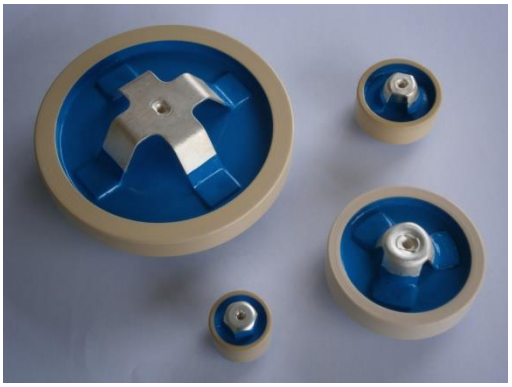
RF Power Capacitors Class1 10-15kV Discs

Morgan Advanced Materials 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.



Applications include :

- Radio Broadcast Transmitters
- Induction and Dielectric Heating Equipment
- HF Filter, By-Pass & Coupling Circuits
- High Power Matching Tuned Circuits
- Antenna Circuits
- Industrial Applications
- High Power matching networks –Plasma Generators
- High quality medical imaging systems (MRI)

Features :

- Low loss Class 1 ceramic dielectric materials with noble metal electrodes resulting in low self heating.
- High Voltage / High Reactive Power Ratings
- Very low NPO capacitance-temperature characteristics available that result in correspondingly low tuned frequency drift.
- Low Inductance construction permitting higher frequency use.
- Low magnetic susceptibility

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

Electrical Specification	
Capacitance Range	25 – 6000pF (see table)
Capacitance Tolerance	±20% ±10% Consult factory for other tolerances
Rated RF Voltage	10-15 kVpk (see table)
Test Voltage (50Hz)	√2 x Rated Voltage / 60sec
RF Voltage, Current kVAr & Load v Frequency	See RF rating curves (ref 30°C max ambient temperature)
Operating Temperature Range	-25°C +95°C
Maximum Relative Humidity	75%

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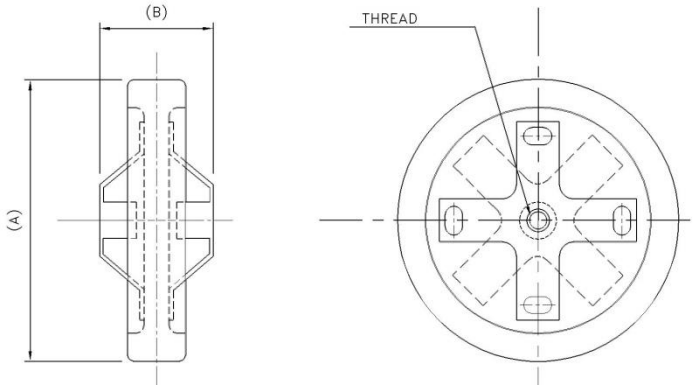
Outline Drawing 10-15kV Discs



Vertical Mounting
Recommended

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)	Thread Size (mm)
907	50	+100	15	15	15	150	30	80	48	M6
907	100	+100	15	15	15	150	30	80	42	M6
907	150	+100	14	14	14	150	30	80	40	M6
908	350	-750	15	15	15	75	30	78	46	M6
908	500	-750	13	13	13	75	30	78	43	M6
908	1000	-750	10	10	10	75	30	78	40	M6
909	150	+100	15	15	15	220	60	140	64	M6
909	250	+100	15	15	15	220	60	140	61	M6
909	350	+100	14	14	14	220	60	140	60	M6
910	1000	-750	15	15	15	125	60	140	63.5	M6
910	1500	-750	14	15	15	125	60	140	60	M6
910	2000	-750	12	12	12	125	60	140	58.5	M6
911	25	0	10	10	12	30	15	34	30	M4
911	35	0	10	10	12	30	15	34	28	M4
911	50	0	10	10	12	30	15	34	26	M4
912	50	0	10	10	12	60	20	53	42	M4
912	100	0	10	10	12	60	20	53	38	M4
912	150	0	10	10	12	60	20	53	36	M4
913	150	0	14	14	14	150	30	80	46	M6
913	250	0	14	14	14	150	30	80	42	M6
913	350	0	14	14	14	150	30	80	40	M6
914	350	0	14	14	14	220	60	140	67	M6
914	500	0	14	14	14	220	60	140	63	M6
914	1000	0	14	14	14	220	60	140	58.5	M6
915	1000	-750	15	15	15	125	60	140	40	M8
915	1500	-750	14	14	14	125	60	140	40	M8
915	1600	-750	14	14	14	125	60	140	40	M8
915	2000	-750	14	14	14	125	60	140	40	M8
916	500	0	14	14	14	220	60	140	52	M8
925	2500	-750	10	10	12	125	60	140	40	M8
925	3000	-750	8	8	8	125	60	140	40	M8

