



Ultra-Broadband Capacitors

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AVX RF/Microwave Solutions



Devices	Thin Film	Multilayer Organic (MLO®)	Ceramics	Resistives
Capacitors	Available	Available	Available	N/A
Inductors	Available	Available	Available	N/A
Resistors, Attenuators Terminations	N/A	N/A	N/A	Available
Low Pass Filters	Available	Custom	N/A	N/A
High Pass Filters	Possible	Custom	N/A	N/A
Band Pass Filters	Possible	Custom	N/A	N/A
Band Reject Filters	Possible	Custom	N/A	N/A
Diplexers	N/A	Available & Custom	N/A	N/A
High Directivity Couplers	Available	Possible	N/A	N/A
Hybrid Couplers	Available	Available	N/A	N/A
Multilayer Varistor	N/A	N/A	Available	N/A

RF/Microwave Capacitor Solutions



SINGLE LAYER CAPACITORS

	CU	Accu-P	MLO	UQ	SQ	AQ	U-Dielectric	HQ	GX
01005	0.5 - 10 pF	0.05 - 2.3 pF							
0201	0.5 - 22 pF	0.1 - 22 pF							0.01 μ F
0301									0.1 μ F
0402		0.05 - 68 pF		0.1 - 27 pF			0.2 - 30 pF		0.1 μ F
0603		0.05 - 68 pF	0.1 - 3.9pF	0.1 - 100 pF	0.1 - 100 pF		1.0 - 120 pF		0.1 μ F
0605				0.1 - 100 pF	0.1 - 10,000 pF	0.1-10,000 pF			
0709				1.0 - 100 pF					
0805		0.1 - 100 pF		0.1 - 240 pF	0.1 - 240 pF		1.0 - 180 pF		
1210		0.1 - 100 pF		0.1 - 1000 pF	0.1 - 100,000 pF	0.1 -100,000 pF	1.0 - 1000 pF		
2225								1.0 - 2700 pF	
3938								1.0 - 5100 pF	
Voltage Rating →	16 - 25V	6.3 - 100V	50 - 500V	50 - 500V	50 - 500V	50-500V	25 - 200V	300 - 7200V	4 - 50V
Max Freq	>20GHz	>20GHz	>20Ghz	>10GHz	>10GHz	>5GHz	>10GHz	>100MHz	>40GHz
Tech	Ceramic	ThinFilm	MLO	Ceramic	Ceramic	Ceramic	Ceramic	Ceramic	Ceramic

