


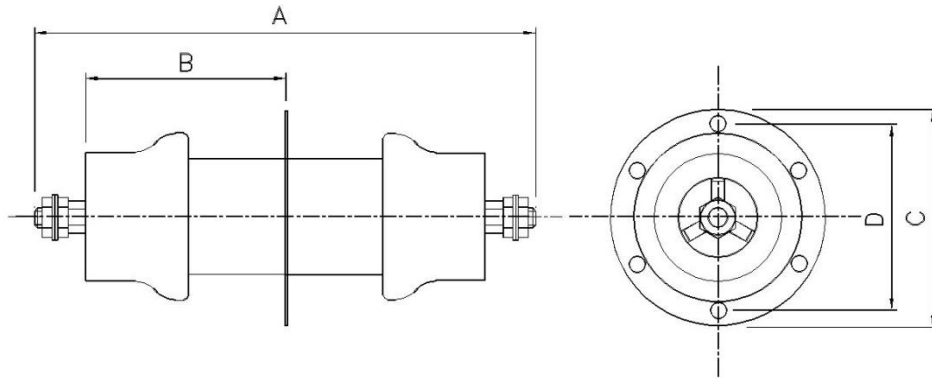
## RF Power Capacitors Class1 10-15kV Hi-Load : Feed-Through Mounting

<p><b>Morgan Advanced Materials</b> is a world leader in the design and manufacture of complex electronic ceramic components and assemblies used in a wide range of applications and cutting edge technologies. Morgan's Ruabon Division specialises in the development and production of dielectric and ferroelectric materials and components. This range of high voltage RF discs capacitors is fabricated from very low loss CLASS 1 ceramic dielectric materials which permit them to carry very high electrical loads over a wide frequency range.</p>	
<p><b>Applications include :</b></p> <ul style="list-style-type: none"> <li>• Radio Broadcast Transmitters</li> <li>• Induction and Dielectric Heating Equipment</li> <li>• HF Filter, By-Pass &amp; Coupling Circuits</li> <li>• High Power Matching Tuned Circuits</li> <li>• Antenna Circuits</li> <li>• Industrial Applications</li> <li>• High Power matching networks –Plasma Generators</li> <li>• High quality medical imaging systems (MRI)</li> </ul>	<p><b>Features :</b></p> <ul style="list-style-type: none"> <li>• Low loss Class 1 ceramic dielectric materials with noble metal electrodes resulting in low self heating.</li> <li>• High Voltage / High Reactive Power Ratings</li> <li>• Very low NPO capacitance-temperature characteristics available that result in correspondingly low tuned frequency drift.</li> <li>• Low Inductance construction permitting higher frequency use.</li> <li>• Low magnetic susceptibility</li> </ul>

Material Characteristics						
<b>Dielectric Constant @ 20°C / 1MHz</b>		15	36	77	90	190
<b>Temperature Coefficient of Capacitance</b>	ppm/°C	+100 ± 60	0± 30	0± 30	-750±80	-1300±120
<b>Tan δ@1MHz (Cap ≤ 1000 pF)</b>	x 10 <sup>-4</sup>	≤5	≤5	≤5	≤5	≤5
<b>Tan δ@1kHz (Cap &gt; 1000 pF)</b>	x 10 <sup>-4</sup>	≤10	≤10	≤10	≤10	≤10
<b>Dielectric Strength</b>	kVmm <sup>-1</sup> dc	22	20	15	10	10
<b>Volume Resistivity</b>	Ωm	10 <sup>13</sup>	10 <sup>13</sup>	10 <sup>13</sup>	10 <sup>13</sup>	10 <sup>13</sup>

Electrical Specification	
<b>Capacitance Range</b>	150 – 4000pF (see table)
<b>Capacitance Tolerance</b>	±20% ±10% Consult factory for other tolerances
<b>Rated RF Voltage</b>	10-15 kVpk (see table)
<b>Test Voltage (50Hz)</b>	√2 x Rated Voltage / 60sec
<b>RF Voltage / Current kVAr Load v Frequency</b>	See RF rating curves (ref 30°C max ambient temperature)
<b>Operating Temperature Range</b>	-25°C +95°C
<b>Maximum Relative Humidity</b>	75%

