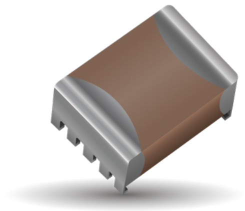


The RH range uses high volumetric efficient X7R capacitors in a “J” style lead frame.

The range of components are uncoated and are suitable for input or output filter capacitors in high frequency DC-DC convertor, automotive, telecom, industrial and military applications.

When large ceramic capacitors are used in applications they can easily be affected by stresses caused by temperature variations, thermal shock, mechanical vibrations and PCB bend movement. The RH range is designed with a “J” type lead frame which greatly reduces all of these thermo mechanical stresses experienced by large capacitors. The RH range allows the capacitors to be doubled stacked so a higher volumetric efficiency can be achieved by the customer and this saves PCB space.

FEATURES

- RH 21/22 are AEC-Q200 compliant.
- RH range has low ESR/ESL capability
- PCB space saving using double stacked MLCCs
- Enhanced thermo mechanical stress resistance

Note: AVX does not recommend or advise the use of adhesives to secure the RH components to the PCB.

ELECTRICAL SPECIFICATIONS

Temperature Coefficient CECC 30 000, (4.24.1)
X7R: C Temperature Characteristic - ± 15%, -55°C to +125°C

Capacitance Test
Measured at 1 VRMS max at 1KHz

Dissipation Factor 25°C
2.5% max at 1KHz, 1 VRMS max

Insulation Resistance 25°C
100K megohms or 1000 megohms-μF, whichever is less

Dielectric Withstanding Voltage 25°C (Flash Test)
250% rated voltage for 5 seconds with 50 mA max charging current. (500 Volt units @ 150% rated voltage)

Life Test (1000 hrs) CECC 30 000 (4.23)
200% rated voltage at +125°C.
(500 Volt units @ 120% rated voltage)

Thermal Shock IEC 68.2.14
-55°C to +125°C, 5 cycles

Resistance to Solder Heat IEC 68.2.20

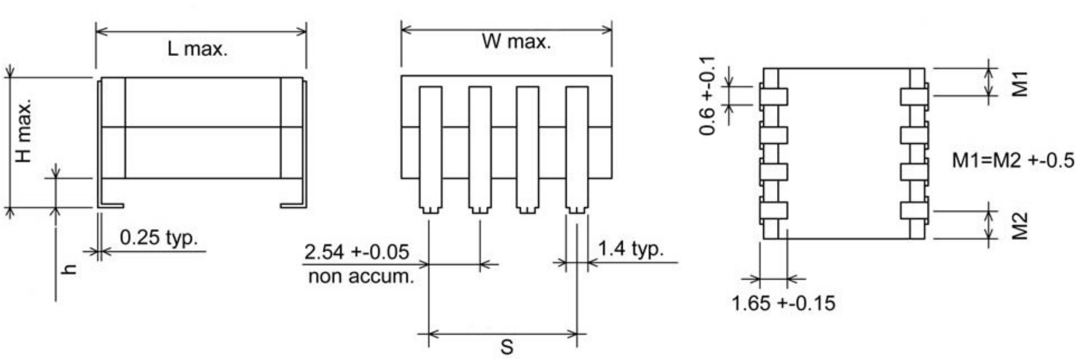
Typical ESR (mΩ) 3 μF, 100V X7R	
ESR @ 100KHz	17
ESR @ 500KHz	12
ESR @ 1MHz	14

DIMENSIONS

millimeters (inches)