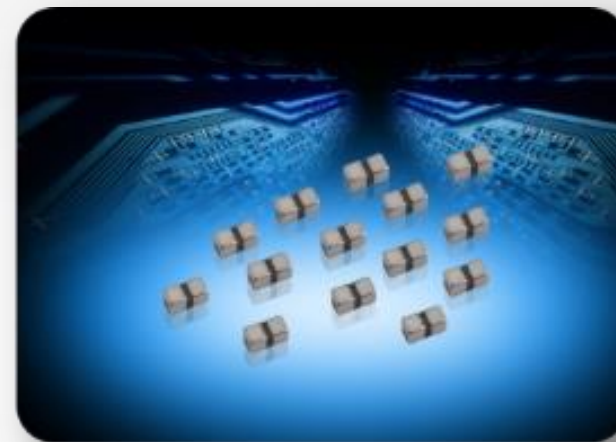
DLA
Approved

AEC Q200

GX Ultra-broadband capacitors

Advantages

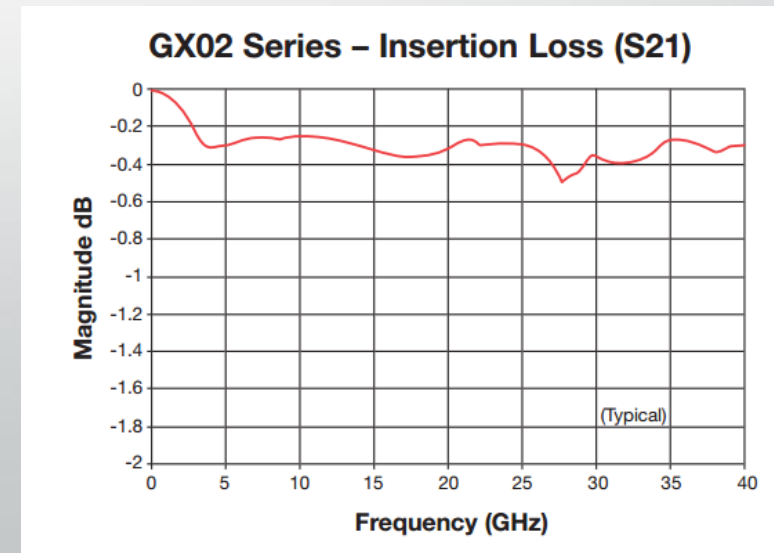
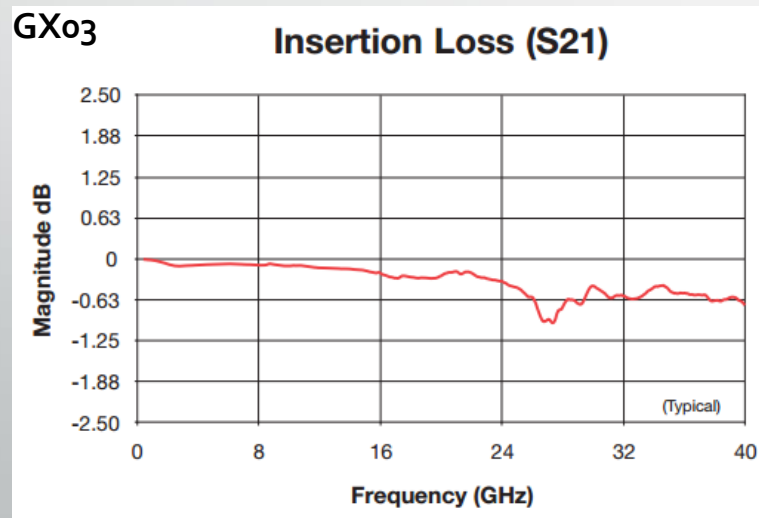
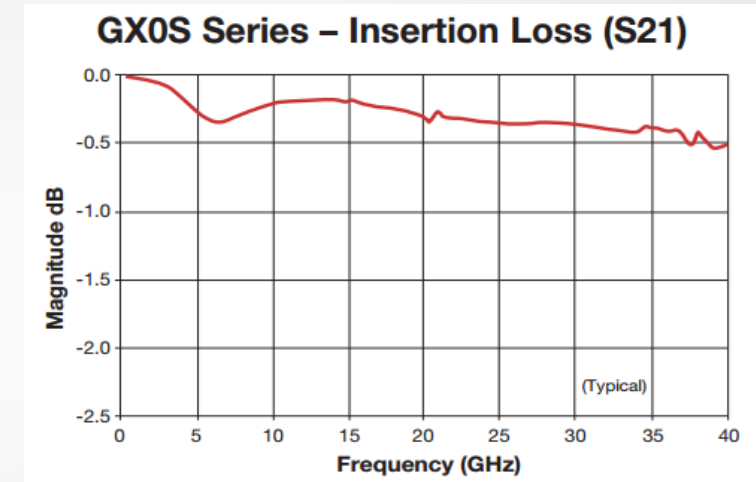
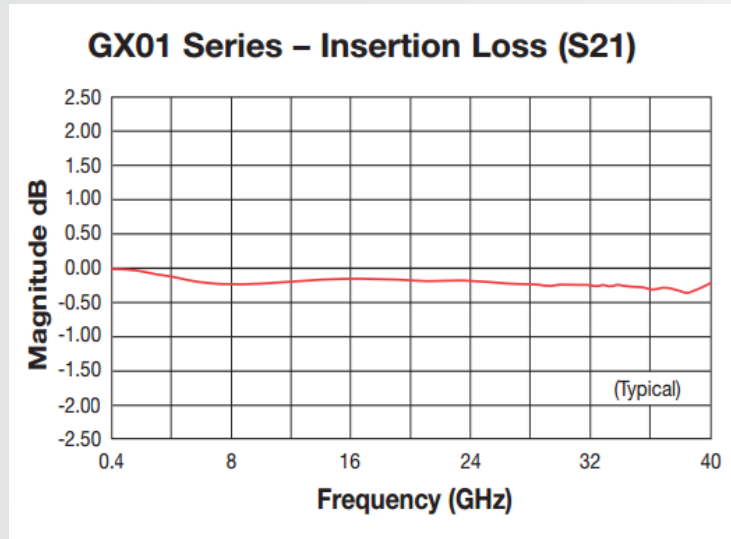
- **Ultra-Low insertion loss**
- **Low return loss**
- **Universal DC Block**



