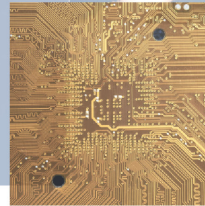


Precision in Every Mission



Our Proud Legacy

PAC-2
GEM-T (PAC-3)
Tomahawk

Capacitors for MISSILE DEFENSE SYSTEMS

Quantic™ Evans

Hybrid wet tantalum capacitors ideal for integration into missile systems



Features

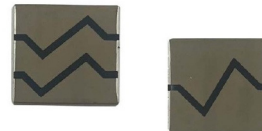
- **High Power Density**
Most power-dense in the industry, providing significant SWaP (Size, Weight, and Power) savings.
- **Rugged and Reliable Design**
Hermetically sealed design withstands high shock, vibration, and altitude > 100,000 ft.
- **Voltages**
Range from 10V-125V
- **Temperature**
Range from -55°C to 200°C
- **Space Grade**
Routinely screened and qualified to NASA EEE-INST-002

Applications

- Power hold-up MIL-STD-704
- High-power pulse

Quantic™ UTC

High-reliability pulse energy capacitors designed for detonation and firing modules



Features

- High Temperature up to 250°C (300°C currently in testing)
- Up to 10KV range for single and multi-pulse firing applications
- Bleed resistor for added safety
- Testing to MIL-PRF-49467 available
- Custom sizes, capacitance, and voltage ranges

Applications

- Missile System
- Detonation



Quantic™ Evans and Quantic™ UTC
are US-Based Manufacturers

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QUANTIC™ EVANS

Hybrid Wet Tantalum Capacitors

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Ceramic and Pulse Energy Ceramic Detonation Capacitors

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QUANTIC™ PAKTRON

Multilayer Polymer [MLP] Stacked Film Capacitors

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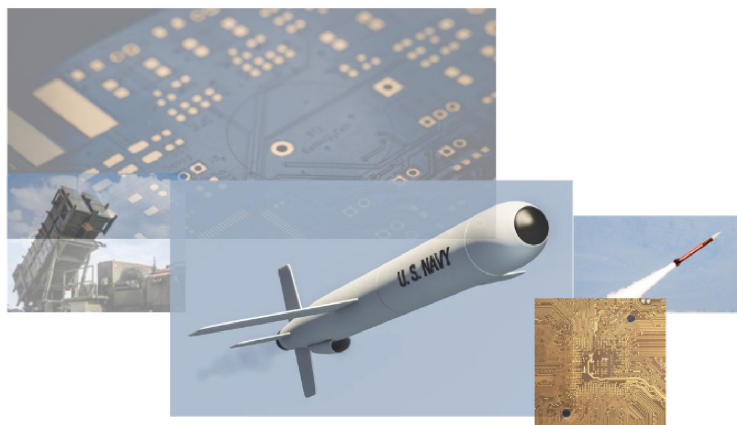
QUANTIC™ EULEX

High Frequency Ceramic Capacitors for RF & Microwave

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CAPACITOR PORTFOLIO OVERVIEW

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Power-Dense, SWaP- Optimized Capacitors for Mission-Critical Applications



Quantic™ Evans hybrid wet tantalum capacitors are the most power dense in the industry, providing significant SWaP savings when compared to traditional capacitor technologies. Their trusted and proven products are qualified and in service with all Tier 1 aerospace and defense contractors.

- Voltage ranges from 10V - 125V (higher for Capacitor Bank Assemblies)
- Ultra-low ESR
- Withstands extreme temperature, shock, and vibration environments
- Unlimited Shelf Life
- Space Grade (routinely screened and qualified to NASA-INST 002); ESA approved
- ECCN EAR99

Featured Products



TDB Series

- › 1.0" x 1.0" square base [5 heights]
- › Voltage Range: 10V-125V
- › Cap Range: 750uF - 150,000uF



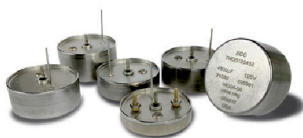
TDD Series

- › 1.4" x 1.4" square base [6 heights]
- › Voltage Range: 10V-125V
- › Cap Range: 1.5mF - 300mF
- › Ultra low ESR
- › DLA 15010



TDE Series

- › 1.4" x 1.4" square base [6 heights]
- › Voltage Range: 60V-110V
- › Cap Range: 2.2mF - 25mF
- › Ultra low ESR



THQ Series

- › 1.4" round base [5 heights]
- › Voltage Range: 10V-125V
- › Cap Range: 1.1mF - 200mF
- › >over 20 years of proven field service
- › DLA 04001, DLA 04003, DLA 04004, DLA 09022



THQA2/M2/S2 Series

- › 0.6" round base
- › M2 - mounting case option
- › S2 - High Shock Option
- › Voltage Range: 10V-125V
- › Cap Range: 215uF - 10,000uF
- › DLA 04005



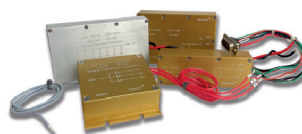
HyCap Series

- › Axial Form Factor
- › 3 case sizes - T1, T2, T4
- › Voltage Range: 10V-150V
- › Cap Range: 2uF - 2700uF
- › High temp 200°C options available
- › DLA 10004, DLA 93026



Capattery series

- › Double layer carbon capacitor technology
- › Voltage range: 5.5V - 11V
- › Capacitance range: 0.47F - 1F
- › High shock options available



Modules

- › Configurable with any
- › Quantic Evans capacitor
- › Available in 2 - 8 capacitor assemblies
- › Can choose connector, wiring, orientation, and more



TDB Series

The TDB Series hybrid capacitor is our newest form factor delivering the same high reliability and rugged quality offered in our other flight and space-grade product lines in a compact package.

- 1.0" × 1.0" square base
- Heights range from 0.329"–0.912"
- Voltages range from 10V–125V
- Cap values range from 750uF– 150,000uF
- Temperature range of -55°C to 125°C
- Standard tolerance ±20% (±10% available)
- Stud mount options available
- Lead-free RoHS compliant options available
- ECCN EAR99



