

Aliases (C2220X823MFRAC7800) SMD Comm X7R HV Flex, Ceramic, 0.082 uF, 20%, 1,500 VDC, X7R, SMD, MLCC, FT-CAP, Temperature Stable, 2220, 3.5 mm



General Information		
Series	SMD Comm X7R HV Flex	
Style	SMD Chip	
Description	SMD, MLCC, FT-CAP, Temperature Stable	
Features	FT-CAP, Temperature Stable	
RoHS	Yes	
Termination	Flexible Termination	
Marking	No	
AEC-Q200	No	
Typical Component Weight	390 mg	
Shelf Life	78 Weeks	
MSL	1	

0.082 uF

Dimensions	
Chip Size	2220
L	5.9mm +/-0.75mm
W	5mm +/-0.4mm
Т	2.5mm +/-0.20mm
S	3.5mm MIN
В	0.7mm +/-0.35mm

	5.9mm +/-0.75mm	Measurement Condition	1 kHz 1.0Vrms
	5mm +/-0.4mm	Tolerance	20%
	2.5mm +/-0.20mm	Voltage DC	1500 VDC
	3.5mm MIN	Dielectric Withstanding Voltage	1,800 VDC
	0.7mm +/-0.35mm	Temperature Range	-55/+125°C
		Temp. Coefficient	X7R
ns	T&R, 180mm, Plastic Tape	Capacitance Change with Reference to +25°C and 0 VDC Applied (TCC)	15%, 1kHz 1.0Vrms
500		Dissipation Factor	2.5% 1 kHz 1.0 Vrms
		Aging Rate	3% Loss/Decade Hour: Referee

**Specifications** 

Capacitance

W	5mm +/-0.4mm	Tolerance	20%
Т	2.5mm +/-0.20mm	Voltage DC	1500 VDC
S	3.5mm MIN	Dielectric Withstanding Voltage	1,800 VDC
В	0.7mm +/-0.35mm	Temperature Range	-55/+125°C
		Temp. Coefficient	X7R
Packaging Specifications		Capacitance Change with	15%, 1kHz 1.0Vrms
Packaging	T&R, 180mm, Plastic Tape	Reference to +25°C and 0 VDC Applied (TCC)	
Packaging Quantity 500	Dissipation Factor	2.5% 1 kHz 1.0 Vrms	
		Aging Rate	3% Loss/Decade Hour: Referee Time is 1000 Hours
		Insulation Resistance	12.1951 GOhms

Statements of suitability for certain applications are based on our knowledge of typical operating conditions for such applications, but are not intended to constitute - and we specifically disclaim - any warranty concerning suitability for a specific customer application or use. This Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by us with reference to the use of our products is given gratis, and we assume no obligation or liability for the advice given or results obtained.

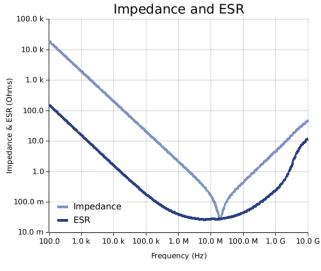
Generated 05/02/2025 © 2006 - 2025 YAGEO

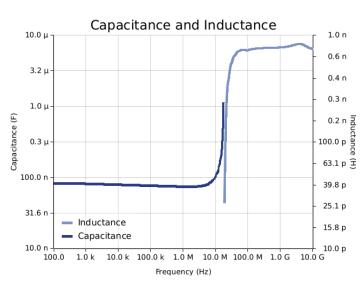


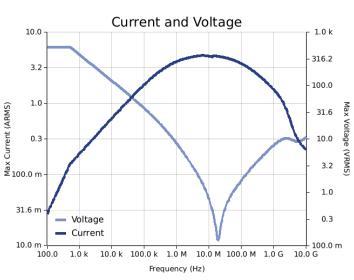
Aliases (C2220X823MFRAC7800) SMD Comm X7R HV Flex, Ceramic, 0.082 uF, 20%, 1,500 VDC, X7R, SMD, MLCC, FT-CAP, Temperature Stable, 2220, 3.5 mm

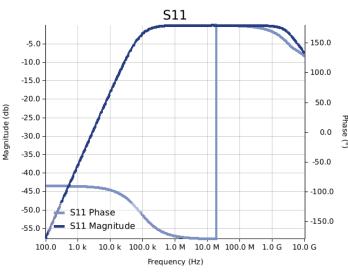
### **Simulations**

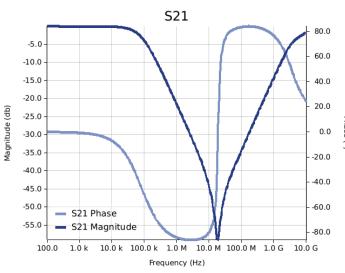
For the complete simulation environment please visit K-SIM.