Current Offering

AVX PN	Case Size	Capacitance	Voltage	Sample Kit PNs
GX01ZD103PATD	0201	10 nF	6.3 – 10 VDC	KIT-GX01
GX0S6D104MATD	0301	100 nF	4 – 6.3 VDC	KIT-GX0S
GX02YD104KAT2	0402	100 nF	10 – 16 VDC	KIT-GX02
GX035C104MAT2	0603	100 nF	50 VDC	KIT-GX03

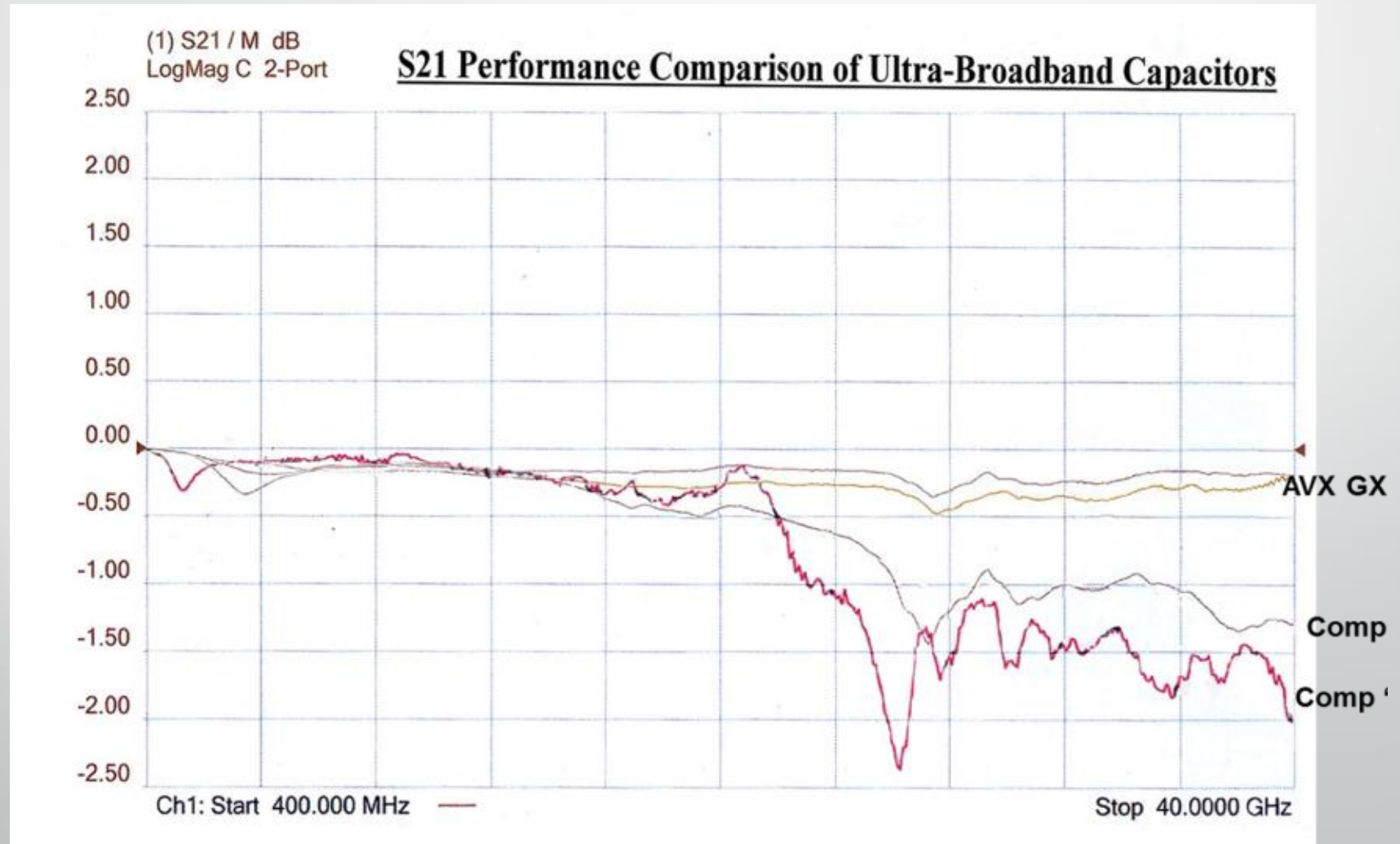
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GX Ultra-Broadband Capacitors