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Part Number	DLA PN	Voltage [85°C]	Voltage [125°C]	Capacitance (μF)	ESR (mΩ)	Height (in)	Mass (g)
TDB1010303	N/A	10	6	30000	55	0.329	34
TDB2010603	N/A	10	6	60000	35	0.475	47
TDB3010903	N/A	10	6	90000	30	0.620	61
TDB4010124	N/A	10	6	120000	25	0.766	74
TDB5010154	N/A	10	6	150000	20	0.912	87
TDB1016203	N/A	16	9.6	20000	55	0.329	34
TDB2016403	N/A	16	9	40000	35	0.475	47
TDB3016603	N/A	16	9.6	60000	30	0.620	61
TDB4016803	N/A	16	9.6	80000	25	0.766	74
TDB5016104	N/A	16	9.6	100000	20	0.912	87
TDB2025243	N/A	25	15	24000	35	0.475	47
TDB3025363	N/A	25	15	36000	30	0.620	61
TDB4025483	N/A	25	15	48000	25	0.766	74
TDB5025603	N/A	25	15	60000	20	0.912	87
TDB1025123	N/A	25	15	12000	55	0.329	34
TDB1035752	N/A	35	21	7500	75	0.329	34
TDB2035153	N/A	35	21	15000	40	0.475	47
TDB4035303	N/A	35	21	30000	30	0.766	74
TDB5035383	N/A	35	21	37500	25	0.912	87
TDB3035233	N/A	35	21	22500	35	0.620	61
TDB1050502	N/A	50	30	5000	90	0.329	35
TDB2050103	N/A	50	30	10000	50	0.475	47
TDB3050153	N/A	50	30	15000	40	0.620	61
TDB4050203	N/A	50	30	20000	30	0.766	74
TDB5050253	N/A	50	30	25000	25	0.912	87
TDB1060312	N/A	60	36	3100	125	0.329	35
TDB2060622	N/A	60	36	6200	75	0.475	50
TDB3060932	N/A	60	36	9300	60	0.620	65
TDB4060123	N/A	60	36	12400	35	0.766	80
TDB5060163	N/A	60	36	15500	30	0.912	95

continued next page

Part Number	DLA PN	Voltage [85°C]	Voltage [125°C]	Capacitance [μF]	ESR [mΩ]	Height [in]	Mass [g]
TDB1075212	N/A	75	45	2100	125	0.329	35
TDB2075422	N/A	75	45	4200	75	0.475	50
TDB3075632	N/A	75	45	6300	60	0.620	65
TDB5075113	N/A	75	45	10500	30	0.912	95
TDB4075842	N/A	75	45	8400	35	0.766	80
TDB1100132	N/A	100	60	1300	125	0.329	35
TDB2100262	N/A	100	60	2600	75	0.475	50
TDB3100392	N/A	100	60	3900	60	0.620	65
TDB4100522	N/A	100	60	5200	35	0.766	80
TDB5100652	N/A	100	60	6500	30	0.912	95
TDB1110102	N/A	110	66	1000	125	0.329	35
TDB2110202	N/A	110	66	2000	75	0.475	50
TDB3110302	N/A	110	66	3000	60	0.620	65
TDB4110402	N/A	110	66	4000	35	0.766	80
TDB5110502	N/A	110	66	5000	30	0.912	9
TDB1125751	N/A	125	75	750	125	0.329	35
TDB2125152	N/A	125	75	1500	75	0.475	50
TDB3125232	N/A	125	75	2250	60	0.620	65
TDB4125302	N/A	125	75	3000	35	0.766	80
TDB5125382	N/A	125	75	3750	30	0.912	95

TDD Series

The TDD Series hybrid capacitor combines high capacitance and ultra-low ESR in a fully hermetic tantalum package for high reliability defense and aerospace applications where weight and volume are at a premium; especially well-suited for high power pulse applications.

- 1.4" × 1.4" square base
- Heights range from 0.312"–0.905"
- Voltages range from 10V–125V
- Cap values range from 1,500uF–300,000uF
- Temperature range of -55°C to 125°C
- Standard tolerance ±20% (±10% available)
- Lead-free RoHS compliant options available
- Stud mount options available
- ECCN EAR99



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Part Number	DLA PN	Voltage [85°C]	Voltage [125°C]	Capacitance [μF]	ESR [mΩ]	Height [in]	Mass [g]
TDD1010603	15010-01	10	6	60000	30	0.310	55
TDD2010124	15010-02	10	6	120000	20	0.450	80
TDD3010184	15010-03	10	6	180000	15	0.600	108
TDD4010244	15010-04	10	6	240000	12	0.750	134
TDD5010304		10	6	300000	10	0.905	160
TDD1016403	15010-05	16	9.6	40000	30	0.310	55

continued next page

Part Number	DLA PN	Voltage [85°C]	Voltage [125°C]	Capacitance [μF]	ESR [mΩ]	Height [in]	Mass [g]
TDD2016803	15010-06	16	9.6	80000	20	0.450	80
TDD3016124	15010-07	16	9.6	120000	15	0.600	108
TDD4016164	15010-08	16	9.6	160000	12	0.750	134
TDD5016204		16	9.6	200000	10	0.905	160
TDD2025483	15010-10	25	15	48000	20	0.450	80
TDD3025723	15010-11	25	15	72000	15	0.600	108
TDD4025963	15010-12	25	15	96000	12	0.750	134
TDD5025124		25	15	120000	10	0.905	160
TDD1025243	15010-09	25	15	24000	30	0.310	55
TDD1035163	15010-13	35	21	16000	40	0.310	55
TDD2035323	15010-14	35	21	32000	20	0.450	80
TDD3035483	15010-15	35	21	48000	15	0.600	108
TDD4035643	15010-16	35	21	64000	12	0.750	134
TDD5035803		35	21	80000	10	0.905	160
TDD1050113	15010-17	50	30	11000	50	0.310	55
TDD2050223	15010-18	50	30	22000	25	0.450	80
TDD3050333	15010-19	50	30	33000	17	0.600	108
TDD4050443	15010-20	50	30	44000	15	0.750	134
TDD5050553		50	30	55000	12	0.905	160
TDD1063472	15010-21	63	38	4700	50	0.310	60
TDD2063942	15010-22	63	38	9400	25	0.450	86
TDD3063143	15010-23	63	38	14000	17	0.600	115
TDD4063183	15010-24	63	38	18000	15	0.750	145
TDD5063223		63	38	22700	12	0.905	170
TDD1080302	15010-25	80	48	3000	55	0.310	60
TDD2080602	15010-26	80	48	6000	27	0.450	86
TDD3080902	15010-27	80	48	9000	18	0.600	115
TDD4080123	15010-28	80	48	12000	15	0.750	145
TDD5080153		80	48	15000	12	0.905	170
TDD1100222	15010-29	100	60	2200	65	0.310	60
TDD2100442	15010-30	100	60	4430	30	0.460	86
TDD3100662	15010-31	100	60	6600	20	0.600	115
TDD4100882	15010-32	100	60	8800	15	0.750	145
TDD5100113		100	60	11000	12	0.905	170
TDD1110202	15010-37	110	66	2000	85	0.310	60
TDD2110402	15010-38	110	66	4000	40	0.450	86
TDD3110602	15010-39	110	66	6000	27	0.600	115
TDD4110802	15010-40	110	66	8000	20	0.750	150
TDD5110103		110	66	10000	15	0.905	175
TDD1125152	15010-33	125	75	1500	65	0.310	60
TDD2125302	15010-34	125	75	3000	45	0.450	90
TDD3125452	15010-35	125	75	4500	25	0.600	120
TDD4125602	15010-36	125	75	6000	20	0.750	150
TDD5125752		125	75	7500	15	0.905	180

TDE Series

The TDE Series hybrid capacitor is our most power-dense capacitor in the 60V-110V range, utilizing advanced materials and processing techniques that push the limits of power density.