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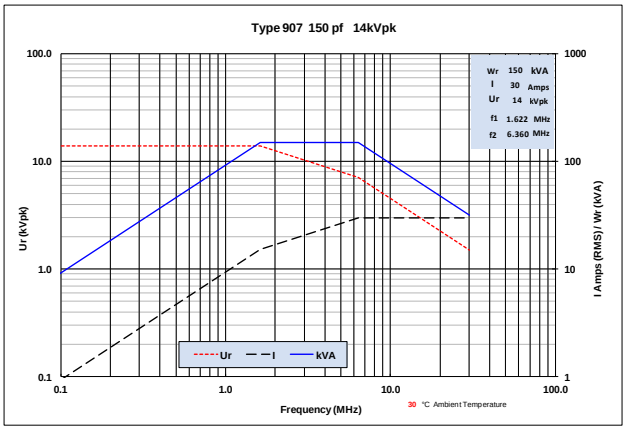

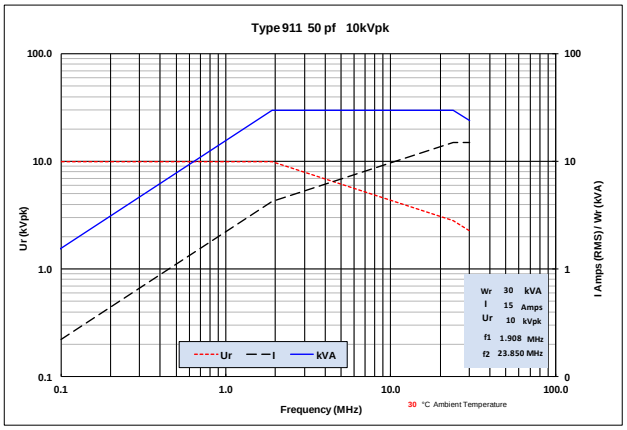

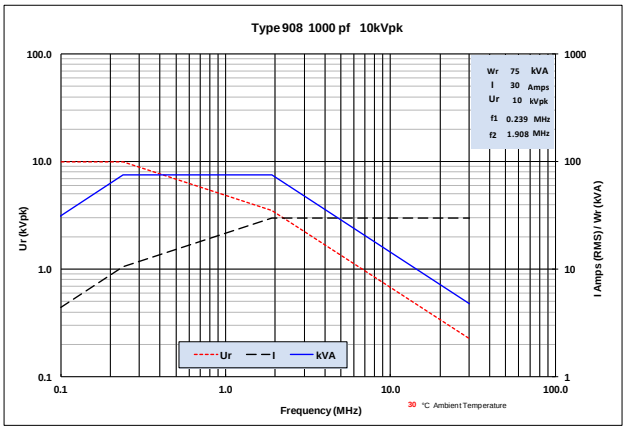

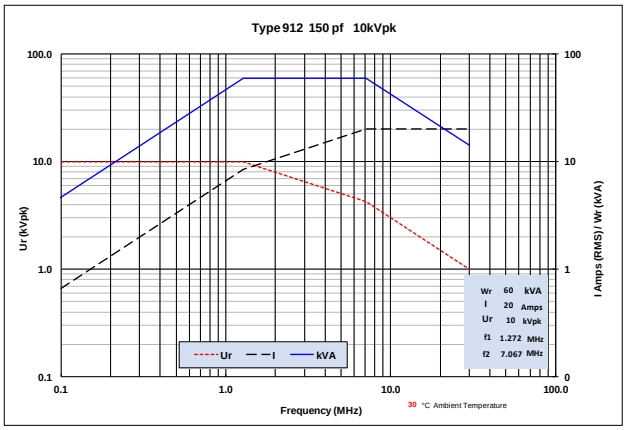

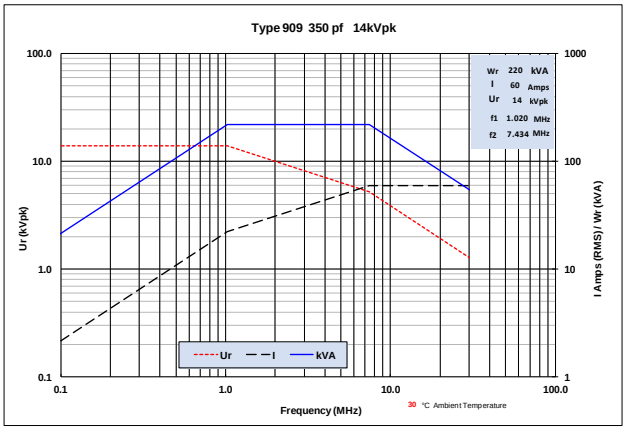

