.045 (1.1)	8-12	
2105	R	0.044 (1.1)	8-12	
2153	S	0.044 (1.1)	8-12	
2168	N	0.043 (1.1)	8-12	
2143	N	0.040 (1.0)	8-12	PSA
2099	N	0.040 (1.0)	8-12	
2031	R	0.040 (1.0)	8-12	PSA
2146	R	0.040 (1.0)	8-12	
2218	S	0.040 (1.0)	8-12	PSA
2238	S	0.040 (1.0)	8-12	FR-PSA
2237	S	0.040 (1.0)	8-12	FR
2270	S	0.040 (1.0)	8-12	
2224	U	0.040 (1.0)	8-12	PSA
2028	N	0.038 (1.0)	12-18	GP
2252	S	0.036 (0.9)	12-18	FR-PSA
2251	S	0.036 (0.9)	12-18	FR
2204	N	0.035 (0.9)	12-18	PSA
2260	N	0.035 (0.9)	12-18	
2183	U	0.035 (0.9)	12-18	PSA
2243	U	0.035 (0.9)	12-18	
2283	N	0.032 (0.8)	12-18	FESI-PSA
2282	N	0.032 (0.8)	12-18	FESI
2045	N	0.030 (0.8)	12-18	PSA
2191	N	0.030 (0.8)	12-18	GP
2132	N	0.030 (0.8)	12-18	FESI
2181	N	0.030 (0.8)	12-18	
2277	R	0.030 (0.8)	12-18	FESI
2151	R	0.030 (0.8)	12-18	
2152	S	0.030 (0.8)	12-18	PSA
2236	S	0.030 (0.8)	12-18	FR-PSA
2235	S	0.030 (0.8)	12-18	FR
2046	S	0.030 (0.8)	12-18	
2144	R	0.028 (0.7)	12-18	PSA
2119	S	0.028 (0.7)	12-18	
2140	N	0.027 (0.7)	12-18	
2078	N	0.025 (0.6)	12-18	
2136	S	0.025 (0.6)	12-18	
2053	N	0.020 (0.5)	12-18	PSA
2201	R	0.020 (0.5)	12-18	PSA
2112	R	0.020 (0.5)	12-18	
2120	S	0.020 (0.5)	12-18	PSA
2234	S	0.020 (0.5)	12-18	FR-PSA
2233	S	0.020 (0.5)	12-18	FR
2075	S	0.020 (0.5)	12-18	
2187	U	0.020 (0.5)	12-18	
2966	S	0.015 (0.4)	12-18	PSA
2963	S	0.012 (0.3)	12-18	PSA
2960	S	0.010 (0.3)	12-18	PSA

* Adequate surface wave performance may be achieved by using thinner materials. Consult R&F Products applications engineers for assistance.

All dimensions shown are in inches (millimeters) unless otherwise specified.