- 1.4" × 1.4" square base
- Heights range from 0.312"–0.755"
- Voltages range from 60V–110V
- Cap values range from 1,100uF–250,000uF
- Temperature range of -55°C to 125°C
- Standard tolerance ±20% (±10% available)
- Lead-free RoHS compliant options available
- Stud mount options available
- ECCN EAR99



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Part Number	DLA PN	Voltage [85°C]	Voltage [125°C]	Capacitance [μF]	ESR [mΩ]	Height [in]	Mass [g]
TDE2060133	N/A	60	36	12600	25	0.450	86
TDE3060193	N/A	60	36	19000	17	0.600	115
TDE4060253	N/A	60	36	25000	15	0.755	145
TDE1060632	N/A	60	36	6300	50	0.312	60
TDE1075442	N/A	75	45	4400	55	0.312	60
TDE2075882	N/A	75	45	8800	27	0.450	86
TDE3075133	N/A	75	45	13000	18	0.600	115
TDE4075183	N/A	75	45	18000	15	0.755	145
TDE1100262	N/A	100	60	2600	65	0.312	60
TDE2100522	N/A	100	60	5200	30	0.450	86
TDE3100782	N/A	100	60	7800	20	0.600	115
TDE4100103	N/A	100	60	10400	15	0.755	145
TDE1110222	N/A	110	66	2200	85	0.312	60
TDE2110442	N/A	110	66	4400	40	0.450	86
TDE3110662	N/A	110	66	6600	27	0.600	115
TDE4110882	N/A	110	66	8800	20	0.755	150

THQ Series

The THQ Series hybrid capacitor has a 20-year legacy of high-reliability performance in countless defense and aerospace applications.



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- 1.4" round base
- Heights range from 0.312"–0.765"
- Voltages range from 6V–125V
- Cap values range from 1,100uF–200,000uF
- Temperature range of -55°C to 125°C
- Standard tolerance ±20% (±10% available)
- Lead-free RoHS compliant options available
- Stud mount options available
- ECCN EAR99



Part Number	DLA PN	Voltage [85°C]	Voltage [125°C]	Capacitance [μF]	ESR [mΩ]	Height [in]	Mass [g]
THQ1010503	04001-01	10	6	50000	50	0.312	44
THQ2010104		10	6	100000	37	0.460	65
THQ3010154	04003-01	10	6	150000	25	0.608	84
THQ4010204	09022-01	10	6	200000	25	0.725	103
THQ5010204	04004-01	10	6	200000	12	0.760	106
THQ1016303	04001-02	16	9.6	30000	50	0.312	44
THQ2016603		16	9.6	60000	37	0.460	65
THQ3016903	04003-02	16	9.6	90000	25	0.608	84
THQ4016124	09022-02	16	9.5	120000	25	0.725	103
THQ5016124	04004-02	16	9.6	120000	15	0.760	106
THQ1025183	04001-03	25	15	18000	50	0.312	44
THQ2025363		25	15	36000	50	0.460	65
THQ3025543	04003-03	25	15	54000	35	0.608	84
THQ4025703	09022-03	25	15	70000	25	0.725	103
THQ5025703	04004-03	25	15	70000	15	0.760	106
THQ1035123	04001-04	35	20	12000	50	0.312	44
THQ2035243		35	20	24000	50	0.460	65
THQ3035363	04003-04	35	20	36000	35	0.608	84
THQ4035503	09022-04	35	21	50000	25	0.725	103
THQ5035503	04004-04	35	21	50000	15	0.760	106
THQ1050802	04001-05	50	30	8000	60	0.312	44
THQ3050243	04003-05	50	30	24000	35	0.608	84
THQ2050163		50	30	16000	60	0.460	65
THQ4050323	09022-05	50	30	32000	25	0.725	103
THQ5050303	04004-05	50	30	30000	15	0.760	106
THQ1063402	04001-06	63	37.5	4000	100	0.312	47
THQ3063123	04003-06	63	38	12000	35	0.608	102
THQ2063802		63	38	8000	70	0.460	78
THQ4063163	09022-06	63	37.5	16000	35	0.725	128
THQ5063163	04004-06	63	38	16000	20	0.760	128
THQ3080822	04003-07	80	48	8200	40	0.608	102
THQ2080562		80	48	5600	70	0.460	78
THQ1080282	04001-07	80	48	2800	100	0.312	50

continued next page

Part Number	DLA PN	Voltage [85°C]	Voltage [125°C]	Capacitance [μF]	ESR [mΩ]	Height [in]	Mass [g]
THQ4080113	09022-07	80	48	11000	35	0.725	128
THQ5080113	04004-07	80	48	11000	25	0.760	128
THQ3100572	04003-08	100	60	5700	50	0.608	102
THQ2100382		100	60	3800	90	0.460	78
THQ1100192	04001-08	100	60	1900	125	0.312	50
THQ4100752	09022-08	100	60	7500	35	0.725	128
THQ5100752	04004-08	100	60	7500	32	0.760	128
THQ3110452	04003-09	110	65	4500	75	0.608	102
THQ2110302		110	65	3000	140	0.460	78
THQ1110152	04001-09	110	65	1500	200	0.312	50
THQ4110602		110	65	6000	35	0.725	128
THQ5110602		110	65	6000	32	0.760	128
THQ2125222		125	75	2200	140	0.460	78
THQ5125452	04003-09	125	75	4500	40	0.760	128
THQ1125112	04001-10	125	75	1100	200	0.312	50
THQ3125332	04003-10	125	75	3300	75	0.608	102
THQ4125452	09022-09	125	75	4500	50	0.725	128

THQ -A2, -M2 Series

The THQA2 Series provides high power in a compact, hermetic, tantalum package. As an iteration, this series offers the THQM2 in a nylon mounting package for ease of assembly to a PCB.

