Evans GROUP
EULEX

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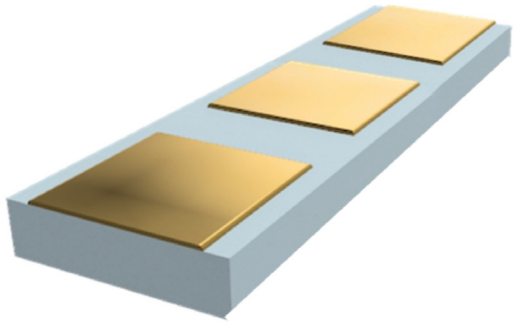
Terminal Gap Capacitor

XG3



Product Overview

Eulex single layer SMD mount gap capacitor with (Pt or Au) metallization for solder, or epoxy die attach.

Part Numbering System

XG	3	A	0301	N	100	K	P	W
Eulex Gap	Number of Pads	Rated Voltage	Case Size	Dielectric Type	Capacitance	Capacitance Tolerance	Metallization Type	Packaging

Dielectrics and Voltage Rating

Dielectric Type		Dielectric Characteristics			
		Temp Coeff	Tolerance	Temp Range	Metallization
P	Porcelain	Neg.	B, C, D [G, J >10pF]	-55 to 125°C	Au/Pt
Q	Class I/NPQ	±25ppm	B, C, D [G, J >10pF]	-55 to 125°C	Au/Pt
N	Class I/NP0	±30ppm	J, K, M	-55 to 125°C	Au/Pt
C	Class I/NPS	+0-5%	J, K, M	-55 to 125°C	Au/Pt
X	Class II/X7R	±15%	K, M, P	-55 to 125°C	Au/Pt
Y	Class III/Y5V	+22%-82%	M, P, Z	-30 to 85°C	Pt

Voltage Code	
A	6.3VDC
C	10VDC
E	16VDC
L	25VDC
G	50VDC
B	100VDC

Tolerance Code									
Code	B	C	D	G	J	K	M	P	Z
Tolerance	±0.10 pF	±0.25 pF	±0.50 pF	±2%	±5%	±10%	±20%	+100 / -0%	+80 / -20%

Termination Material (P/G)

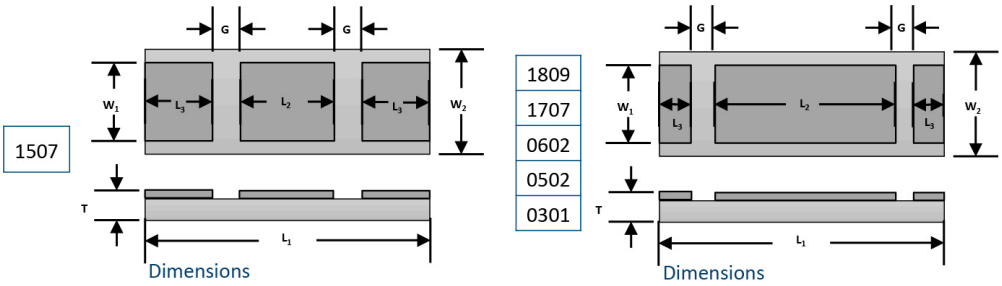
Metallization
Pt 100µin min
Au 100µin min

Packaging (G/W/T)

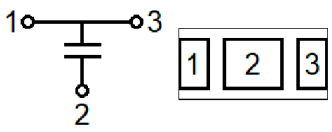
Package Type	Pack Qty
Gel-Pak/Waffle / Tape and Reel	N/A