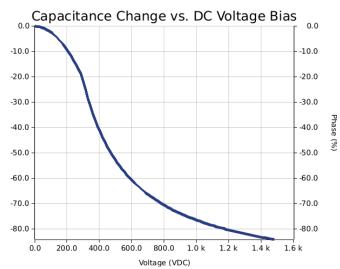










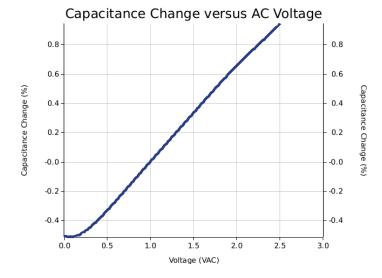


Generated 05/02/2025 © 2006 - 2025 YAGEO

(%)



Aliases (C2220X823MFRAC7800) SMD Comm X7R HV Flex, Ceramic, 0.082 uF, 20%, 1,500 VDC, X7R, SMD, MLCC, FT-CAP, Temperature Stable, 2220, 3.5 mm



Generated 05/02/2025 © 2006 - 2025 YAGEO



Aliases (C2220X823MFRAC7800) SMD Comm X7R HV Flex, Ceramic, 0.082 uF, 20%, 1,500 VDC, X7R, SMD, MLCC, FT-CAP, Temperature Stable, 2220, 3.5 mm

#### These are simulations.

This is not a specification!

The responses shown represent the typical response for each part type. Specific responses may vary, depending on manufacturing variation affects of all parameters involved, including the specified tolerances applied to capacitance and unspecified variations of ESR, ESL, and leakage resistance.

The responses shown do not represent a specified or implied maximum capability of the device for all applications.

- The ESR used for ripple "Ripple Current/Voltage vs. Frequency" plots is the ESR at ambient temperature.

- The ESR used for ripple Ripple Currenty votage vs. rrequency plots is unleast at an interact temperature.
  The ESR in the "Temperature Rise vs. Ripple Current" plots is adjusted to each incremental temperature rise before the power and ripple current is calculated.
  The effects shown herein are based on measured data from a multiple part sample of the parts in question.
  Ripple capability of this device will be factored by thermal resistance (Rth) created by circuit traces (addi affects of all parameters involved, including the specified tolerances applied to capacitance and unspecified variations of ESR, ESL, and leakage resistance.
  The peak voltages generated in the "Temperature Rise vs. Combined Ripple Currents" plot are calculated for each frequency and are not combined with voltages
- generated at any other harmonics.

  Please consult with the catalog or field applications engineer for maximum capability of the device in specific applications.

All product information and data (collectively, the "Information") are subject to change without notice.

KEMET K-SIM is designed to simulate behavior of components with respect to frequency, ambient temperature, and DC bias levels. The responses shown represent the typical response for each part type. Specific responses may vary, depending on manufacturing variation effects of all parameters involved, including the specified tolerances applied to capacitance and unspecified variations of ESR, ESL, and leakage resistance.

All Information given herein is believed to be accurate and reliable, but is presented without guarantee, warranty, or responsibility of any kind, expressed or implied. All information given herein is believed to be accurate and reliable, but is presented without guarantee, warranty, or responsibility of any kind, expressed of implied.

Statements of suitability for certain applications are based on our knowledge of typical operating conditions for such applications, but are not intended to constitute – and we specifically disclaim – any warranty concerning suitability for a specific customer application or use. This Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by us with reference to the use of our products is given gratis, and we assume no obligation or liability for the advice given or results obtained.

If you have any questions please contact K-SIM.

Generated 05/02/2025 © 2006 - 2025 YAGEO