- 0.6" round diameter case
- Heights range from 0.274"–0.45"
- Voltages range from 10V–125V
- Cap values range from 215uF–10,000uF
- Temperature range of -55°C to 125°C
- Lead-free RoHS compliant options available
- 4-pin nylon mounting package available
- ECCN EAR99



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Part Number	DLA PN	Voltage [85°C]	Voltage [125°C]	Capacitance [μF]	ESR [mΩ]	Height [in]	Mass [g]
THQM2010103	04005-11	10	6	10000	200	0.450	10
THQA2010103	04005-01	10	6	10000	200	0.274	8
THQA2016502	04005-02	16	9.5	5000	200	0.274	8
THQM2016502	04005-12	16	9.5	5000	200	0.450	10
THQA2025382	04005-03	25	15	3800	200	0.274	8
THQM2025382	04005-13	25	15	3800	200	0.450	10
THQA2030302	04005-04	30	18	3000	250	0.274	8
THQM2030302	04005-14	30	18	3000	250	0.450	10
THQA2035252	04005-05	35	21	2500	250	0.274	8
THQM2035252	04005-15	35	21	2500	250	0.450	10

continued next page

Part Number	DLA PN	Voltage [85°C]	Voltage [125°C]	Capacitance [μF]	ESR [mΩ]	Height [in]	Mass [g]
THQA2050152	04005-06	50	30	1500	250	0.274	8
THQM2050152	04005-16	50	30	1500	250	0.450	10
THQA2060871	04005-07	60	36	875	350	0.274	8
THQM2060871	04005-17	60	36	875	350	0.450	10
THQA2075561	04005-08	75	45	565	500	0.274	8
THQM2075561	04005-18	75	45	565	500	0.450	10
THQA2100361	04005-09	100	60	360	800	0.274	8
THQM2100361	04005-19	100	60	360	800	0.450	10
THQA2125211	04005-10	125	75	215	1250	0.274	8
THQM2125211	04005-20	125	75	215	1250	0.450	10

THQS2 Series

The THQS2 “Shock Hard” Series hybrid capacitor is designed for applications with high-impact shock requirements. Applications are limited cycle, limited time on charge (such as missile fusing), and short duration power hold up. Impact shock capability of 30,000g or higher. Unlimited shelf life.

- 0.6” round diameter case
- Height 0.341”
- Voltages range from 8V–50V
- Cap values range from 1,600uF–13,000uF
- Temperature range of -55°C to 125°C
- Lead-free RoHS compliant
- options available



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Part Number	DLA PN	Voltage [85°C]	Voltage [125°C]	Capacitance [μF]	ESR [mΩ]	Height [in]	Mass [g]
THQS2008133	N/A	8	4.8	13000	200	0.341	6
THQS2010103	N/A	10	6	10000	200	0.341	6
THQS2016622	N/A	16	9.5	6250	200	0.341	6
THQS2025442	N/A	25	15	4400	200	0.341	6
THQS2035292	N/A	35	21	2900	250	0.341	6
THQS2050162	N/A	50	30	1600	250	0.341	6

HyCap Series

The HyCap Series capacitor in axial form features our hybrid technology in the traditional tantalum wet case style that provides up to 4X the capacitance in industry standard case sizes [T1, T2, and T4] . Standard DLA part numbers available.

- Voltages range from 10V-150V
- Cap values range from 68uF-2700uF
- Operating temperature range of -55°C to 125°C
- RoHS 6/6 compliant and lead-free options available
- ECCN EAR99



[Download the datasheet](#)

Part Number	DLA PN	Voltage [85°C]	Voltage [125°C]	Capacitance [μF]	ESR [mΩ]	Height [in]	Mass [g]
HC2B025102	10004-19	25	15	1000	800	0.641	5.50
HC2B025102	10004-19	25	15	1000	800	0.641	5.50
HCB025561		25	15	560	800	0.641	5.50
HC2B050471	10004-20	50	30	470	900	0.641	5.50
HC2D050152	10004-08	50	30	1500	450	1.062	15.00
HC3B050681	10004-25	50	30	680	900	0.641	5.70
HC3D050222	10004-15	50	30	2200	600	1.062	15.00
HC4B050821		50	30	820	800	0.641	5.70
HC4D050272		50	30	2700	800	1.062	15.00
HCB050221		50	30	220	900	0.641	5.50
HCD050681	93026-40	50	30	680	700	1.062	15.00
HC2B060331	10004-21	60	40	330	900	0.641	5.50
HC2D060122	10004-16	60	40	1200	500	1.062	15.00
HC3B060471	10004-26	60	40	470	1000	0.641	5.70
HC3B060561	10004-27	60	40	560	1000	0.641	5.70
HC3D060182	10004-28	60	40	1800	500	1.062	15.00
HC4B060681		60	40	680	900	0.641	5.70
HC4D060222		60	40	2200	800	1.062	15.00
HCB060151		60	40	150	1100	0.641	5.50
HCD060561	93026-44	60	40	560	800	1.062	15.00
HC2A075680		75	50	68	2800	0.453	2.25
HC2B075221	10004-22	75	50	220	1000	0.641	5.50
HC2D075102		75	50	1000	350	1.062	15.00
HC2D075941	10004-17	75	50	940	500	1.062	15.00
HC3D075122	10004-30	75	50	1200	400	1.062	15.00
HC4B075391		75	50	390	600	0.641	5.70
HC4D075152		75	50	1500	600	1.062	15.00
HCB075111	93026-46	75	50	110	1300	0.641	6.00
HCD075471	93026-48	75	50	470	900	1.062	15.00
HC3B075331	10004-29	75	50	330	600	0.641	5.70
HC2A100330		100	65	33	3000	0.453	2.25
HC2B100151	10004-23	100	65	150	1200	0.641	5.50
HC2D100471	10004-18	100	65	470	500	1.062	15.00

continued next page

Part Number	DLA PN	Voltage [85°C]	Voltage [125°C]	Capacitance [μF]	ESR [mΩ]	Height [in]	Mass [g]
HC3A100470		100	65	47	2500	0.453	2.25
HC3B100221		100	65	220	800	0.641	5.70
HC3D100681		100	65	680	600	1.062	15.00
HC4B100271		100	65	270	1000	0.641	5.70
HC4D100881		100	65	880	600	1.062	15.00
HCB100680	93026-50	100	65	68	2100	0.641	6.00
HCD100221	93026-52	100	65	220	1200	1.062	18.00
HC2A125220		125	85	22	3200	0.453	2.25
HC2B125101		125	85	100	1800	0.641	5.50
HC2D125241	10004-14	125	85	240	800	1.062	18.00
HC2D125331	10004-24	125	85	330	800	1.062	15.00
HC3B125151		125	85	150	1000	0.641	5.70
HC3D125471		125	85	470	700	1.062	15.00
HC4B125181		125	85	180	1500	0.641	5.70
HC4D125561		125	85	560	700	1.062	15.00
HCB125470		125	85	47	2300	0.641	6.00
HCD125151	93026-56	125	85	150	1600	1.062	18.00
HC2D150151		150	100	150	1800	1.062	18.00

Hy-Cap HT Series

The HyCap HT (High Temperature) Series hybrid capacitor is designed for operation up to 200° C in intense shock and vibration environments including Oil & Gas Downhole Wireline, Drilling, MWD, and Completion Services. For extreme shock and vibration environments, our HyCap-HTX Series offers a robust construction in the largest traditional D(T4) case style. Information on the HyCap-HTX available upon request.