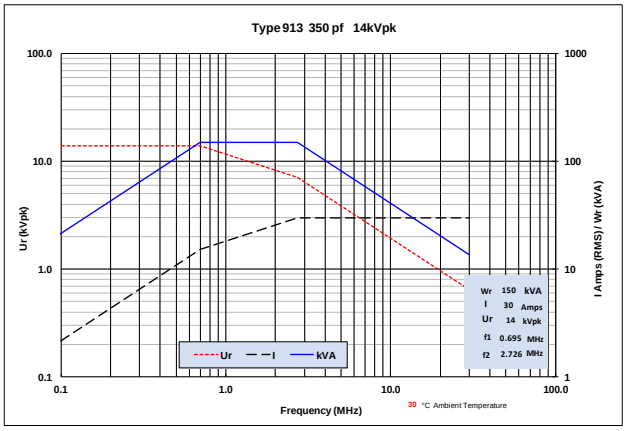

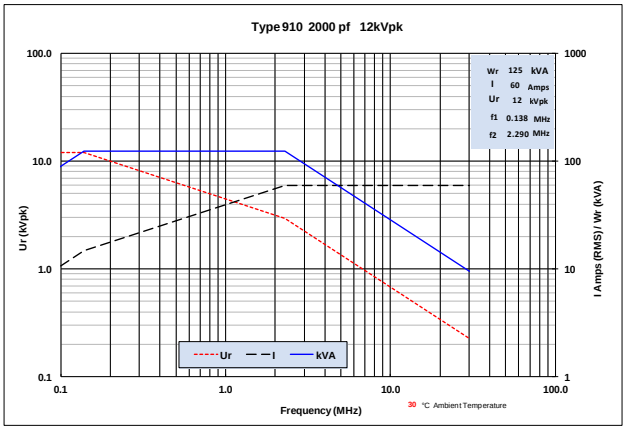

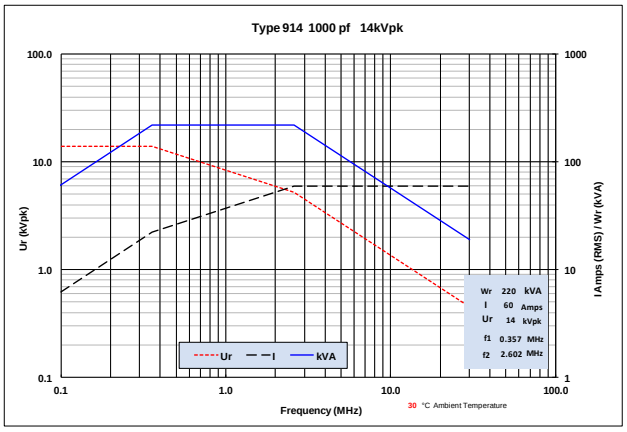

The above RF load conditions are based on the maximum body temperature rise of 45°C from an ambient temperature of 30°C.