Style	L max	W max	H max	S ± 0.1 (±0.004)	h	No. of leads per side
RH21	7.20 (0.283)	5.40 (0.213)	4.60 (0.181)	2.50 (0.098)	1.50 ±0.30 (0.059 ±0.012)	2
RH22	7.20 (0.283)	5.40 (0.213)	7.50 (0.295)	2.50 (0.098)	1.50 ±0.30 (0.059 ±0.012)	2
RH31	7.62 (0.300)	7.00 (0.270)	5.08 (0.200)	5.08 (0.200)	1.78 ±0.25 (0.070 ±0.010)	3
RH32	7.62 (0.300)	7.00 (0.270)	8.13 (0.320)	5.08 (0.200)	1.78 ±0.25 (0.070 ±0.010)	3
RH41	9.20 (0.362)	8.70 (0.342)	4.90 (0.192)	5.08 (0.200)	1.60 ±0.10 (0.062 ±0.004)	3
RH42	9.20 (0.362)	8.70 (0.342)	8.20 (0.323)	5.08 (0.200)	1.60 ±0.10 (0.062 ±0.004)	3
RH51	10.7 (0.421)	10.7 (0.421)	4.90 (0.192)	7.62 (0.300)	1.60 ±0.10 (0.062 ±0.004)	4
RH52	10.7 (0.421)	10.7 (0.421)	8.20 (0.323)	7.62 (0.300)	1.60 ±0.10 (0.062 ±0.004)	4
RH61	14.9 (0.586)	13.6 (0.535)	4.90 (0.192)	10.2 (0.400)	1.60 ±0.10 (0.062 ±0.004)	5
RH62	14.9 (0.586)	13.6 (0.535)	8.20 (0.323)	10.2 (0.400)	1.60 ±0.10 (0.062 ±0.004)	5

DIMENSIONS: MILLIMETERS (INCHES)



Performance of SMPS capacitors can be simulated by downloading SpiCalci software program - http://www.avx.com/download/software/SpiCalci-AVX.zip
Custom values, ratings and configurations are also available.

X7R STABLE DIELECTRIC

	RH21/RH22 Style					RH31/RH32 Style				RH41/RH42 Style				RH51/RH52 Style				RH61/RH62 Style			
	Voltage DC																				
Cap µF	25	50	100	200	500	50	100	200	500	50	100	200	500	50	100	200	500	50	100	200	500
0.047																					
0.056																					
0.068									RH31												
0.082																					
0.1																					
0.12																					
0.15									RH32				RH41								
0.18																					
0.22																					
0.27								RH31													
0.33													RH42				RH51				
0.39												RH41									
0.47																					
0.56								RH32									RH52				
0.68																					RH61
0.78																RH51					
0.82							RH31					RH42									
1																					
1.2																					RH62
1.5						RH31					RH41					RH52				RH61	
1.8																					
2.2							RH32			RH41											
3																					
3.3			RH21			RH32					RH42									RH62	
3.9															RH51						
4.7										RH42											
5.6															RH52						
6.8														RH51					RH61		
8.2		RH21																RH61			
10														RH52	RH51						
12			RH22																RH62		
15	RH21	RH22												RH51				RH62			
18															RH52						
22														RH52							
33	RH22	DEV	DEV												DEV						
47														DEV							
68	DEV																				

BME BME PME PME BME Development

PACKAGING

For availability of further parts in the RH21/RH22 Series, contact manufacturing.

Style	Qty/Reel 13"	Max. Qty/Waffle Pack
RH21	800	270
RH22	500	270
RH31	800	108
RH32	500	108
RH41	see note	108
RH42	500	100
RH51	750	88
RH52	see note	88
RH61	500	42
RH62	see note	42

Note: T&R is not yet available. Contact manufacturing for further information as this will be available in the future.

BME Available in RoHS and Non-RoHS PME Available Only in Non-RoHS

RoHS COMPLIANT

Please contact plant for details

HOW TO ORDER

RH	31	5	C	225	M	A	3	0	A	3
Style Code (see table above)	**Size Code**	**Voltage Code** 3 = 25V 5 = 50V 1 = 100V 2 = 200V 7 = 500V	**Dielectric Code** C = X7R	**Capacitance Code** (2 significant digits + no. of zeros) eg. 105 = 1 uF 104= 0.1 uF	**Capacitance Tolerance** K = ±10% M = ±20%	**Specification Code** A = Non-customized	**Package Code** 3 = Waffle Pack A = Tape & Reel	**Lead Dia. Code** 0 = Standard R = RoHS Compliant	**Lead Space Code** A = Standard	**Lead Style Code** 3 = 'J' Lead