- Axial form
- Voltages range from 25V–75V
- Cap values range from 22μF–1800μF
- Temperature range of –55°C to 200°C
- Lead-free RoHS compliant options available
- ECCN EAR99



[Download
the datasheet](#)

Part Number	DLA PN	Voltage [85°C]	Voltage [125°C]	Capacitance [μF]	ESR [mΩ]	Height [in]	Mass [g]
HC2B050471HT	N/A	30	25	470	900	0.641	5.25
HC2D050152HT	N/A	30	25	1500	500	1.062	15.00
HCD050681HT	N/A	35	30	680	700	1.062	18.00
HC2B060331HT	N/A	36	30	330	900	0.641	5.25
HC3B060561HT	N/A	36	30	560	1300	0.641	5.75
HC3D060182HT	N/A	36	30	1800	600	1.062	15.50
HCD060561HT	N/A	42	36	560	800	1.062	18.00
HC2A075680HT	N/A	45	37	68	2800	0.453	2.25
HC2B075221HT	N/A	45	37	220	1000	0.641	5.25
HC2D075941HT	N/A	45	37	940	600	1.062	15.00

HC3B075331HT	N/A	45	37	330	1500	0.641	5.75
HC3D075122HT	N/A	45	37	1200	800	1.062	15.50
HC4B075391HT	N/A	45	37	390	800	0.641	5.75
HCB075111HT	N/A	50	45	110	1300	0.641	6.00
HCD075471HT	N/A	50	45	470	900	1.062	18.00
HC2A100330HT	N/A	60	50	33	3000	0.453	2.25
HC2B100151HT	N/A	60	50	150	1200	0.641	5.25
HC2D100471HT	N/A	60	50	470	700	1.062	15.00
HC3B100221HT	N/A	60	50	220	1000	0.641	5.75
HC3D100681HT	N/A	60	50	680	500	1.062	15.50
HC4B100271HT	N/A	60	50	270	1200	0.641	5.75
HC4D075152HT	N/A	60	50	1500	600	1.062	15.50
HC4D100881HT	N/A	60	50	880	600	1.062	15.50
HCB100680HT	N/A	70	60	68	2100	0.641	6.00
HCD100221HT	N/A	70	60	220	1200	1.062	18.00
HC2A125220HT	N/A	75	62	22	3200	0.453	2.25
HC2D125331HT	N/A	75	62	330	800	1.062	15.00
HC3B125151HT	N/A	75	62	150	1200	1.062	5.75
HC3D125471HT	N/A	75	62	470	600	1.062	15.50
HC4D125561HT	N/A	75	62	560	700	1.062	15.50
HCD125151HT	N/A	85	75	150	1600	1.062	18.00

Cappattery Series

The Cappattery Series super capacitor is designed for longer duration power hold up and memory backup applications. It has a full operating temperature range of -55°C to +85°C. Steady state charge life is 25 years. High-shock design options available.



Part Number	DLA PN	Voltage [85°C]	Capacitance [μF]	ESR [mΩ]	Height [in]	Mass [g]
RE055105	92001-02	5.5	1,000,000	700	1.28	0.675
RS055105	92001-07	5.5	1,000,000	2000	1.10	0.580
RS110564	92001-14	10	560,000	4000	1.10	0.950
RE110474	92001-09	11	470,000	1500	1.28	1.050
RES160504	N/A	16	500,000	1500	1.28	1.050
RSS160564	N/A	16	500,000	4000	1.10	0.950

A Global Leader in Multilayer Ceramic Capacitors

Quantic™ UTC specializes in **multilayer ceramic capacitors and high frequency switch mode power supply capacitors**, both standard and custom, for high-reliability and mission-critical applications in the military, aerospace, telecommunications, and industrial industries.

Industries

- › Military and Aerospace
- › Space (High Reliability)
- › Industrial
- › Telecommunications
- › Computing

Applications

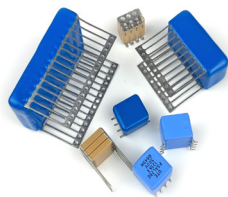
- › Filtering
- › Snubbers
- › Energy Storage
- › Power Conversion
- › Coupling - DeCoupling
- › Munitions

Featured Products



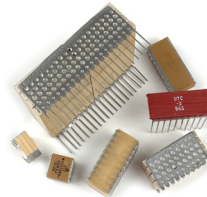
MLCC

- › Voltage Range: 6.3V-12KV
- › Cap Range: 1.2pF - 220uF
- › Size: 01005 - 13060
- › Dielectric: NPO, X7R, X5R
- › Application: Industrial and commercial



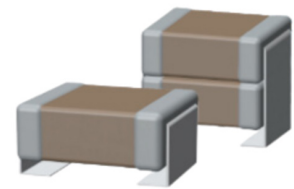
SMPS

- › Voltage Range: 50V-500V
- › Cap Range: .01uF - 27uF
- › Size: Case Code Size 1-6
- › Dielectric: NPO, X7R
- › Application: Military, high end protection



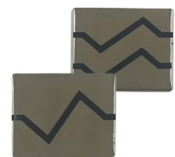
Military [MIL-PRF-49470]

- › B Level Voltage: 50V-500V
- › Cap Range: 0.15uF - 47uF
- › Size: Case Size 3, 4, 5
- › Dielectric: BX, BR, BQ
- › T [Space] Level Qualified Products
- › Application: Military Mil-Prf-49470



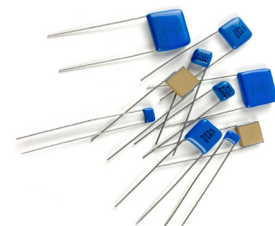
MegaCap Type [BC Series]

- › Voltages to 1000V
- › Higher capacitance on same footprint
- › Dielectric: COG and X7R
- › Applications: Industrial Smoothing and Decoupling, resonant charging systems, DC to DC conversion, DC blocking, power supplies



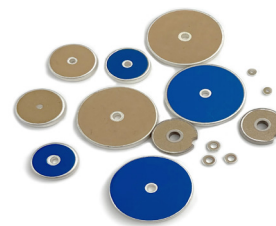
Pulse Energy

- › Available in High temperature up to 250 °C
- › Up to 10KV range for single and multi-pulse firing applications
- › Custom sizes, capacitance, and voltage ranges are available
- › Applications: Missiles, Downhole, detonation



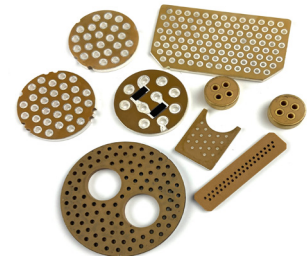
Radial Leaded

- › Voltage Range: 250V-10,000V
- › Cap Range: .05pF - .68uF
- › Size: .25 x .22 to .55 x .28
- › Dielectric: NPO, X7R



Discoidal

- › Cap Range: .05pF - 7.2uF
- › Voltage Range: 25V-3000V
- › Size: 0502 - 6429
- › Temperature Dielectric: NPO, X7R
- › Application: EMI suppression filter