Case Size & Dimensions

Case Size	Length (L1) Inch (mm)	Chip Width (W2) Inch (mm)	Thickness (T) Inch (mm)	Center Pad (L2) Inch (mm)	Side Pad (L3) Inch (mm)	Pad Width (W1) Inch (mm)	Gap (G) Inch (mm)
1809	0.180 ±0.005 (4.572 ±0.127)	0.090 ±0.005 (2.286±0.127)	0.020 Max (0.508 Max)	0.120 ±0.004 (3.048 ±0.102)	0.020 ±0.003 (0.508 ±0.076)	0.060 ±0.003 (1.524 ±0.076)	0.008 Min (0.203 Min)
1707	0.170 ±0.005 (4.318 ±0.127)	0.070 ±0.005 (1.778 ±0.127)	0.018 Max (0.457 Max)	0.110 ±0.004 (2.794 ±0.102)	0.020 ±0.003 (0.508 ±0.076)	0.060 ±0.003 (1.524 ±0.076)	0.008 Min (0.203 Min)
1507	0.150 ±0.005 (3.810 ±0.127)	0.070 ±0.005 (1.778 ±0.127)	0.016 Max (0.406 Max)	0.060 ±0.002 (1.524 ±0.051)	0.036 ±0.003 (0.914 ±0.076)	0.060 ±0.003 (1.524 ±0.076)	0.008 Min (0.203 Min)
0602	0.060 ±0.004 (1.524 ±0.102)	0.020 ±0.002 (0.508 ±0.051)	0.012 Max (0.305 Max)	0.040 ±0.002 (1.016 ±0.051)	0.005 ±0.002 (0.127 ±0.051)	0.018 ±0.002 (0.457 ±0.051)	0.003 Min (0.076 Min)
0502	0.050 ±0.004 (1.270 ±0.102)	0.020 ±0.002 (0.508 ±0.051)	0.012 Max (0.305 Max)	0.030 ±0.002 (0.762 ±0.051)	0.005 ±0.002 (0.127 ±0.051)	0.018 ±0.002 (0.457 ±0.051)	0.003 Min (0.076 Min)
0301	0.030 ±0.003 (0.762 ±0.076)	0.010 ±0.002 (0.254 ±0.051)	0.010 Max (0.254 Max)	0.018 ±0.002 (0.457 ±0.051)	0.005 ±0.002 (0.127 ±0.051)	0.008 ±0.002 (0.203 ±0.051)	0.003 Min (0.076 Min)



Pinout Schematic



Capacitance Rating

6.3V	1809	1707	1507	0602	0502	0301
Dielectric	Cap (pF)	Cap (pF)	Cap (pF)	Cap (pF)	Cap (pF)	Cap (pF)
P	100	68	39	7.5	5.6	1.2
Q	220	150	82	15	12	3.0
N	700	500	270	56	40	10
C	3200	2200	1200	240	180	40
X	15000	11000	6200	1200	910	150
Y	100000	68000	37000	7500	5600	1300

10V	1809	1707	1507	0602	0502	0301
Dielectric	Cap (pF)	Cap (pF)	Cap (pF)	Cap (pF)	Cap (pF)	Cap (pF)
P	91	62	36	6.8	5.1	1.0
Q	180	110	62	12	9.1	1.5
N	560	390	220	43	33	5.6
C	2200	1500	750	150	120	22
X	12000	8200	4700	910	680	120
Y	75000	51000	27000	5600	4300	820

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Capacitance Rating

16V	1809	1707	1507	0602	0502	0301
Dielectric	Cap (pF)	Cap (pF)	Cap (pF)	Cap (pF)	Cap (pF)	Cap (pF)
P	56	39	22	4.5	3.3	0.8
Q	130	90	50	10	7.5	1.8
N	400	300	150	33	25	6.0
C	1900	1300	700	140	100	26
X	10000	6800	3900	750	560	91
Y	60000	41000	22000	4500	3300	800

25V	1809	1707	1507	0602	0502	0301
Dielectric	Cap (pF)	Cap (pF)	Cap (pF)	Cap (pF)	Cap (pF)	Cap (pF)
P	47	33	18	3.9	2.7	0.7
Q	110	75	44	8.2	6.5	1.5
N	370	250	140	27	20	5.0
C	1600	1100	600	120	90	22
X	8200	5600	3300	620	470	82
Y	51000	35000	19000	3800	2700	680

50V	1809	1707	1507	0602	0502	0301
Dielectric	Cap (pF)	Cap (pF)	Cap (pF)	Cap (pF)	Cap (pF)	Cap (pF)
P	44	30	17	3.5	2.5	0.6
Q	100	70	39	8.0	6.0	1.4
N	330	220	130	26	19	4.7
C	1500	1000	560	110	82	20
X	7900	5600	3000	560	470	75
Y	47000	32000	17000	3500	2500	600