AVX's Advantage



GX Ultra-broadband capacitors



Roadmap

		CAPACITANCE (nF)						
		1	10	47	68	82	100	220
VOLTAGE (V)	100V	0402						
	50V				0402		0603	
	25V					0402		
	16V			0301			0402	
	10V		0201		0301			0402
	6.3V						0301	
	4V						0201	

Available Today

In Development



GX Ultra-Broadband Capacitors



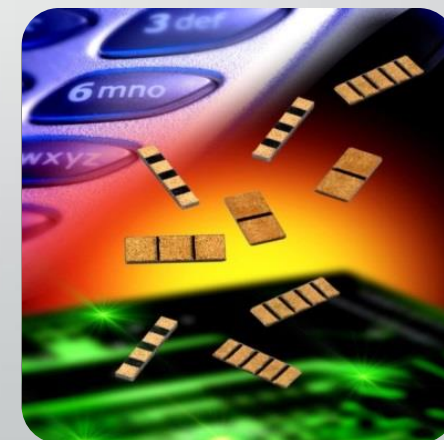
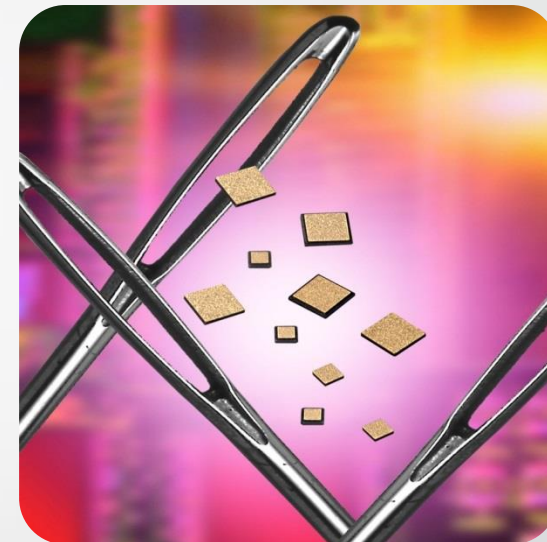
Applications

- **Optical Communications**
 - DC Blocking
 - Currently being utilized in 100 Gbps optical modules
 - **NEXT Generation Optical Modules**
 - We're extending data for GX01, GX02 and GXoS to 67GHz to respond to the need for faster speeds.
- **Military**
 - DC Blocking
 - High Accuracy Systems