Planar Arrays

- › Voltage Range: 50V-2000V
- › Cap Range: 100pF - uF
- › Size: Custom/Standard: Circular, Sub D, ARINC
- › Dielectric: NPO, X7R
- › Application: Connectors, low-pass filter

Pulse Energy Capacitor

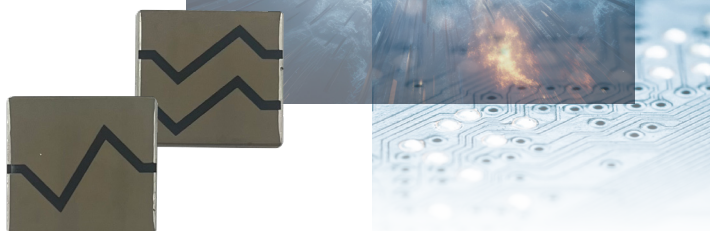
Quantic™ UTC's pulse energy capacitors are manufactured using dielectric formulations with negative temperature coefficients. The energy density of this dielectric material is greater than that of conventional dielectric materials and it provides excellent pulse delivery over short durations at temperatures up to 250 °C. MIL-PRF-49467 testing is available.

Features

- Available in High temperature up to 250 °C
- Up to 10KV range for single and multi-pulse firing applications
- Bleed resistor for added safety
- Custom sizes, capacitance, and voltage ranges are available

Applications

- Downhole
- Missile System
- Detonation



How to Order [Stack]

DP	1	F	6560	L	1	C	304	K	P	X	-R500
Series	No. Chip[s]	Voltage	Case Size	Lead Frame	Coating	Dielectric	Capacitance	Tolerance	Termination	Testing	Special
Pulse Energy [200 °C]	1	T = 1000 VDC	2225	L	1 = uncoated	C (N2200)	304	J = ±5%	P = PdAg	A = Standard	R500 [500 MegaOhm]
	2	F = 1600 VDC	3640	J	2 = coated		Two significant digits followed by No. of zeros. e.g.: 304=300,000 pF	M = ±20%	S = Ag	B = Group	
	3	V = 1800 VDC	4040					Z = ±80%, -20%		X = Special	
		W = 2000 VDC	5550					P = ±100%, -0%			
		X = 3000 VDC	6560								

How to Order [Chip]

DP	1	F	6560	1	C	304	K	P	-	R500
Series	No. Chip[s]	Voltage	Case Size	Coating	Dielectric	Capacitance	Tolerance	Termination	Testing	Special
Pulse Energy [200 °C]	1	T = 1200 VDC	2225	1 = uncoated	C (N2200)	304	J = +5%	P = PdAg	A = Standard	R500 [500 MegaOhm]
	2	F = 1600 VDC	3640	2 = coated		Two significant digits followed by No. of zeros. e.g.: 304=300,000 pF	K = +10%	S = Ag	B = Group	
	3	V = 1800 VDC	4040				M = +20%		X = Special	
		W = 2000 VDC	5550				Z = +80%, -20%			
		X = 3000 VDC	6560				P = +100%, -0%			

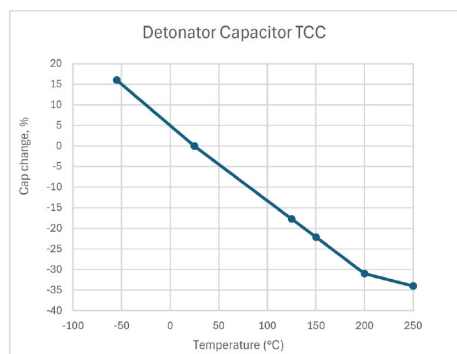
Dielectric Characteristics

Operating Temperature range:	-55 °C to 200 °C
Temperature coefficient:	-55 °C to 200 °C is 2200 ppm/°C +300 ppm/°C
Dissipation factor@ 25 °C	0.1% Max
Insulation resistance @ 25 °C:	>100GΩ or >1000ΩF whichever is less
Insulation resistance @ 200 °C:	>1GΩ or >10ΩF whichever is less
Dielectric withstanding voltage:	120%
Ageing rate:	0% per decade
Test Parameters:	1KHz, 1.0 ±0.2 VRMS, 25 °C

Product Range [per size]

Chip Size	2225	3640	4040	5550	6560
Length, inch	0.220 ±0.015	0.360 ±0.018	0.400 ±0.020	0.550 ±0.028	0.650 ±0.033
Width, inch	0.250 ±0.015	0.400 ±0.020	0.400 ±0.020	0.500 ±0.025	0.600 ±0.030
T max, inch	0.125	0.180	0.250	0.250	0.250
End Band, inch	0.030 ±0.015	0.030 ±0.015	0.040 ±0.020	0.040 ±0.020	0.040 ±0.020
Rated V	Max. Cap				
1000	623	254	334	524	824
1500	303	154	214	334	474
2000	223	104	134	254	404
3000	682	273	393	563	104

Dielectric Characteristics



Quantic™ UTC is a global capacitor provider manufacturing multilayer ceramic capacitors (MLCCs) and leaded devices for use in defense, aerospace, computer, telecommunications, industrial and various high reliability applications. Our offerings include surface mount (SMT) multi-layer ceramic chip capacitors in both custom and EIA standard sizes; switch mode power supply (SMPS) capacitors in accordance with MIL-PRF-49470 and DSCC/DLA 87106, 88011 drawings and customer source controlled drawings (SCDs); SMT high voltage MLCC; radial leaded high voltage capacitors; SMD large body size MLCC; discoidal capacitors; discoidal arrays; and custom molded case radial parts.

info@quanticutc | quanticutc.com | +1-323-266-6603

Quantic™ UTC

Stacked, Multilayer Polymer (MLP) Film Capacitors for Mission-Critical Applications



Quantic™ Paktron stands out as a pioneer in capacitor technology with its innovative stacked, multilayer polymer (MLP) construction. This advanced design offers significant advantages over conventional wound film capacitors, making Quantic™ Paktron a preferred choice across diverse markets including automotive, commercial, high-reliability, military, space, and telecommunications sectors. These stacked, multilayer polymer (MLP) film capacitors serve as an excellent alternative to ceramic capacitors in critical “cannot fail” applications that require robust mechanical and electrical performance.

All Quantic™ Paktron products are design registrable.



