



# ES Components

**Woman Owned!**

A Franchised Distributor  
and QSLD / JESD31 manufacturer

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## Space Grade MLCC Ceramic Capacitors

### DLA Certified MIL-PRF-123 SMT MLCC's

- Vishay Vitramon CAGE CODE 2770A
- Reliable Precious Metal Electrode (PME) system
- Reliable Wet Build process
- Competitive pricing and lead time!



### Vitramon "Extended Range" MIL-PRF-123 Capacitors

- Same PME and Wet Build Process reliability
- Full 100% screening and QCI per MIL PRF 123 requirements
- Sizes down to 0402; Voltages from 6.3V – 500V; selected ESR available

Table 1: Extended range equivalent 123 MLCCs with 4000 hr life test complete (partial list)

VITRAMON PN	Outline	Dielectric	Generic Cap Value	Tolerance (% or pF)	Voltage	"J" reel 0603= Paper others Plastic	Hi Qty reel "C"=Paper "T"=Plastic	Reel Qty C, Treels
VJ0603Y104KLAJxy	0603	BR	0.1UF	10	16	1000	C	4000
VJ1206Y105NLAJxy	1206	BR	1.0UF	+10/-0	16	1000	T	2500
VJ0603A820JLAJxy	0603	BP	82pF	5	50	1000	C	4000
VJ0603Y273KLAJxy	0603	BR	0.027UF	10	50	1000	C	4000
VJ1206Y474NLAJxy	1206	BR	0.47UF	+10/-0	50	1000	T	2500
VJ1812Y824NLAJxy	1812	BR	0.82UF	+10/-0	85	1000	T	2500
VJ0603Y103KLAJxy	0603	BR	0.01UF	10	100	1000	C	4000
VJ1206Y154NLAJxy	1206	BR	0.15UF	+10/-0	100	1000	T	2500
VJ1210Y474NLAJxy	1210	BR	0.47UF	+10/-0	100	1000	T	2500
VJ1812Y334NLAJxy	1812	BR	0.33UF	+10/-0	175	1000	T	2500
VJ0603A101JLAJxy	0603	BP	100pF	5	200	1000	C	4000
VJ0603Y562KLAJxy	0603	BR	5.6nF	10	200	1000	C	4000
VJ1206Y103KLEAJxy	1206	BR	0.01UF	10	500	1000	T	3000

Table 2: Extended range equivalent 123 MLCCs available values

VOLTAGE	CAPACITANCE RANGE: EXTENDED RANGE X7R MLCC's with MIL PRF 123 SCREENING AND QCI									
	0402	0603	0805	1206	1210	1808	1812	1825	2220 / 2225	
6.3	330pF - 10nF	330pF - 100nF								
10	330pF - 10nF	330pF - 100nF	330pF - 100nF							
16	330pF - 10nF	330pF - 100nF	330pF - 100nF	1.2nF - 1.0UF	10nF - 390nF					
25	330pF - 10nF	330pF - 33nF	330pF - 100nF	1.2nF - 470nF	10nF - 390nF	5.6nF - 100nF	27nF - 820nF	180nF - 470nF	120nF - 470nF	
50		330pF - 33nF	330pF - 100nF	1.2nF - 470nF	10nF - 390nF	5.6nF - 100nF	27nF - 820nF	180nF - 470nF	120nF - 470nF	
100		330pF - 10nF	330pF - 82nF	1.2nF - 150nF	10nF - 390nF	5.6nF - 33nF	27nF - 820nF	56nF - 150nF		
175							27nF - 330nF			
200		330pF - 5.6nF		1.2nF - 10nF			27nF - 330nF			
500				1.2nF - 10nF			27nF - 330nF			

VOLTAGE	CAPACITANCE RANGE: EXTENDED RANGE COG (NPO) MLCC's with MIL PRF 123 SCREENING AND QCI									
	0402	0603	0805	1206	1210	1808	1812	1825	2225	
10	1.0pF - 100pF	1.0pF - 680pF	1.0pF - 820pF							
16	1.0pF - 100pF	1.0pF - 680pF	1.0pF - 820pF	1.0pF - 2.2nF						
25	1.0pF - 100pF	1.0pF - 680pF	1.0pF - 820pF	1.0pF - 2.2nF	330pF - 3.3nF	330pF - 3.3nF	1.0nF - 10nF			
50	1.0pF - 100pF	1.0pF - 680pF	1.0pF - 680pF	1.0pF - 2.2nF	330pF - 3.3nF	330pF - 3.3nF	1.0nF - 10nF	10nF - 22nF	1.2nF - 10nF	
100	1.0pF - 100pF	1.0pF - 220pF	1.0pF - 470pF	1.0pF - 1.0nF	330pF - 2.2nF	330pF - 2.2nF	1.0nF - 4.7nF	3.9nF - 10nF	1.2nF - 10nF	
200		1.0pF - 100pF								



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## Vitramon Lead (Pb) Bearing Automotive Grade MLCCs

- Automotive Grade Reliability with mission critical tin whisker mitigation
- **Tin/Lead (Sn/Pb) terminations with  $\geq 4\%$  Pb**
- Vishay high reliability PME system and WET build process
- AEC-Q200 certified portfolio with PAPP data available
- IATF16949 and MIL STD 790 certified Vishay factories
- Lower cost, shorter lead time, and broader portfolio than MIL PRF 123 MLCCs
- Ideal for Commercial Space, LEO, Military, and Avionics applications
- White Paper Support:
  - Applications
  - Reliability

DIELECTRIC	CASE CODE	VOLTAGE (V)	CAP VALUE	
			MIN	MAX
COG (NPO) (GRAY field not yet released)	402	100	1.0 pF	220 pF
	603	200	1.0 pF	820 pF
	805	500	1.0 pF	3.9 nF
	1206	630	1.0 pF	8.2 nF
	1210	630	100 pF	12 nF
X7R	402	100	120 pF	33 nF
	603	200	330 pF	150 nF
	805	200	330 pF	470 nF
	1206	630	220 pF	1.0 $\mu$ F
	1210	630	390 pF	1.0 $\mu$ F

BODY SIZE	NPO		X7R	
	FIT <sup>(1)</sup>	MTTF <sup>(1)</sup> (YEARS)	FIT <sup>(1)</sup>	MTTF <sup>(1)</sup> (YEARS)
0402	0.0122	9 360 731	0.013	8 618 721
0603	0.0308	3 710 046	0.101	1 130 137
0805			0.072	1 575 342
1206			0.130	877 854
1210			0.092	1 244 292

NOTE 1: 25°C and 50% rated voltage

## Vitramon Hi-Frequency MLCCs

- High Q > 2000 at 1MHz
- Ultra-stable “D” Dielectric
- Ultra-low ESR
- Available with MIL-PRF-123  
100% Screening and QCI

Vishay PN	ATC	AVX	Temex	Novacap	DLI	Johanson
VJ0402D	600L	UQCL	SHL		C04	R07S
VJ0603D	600S	UQCS	SHS		C06	R14S
VJ0805D	600F	UQCF	SHF		C08	R15S
VJ0505D	100A	SQCA	CHA/SHA	RF0505	C11	
VJ1111D	100B	SQCB	CHB/NHB/SHB	RF1111	C17 / C18	S42E
VJ2525D	100C			RF2525	C22	S48E
VJ3838D	100E				C40	S58E