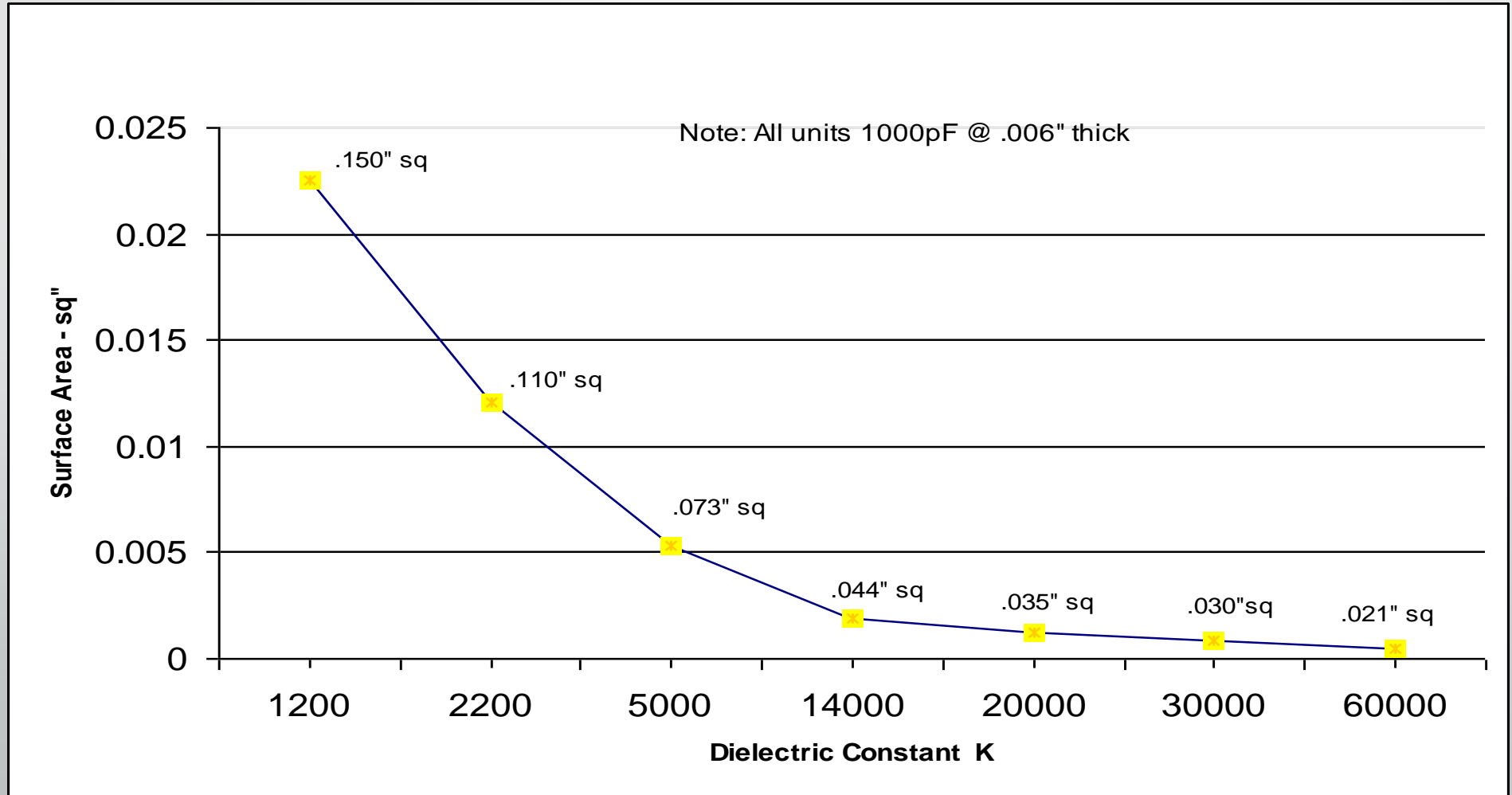
Single Layer Capacitors

- Features
 - Dielectric constant from 20 to 60,000
 - Sizes from 0.010" to 0.100" square
 - Single Sided Borders
 - Standard Termination Ti/W-Au
 - Capacitor Arrays Available
 - Up to 100GHz frequency range
 - Wire Bondable
 - Sample Turnaround approximately 2 weeks.