### Outline Drawing: 10-15kV Hi-Load Feed-Through Mounting



Vertical Mounting  
recommended

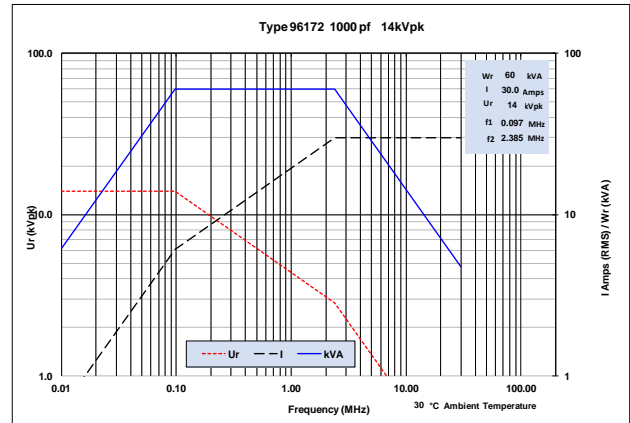
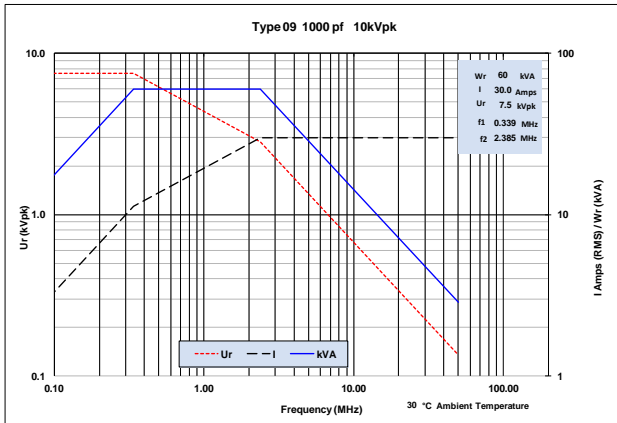
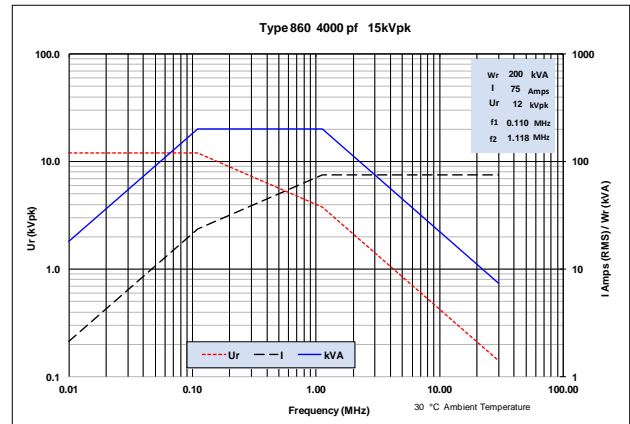
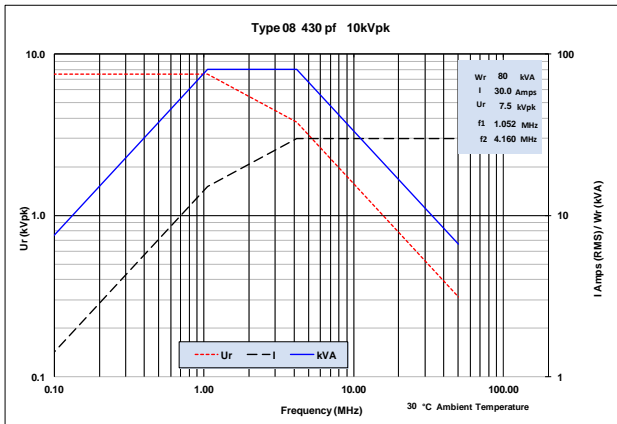
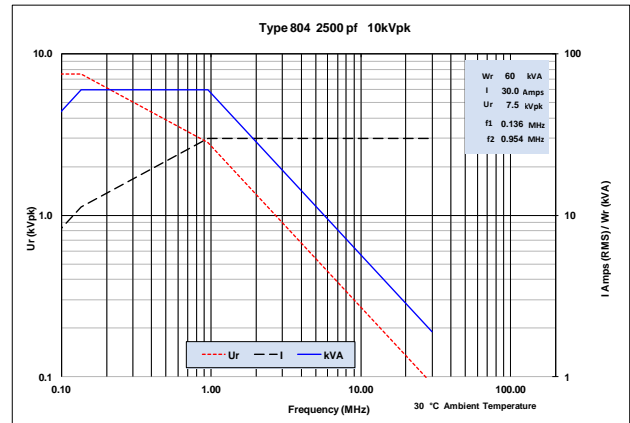
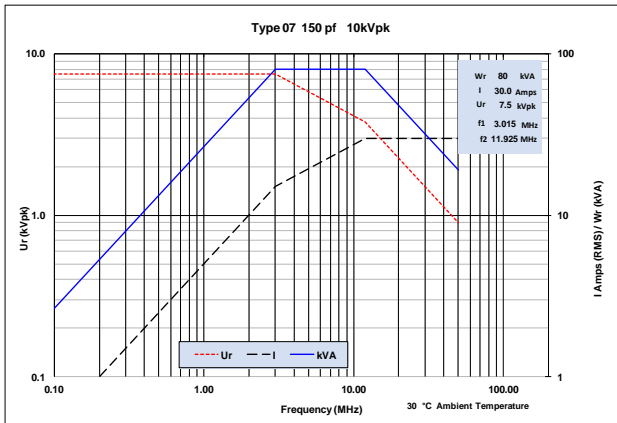
Type 860 – Female  
Thread (M6)

#### Electrical Characteristics

Type No	Cap Value pF	TCC ppm/°C	Rated (ACpk + DC) kVpk	Rated AC kVpk	Test 50 Hz kVrms	Max POWER Rating (kVAr)	Max Current Rating (A rms)	A nom (mm)	B nom (mm)	C nom (mm)	D nom (mm)
07	150	+100	10	7.5	10	80	30	138	44	72	59
08	430	0	10	7.5	10	80	30	138	44	72	59
09	1000	-750	10	7.5	10	60	30	138	44	72	59
804	2000	-1300	10	7.5	10	60	30	138	44	72	59
804	2500	-1300	10	7.5	10	60	30	138	44	72	59
96172	1000	-750	14	10	14	60	30	195	77.5	84	73
860	2000	-1300	15	12	15	200	75	129	64	120	99
860	3000	-1300	15	12	15	200	75	162	79	120	99
860	4000	-1300	15	12	15	200	75	184	92	120	99

Maximum feed-through current - 50 Amps rms all types other than Type 860

Maximum feed-through current - 75 Amps rms - Type 860



The above RF load conditions are based on the maximum body temperature rise of 45°C from an ambient temperature of 30°C.

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[www.morganelectroceramics.com](http://www.morganelectroceramics.com)

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\* Power Rating & Operating Conditions

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