Angstor

- › 0.10uF – 10uF
- › 100VDC – 1200VDC
- › 7.5mm – 15mm lead spacing



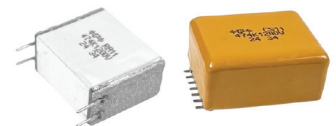
Capstick

- › 0.33uF – 20uF
- › 50VDC – 1200VDC
- › 10mm – 15mm lead spacing
- › SMD versions available



Quencharc RC-Snubber

- › 200VDC – 1600VDC
- › up to 2W power ratings
- › UL/CSA versions available



New High Voltage MLP

- › <2uF typical values available
- › 1000VDC-1200VDC
- › 27.5mm lead spacing
- › SMD and thru-hole options

Advantages

Unique advantages over conventional wound film capacitors

- › higher frequency operation
- › lower ESR and ESL
- › High dV/dT

Self -Encased Design

- › volumetrically efficient square shape
- › lightweight, higher capacitance density compared to boxed, wound capacitors
- › mechanically resilient body

Ultra-High ripple current ratings

- › ultra-low D.F. due to stacked construction, specialty dielectrics
- › unique design improves heat dissipation

High stability

- › zero DC-bias derating
- › low temperature coefficients
- › 20+ year life expectancy without significant cap degradation

Wide Operating Temperature range

- › -55°C to +125°C, vs polypropylene [-55°C to 85°C [105°C]]: stable parameters across this range

Self Healing

- › during a fault condition, the affected area of the capacitor is “cleared”, isolating the fault and allowing the capacitor to continue to operate as normal
- › mechanically flexible, no susceptibility to piezoelectric effect, surge cracking

Standard values

- › corresponding to the needs of wide bandgap switching applications
- › custom values available

Lead Times 8-10 weeks, less in some cases

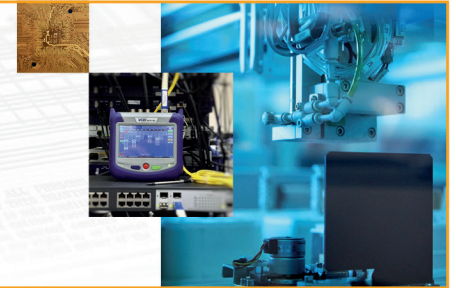
Manufactured in USA

Applications

- EMI filtering
- VPX Systems
- L-C filtering (power converters, power amplifiers, etc.)
- Low energy pulse applications (ignition, systems, etc)
- Boost converters
- Switched mode power supplies
- DC Block Applications (HF, plasma amplifiers, etc)
- DC link applications, (low energy)
- Voltage smoothing,
- Coupling and de-coupling
- Timing/tuning

**AEC-Q200 qualification
expected in Q4 2024,
with final testing underway**

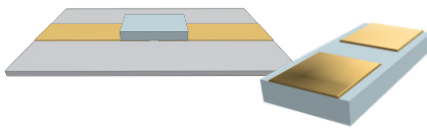
Ceramic Capacitors for the most demanding high frequency, microwave & millimeter-wave applications.



Innovative technology allows ceramic capacitors to be manufactured with higher capacitance using fewer dielectrics while improving temperature and frequency performance in a high reliability package.

- Up to 20X capacitance
- Frequencies exceeding 100GHz
- Ultra-high Q dielectrics
- Simple part selection
- Wide range of voltages
- High Reliability

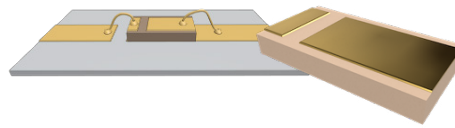
Featured Products



Gap Capacitors

Microwave / millimeter wave gap capacitor for DC blocking, RF bypass, impedance matching, filtering, tuning, coupling.

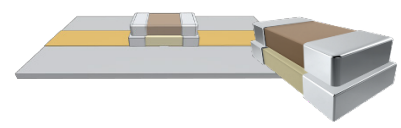
- › 10X Capacitance Design
- › Ultra-Stable High Q Dielectrics
- › 6.3 Volt to 100 Volt
- › Standard and Custom Sizes Available
- › No Wire-bond



Binary Capacitors

Suitable for Ga-As, 5G, telecom, industrial, military and space applications requiring high self resonance frequencies to 100GHz

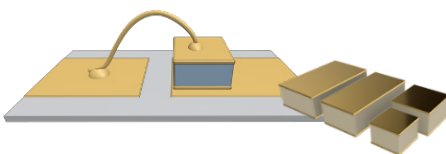
- › 20X capacitance design
- › Wire-bondable
- › Additional Capacitor on Device
- › Configurable Design



Broadband Blocks

Broadband Block combines Eulex patented Gap Capacitor with high capacitance MLCC. For microwave/mm-wave, optical transceivers, broadband test equipment.

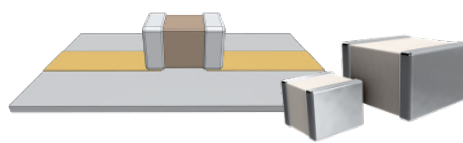
- › Size 0201 thru 0805 / 10, 100, 220nF
- › Low insertion Loss to 100GHz
- › Lowest Profile



Vertical Layer

High capacitance, wire-bondable MLCC. Class II dielectric for RF Bypass and DC Blocking for wide frequency range.

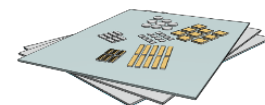
- › Miniature Form Factor [1515-5080]
- › Wire-bondable, Au Terminations
- › Class II (-55°C to 125°C)
- › High Frequency Response



Ultra-High Q

High frequency performance MLCC (high Q / low ESR design). Economical solution for demanding RF applications.

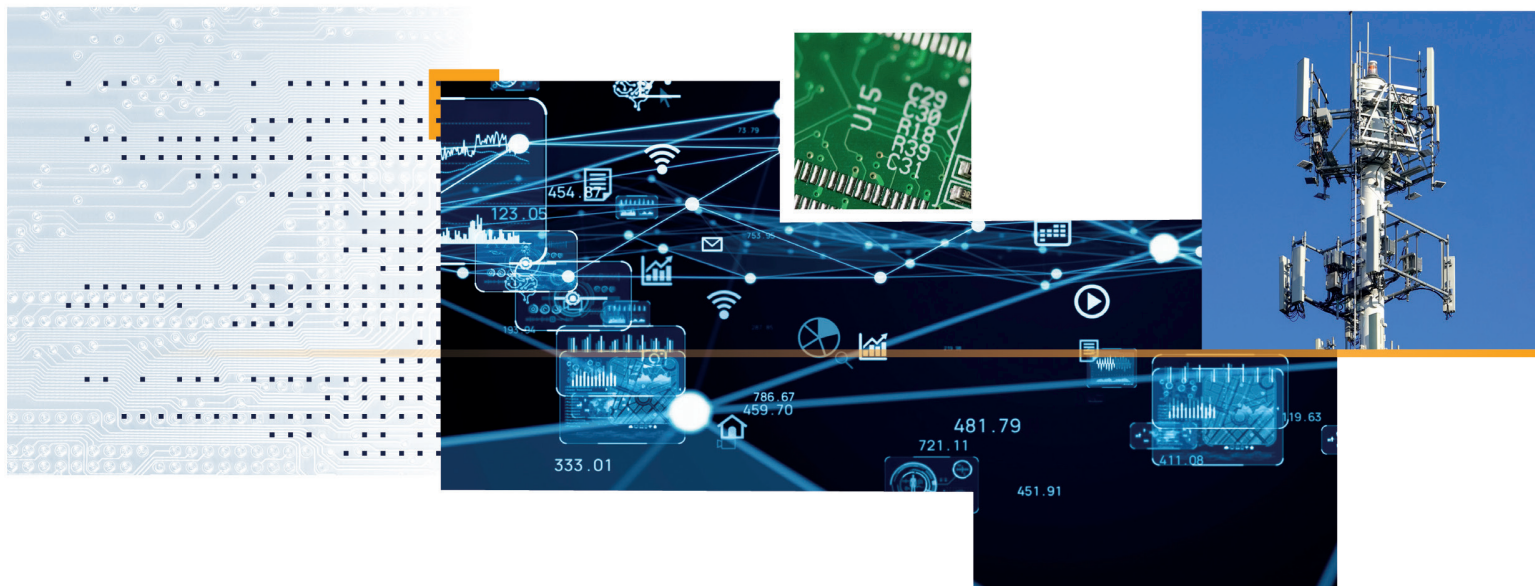
- › Size 01005 thru 1111
- › 0.1pF to 1000pF
- › 6.3 volt to 1500 volt
- › NPO dielectric (± 30 ppm / °C)