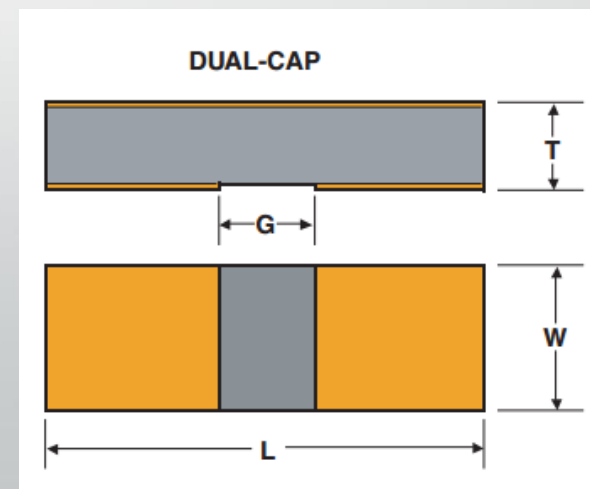
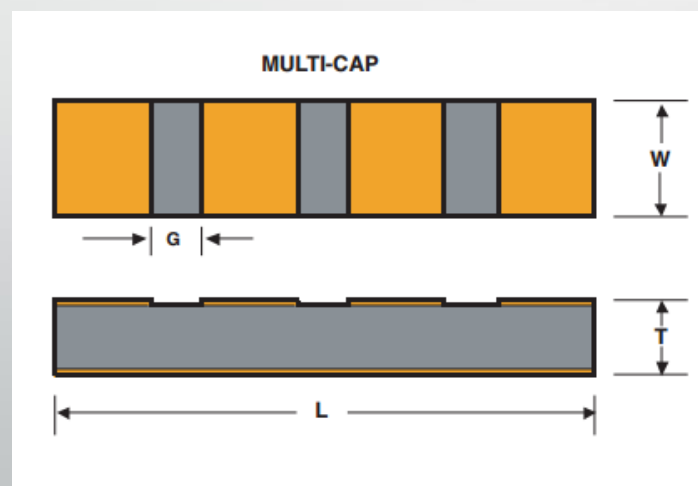
Single Layer Capacitors

Miniaturization



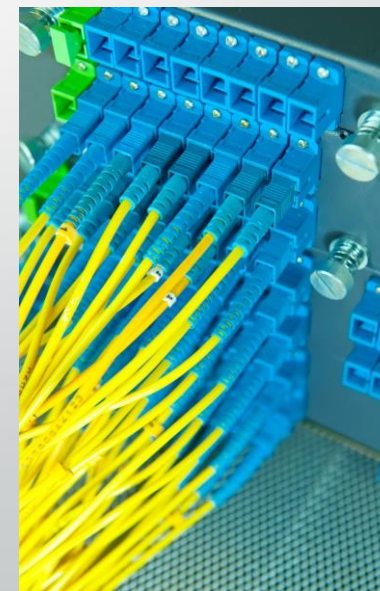
Single Layer Capacitors

- Features



Single Layer Capacitors

- Applications
 - Decoupling wide band noise in optical systems
 - DC Blocking close to semiconductor ICs
 - Instrumentation
 - Military Systems



Sampling



Series	Sample Kits
GX	KIT-GX01 KIT-GX0S KIT-GX02 KIT-GX03
GF	Q4 CY2015
SLC	KITSLCK20KSAMPL KITSLCK30KSAMPL KITSLCK60KSAMPL

Design Tools

Individual Samples	✓
Sample Kits	✓
S-Parameters	✓
Modelithics Models	✓
ADS Library	✓

Thank You