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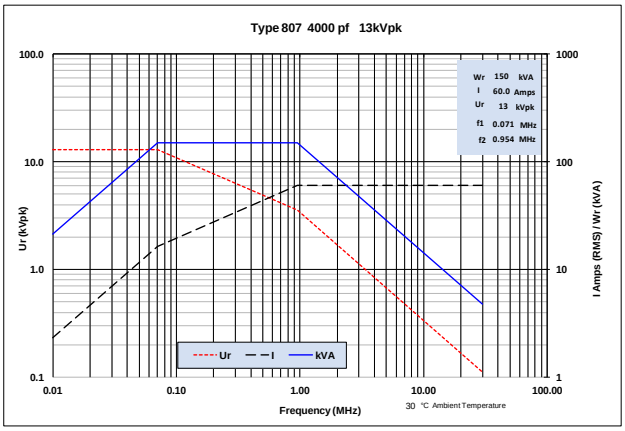
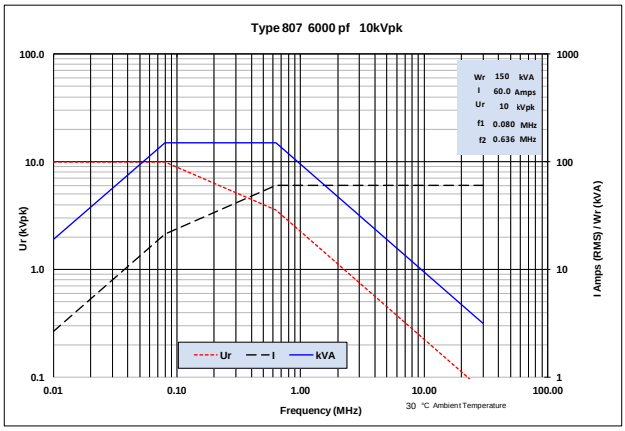
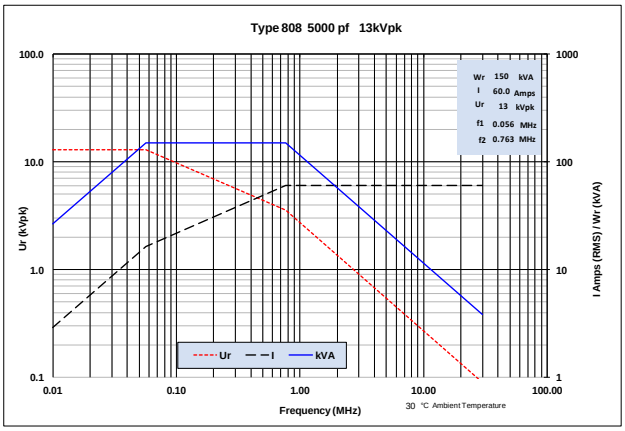
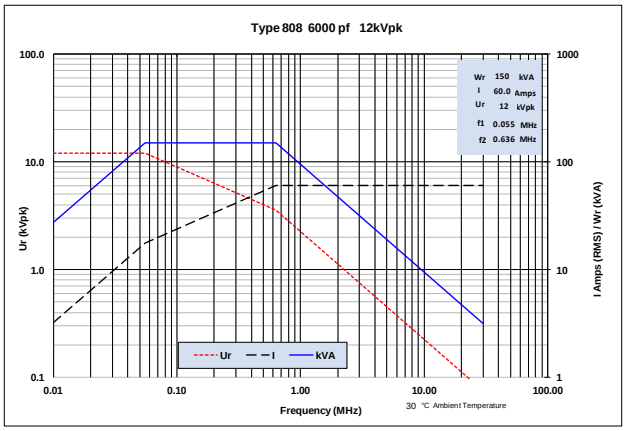
Electrical Characteristics

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)	Thread Size (mm)
918	1000	0	14	14	14	125	60	140	61	M6
918	1500	0	14	14	14	125	60	140	60	M6
918	2000	0	10	10	10	125	60	140	58	M6
807	2000	-750	14	14	14	150	60	200	45	M10
807	2500	-750	14	14	14	150	60	200	45	M10
807	3000	-750	14	14	14	150	60	200	45	M10
807	4000	-750	13	13	13	150	60	200	45	M10
807	5000	-750	12	12	12	150	60	200	45	M10
807	6000	-750	10	10	10	150	60	200	45	M10
808	5000	-1300	13	13	13	150	60	200	45	M10
808	6000	-1300	12	12	12	150	60	200	45	M10
921	1000	0	14	14	14	440	60	205	46	M10
921	1500	0	14	14	14	440	60	205	43	M10
921	2000	0	14	14	14	440	60	205	41.5	M10









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Please view our website :
www.morganelectroceramics.com

Links:

* Power Rating & Operating Conditions

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