Substrates

Eulex has the capability to manufacture custom substrates from a range of ceramic materials with thin or thick film metallization and inclusion of thick film resistors.

- › High Purity AlO
- › High Q dielectrics >100GHz
- › AlN with Exceptional Thermal Conductivity
- › Custom Size & Shape
- › Metallization Options



Common Applications

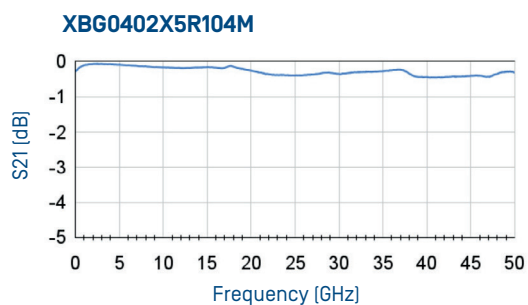
- 5G and next generation telecoms
- Test & Measurement
- AI & Machine learning new high speed architecture
- Automotive, mmwave / vision sensing, C-V2X
- Military & aerospace radar / sat coms
- Photonics

Design

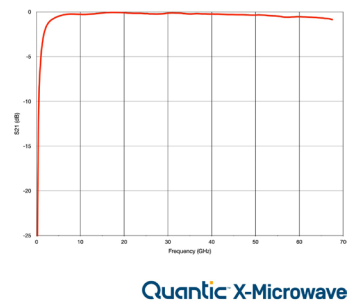
Quantic™ Eulex has extensive experience in ceramic capacitor design and manufacture for high reliability applications. Our patented design allows us to use the highest performing ceramic dielectric materials ensuring our products can operate with low loss over a wide range of frequencies. As well as offering our standard lines of product, we are happy to engage with design engineers to apply our technology and provide custom solutions for your applications.

Test Data

BroadBand Blocks Tested by **Quantic PMI**



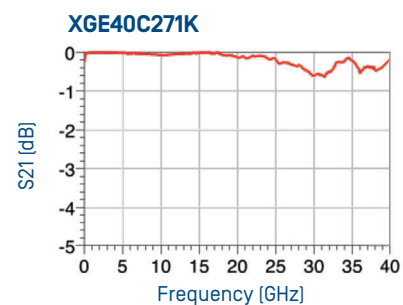
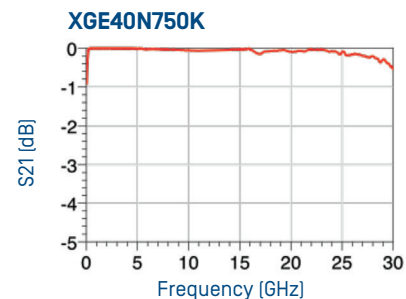
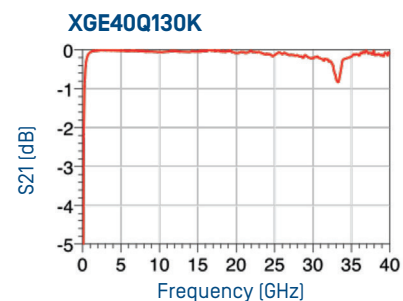
Low Insertion Loss Graph



Test Data

Gap Capacitors

Tested by **Modelithics®**



Quantic™ Eulex

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Quantic® Electronics Capacitor Technology Portfolio

Quantic™ Evans



Hybrid Wet Tantalum

Quantic™ Evans hybrid wet tantalum capacitors are the most power dense in the industry, providing significant SWaP savings compared to traditional capacitor technologies.

- › Voltage range from 10 to 125V
- › Cap values ranges from 22uF-1F
- › Rugged hermetically sealed design withstands high shock & vibration
- › Ultra-low ESR “enable” high-current applications
- › Space Grade [Qualified to NASA-INST-002]

www.quanticevans.com

Quantic™ Eulex



RF and Microwave Ceramic

Quantic™ Eulex's patented technology allows ceramic capacitors to be manufactured with higher capacitance using fewer dielectrics, while improving temperature and frequency performance, in a highreliability package.

- › Up to 20X capacitance
- › Frequencies exceeding 100GHz
- › Ultra-high Q dielectrics
- › Product offering includes gap, binary, broadband, vertical layer, ultra-high Q
- › Voltage range from 6.3V-1500V

www.quanticeulex.com

Quantic™ Paktron



Multi-Layer Polymer (MLP) Stacked Film

Quantic™ Paktron's multilayer polymer capacitors offer a ceramic capacitor alternative in specific “cannot fail” applications that demand robust mechanical and electrical solutions.

- › Highest ripple current rating per C*V in the industry
- › Offers better electrical stability over temperature compared to XB
- › Self healing - does not fail short
- › Mechanically flexible does not crack
- › Voltage ratings from 50VDC-1200VDC
- › Cap values from 0.1uF-20uF

www.quantickpaktron.com

Quantic™ UTC



Multi-Layer Ceramic Capacitor (MLCC)

Quantic™ UTC manufactures standard and engineered high-reliability MLCCs and leaded devices, approved to produce MIL-PRF 49470 parts to standard (B) level and (T) space levels, in addition to a wide variety of DLA drawings.

- › Equipped to perform a variety of MIL-PRF testing
- › Low ESR & ESL – excellent for frequency decoupling
- › Multiple dielectrics available including NP0, X7R, X5R, Y5V - PME and BME formulations.
- › Low-cost manufacturing options available
- › Product offerings include MLCCs, planar arrays, discoidals, pulse energy, megacap type (BC), safety caps and SMPS.

www.quanticutc.com