100V	1809	1707	1507	0602	0502	0301
Dielectric	Cap (pF)	Cap (pF)	Cap (pF)	Cap (pF)	Cap (pF)	Cap (pF)
P	40	27	15	3.0	2.2	0.5
Q	95	65	35	7.0	5.0	1.2
N	300	200	120	22	17	4.0
C	1300	900	500	100	75	18
X	7200	4700	2700	510	390	68
Y	43000	29000	15000	3000	2200	560

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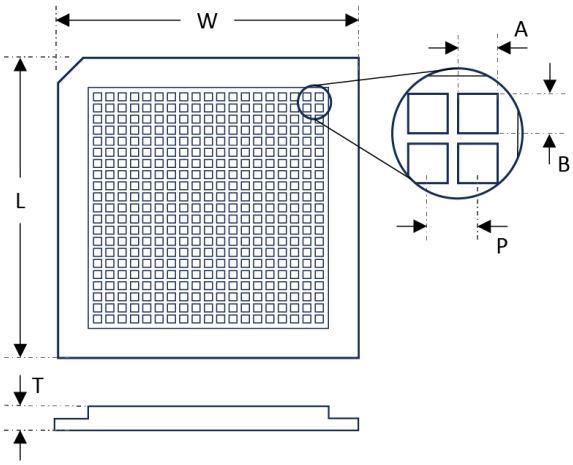
Test Conditions

No.	Item	Test Condition	Requirements
1	Visual & Dimensions	Suitable optical or mechanical measurement system	▪ No major defects ▪ Conforms to individual specification sheet"
2	Capacitance	▪ Measured at 1.0±0.2Vrms, 1.0MHz±10% ▪ Measured at room temperature"	▪ Shall not exceed specified capacitance plus allowed tolerance.
3	Dielectric Strength	▪ 250% of rated voltage. ▪ Duration: 1 to 5 sec. ▪ Charge & discharge current <50mA."	▪ No evidence of damage or arc-over during test.
4	Insulation Resistance	▪ Time rated voltage applied for 120 secs Max ▪ Test at room temperature"	▪ ≥100GΩ minimum
5	Temperature Coefficient	▪ No electrical load ▪ Allow temperature to equilibrate prior to measure"	▪ Capacitance change ±30ppm between -55 to +125°C from reference measurement at 20°C.
6	Termination Strength	▪ MIL-STD-883, device mounted to Au metalized alumina substrate with Au-Sn20. Apply force parallel to substrate until failure.	▪ Die bond strength 2N min.
7	High Temperature Load	▪ Test temp.: 125±3°C ▪ Applied voltage: Rated Volt ▪ Test time: 1000+24/-0 hrs. ▪ Cap. / DF / I.R. Measurement to be made after de-aging at 150°C for 1hr then 24±2hr age at RT	▪ No major damage ▪ Cap change: within ±7.5% or ±0.75pF whichever is larger ▪ I.R. ≥1GΩ

Packaging Details

Dimensions (mm)					
A	B	P	W	L	T
Samples Provided in Gel-Pak AD-22T-00X8					



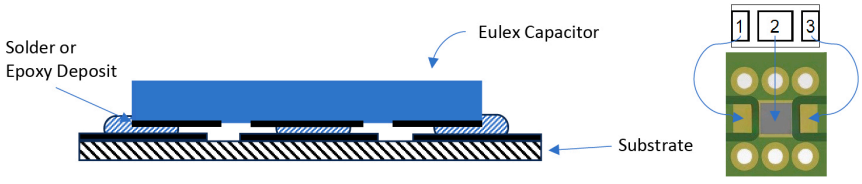
Mounting Methods

Solder Attach

Parts are mounted terminations down.
Solder compositions suitable for Au attachment are acceptable.
Au-Sn20 or In-Pb30 solder is recommended.
Do not exceed 320°C.
Heating cycle to remain below 5°C/sec and cooling below 4°C/sec.

Epoxy Bonding

Parts are suitable for conductive epoxy bonding.
Epoxy should be deposited towards edge of part, taking care not to short gap between terminals.



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Uniting four industry leaders—Evans, Paktron, UTC, and Eulex—Evans Group delivers the industry's most specialized and comprehensive capacitor portfolio. Together, we provide power-dense, high-reliability solutions engineered for mission-critical environments across defense, aerospace, energy, and advanced RF systems.

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