

Reference: QOD-510

Product/Process Change Notification

PCN-071521-MRL

ID Number/Date	ID Number (MMDDYY): PCN-071521-MRL, August 27 th , 2021																																																																	
Affected Product/s	<p>Product Series: HiQ-CBR Series</p> <ul style="list-style-type: none"> • EIA 0201, 0402, 0603, 0805 <p>Ultra HiQ-CBR Squared Series</p> <ul style="list-style-type: none"> • 0505 <p>Form Factor/s: Surface Mount Case Size/s: ALL Voltage Rating/s (Vdc): ALL Dielectric/s: COG Packaging C-Spec/s: ALL Packaging Suffix/s: N/A</p>																																																																	
Change Overview	<p>Ultra HiQ-CBR Squared Series, (0505 Case Size) As part of KEMET's on-going product lifecycle management process, all Ultra HiQ-CBR Squared Series (0505 case size) part numbers will be transitioned to an "End-of-Life" status.</p> <p>HiQ-CBR Series (EIA 0201, 0402, 0603, 0805 Case Size) Optimizing the CBR dielectric materials to ensure an uninterrupted supply of RF MLCCs, improving product capabilities, and enabling KEMET to fulfill long term product roadmap. There will be no change in electrical specifications.</p> <p>In addition to the above changes, the below part numbers will be transitioned to an "End-of-Life" status.</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr style="background-color: #003366; color: white;"> <th>Part Number</th> <th>Description</th> <th>Alternative Part Number</th> <th>Description</th> </tr> </thead> <tbody> <tr style="background-color: #e0e0e0;"> <td>CBR04C108A3GAC</td> <td>0402 25V 0.1pF ±0.05pF</td> <td>CBR04C108B3GAC</td> <td>0402 25V 0.1pF ±0.1pF</td> </tr> <tr style="background-color: #e0e0e0;"> <td>CBR04C108A5GAC</td> <td>0402 50V 0.1pF ±0.05pF</td> <td>CBR04C108B5GAC</td> <td>0402 50V 0.1pF ±0.1pF</td> </tr> </tbody> </table> <p>Dimensional Changes (Highlighted in Blue)</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr style="background-color: #003366; color: white;"> <th rowspan="2"></th> <th colspan="2">Length (L)</th> <th colspan="2">Width (W)</th> <th colspan="2">Thickness (T)</th> <th colspan="2">Bandwidth (B)</th> </tr> <tr style="background-color: #e0e0e0;"> <th>Current</th> <th>New</th> <th>Current</th> <th>New</th> <th>Current</th> <th>New</th> <th>Current</th> <th>New</th> </tr> </thead> <tbody> <tr> <td>0201</td> <td>0.60±0.03</td> <td>0.60±0.03</td> <td>0.30 ± 0.03</td> <td>0.30 ± 0.03</td> <td>0.30±0.03</td> <td>0.30±0.03</td> <td>0.15±0.05</td> <td>0.15±0.05</td> </tr> <tr> <td>0402</td> <td>1.00±0.05</td> <td>1.00±0.05</td> <td>0.50±0.05</td> <td>0.50±0.05</td> <td>0.50±0.05</td> <td>0.50±0.05</td> <td>0.25+0.05/-0.10</td> <td>0.25+0.05/-0.10</td> </tr> <tr> <td>0603</td> <td>1.60±0.10</td> <td>1.60±0.10</td> <td>0.80±0.10</td> <td>0.80±0.10</td> <td>0.80±0.07</td> <td style="color: blue;">0.80 ± 0.1</td> <td>0.40±0.15</td> <td style="color: blue;">0.40±0.20</td> </tr> <tr> <td>0805</td> <td>2.00±0.20</td> <td>2.00±0.20</td> <td>1.25±0.20</td> <td>1.25 ± 0.20</td> <td>0.85±0.10</td> <td>0.85±0.10</td> <td>0.50±0.20</td> <td style="color: blue;">0.50±0.25</td> </tr> </tbody> </table>	Part Number	Description	Alternative Part Number	Description	CBR04C108A3GAC	0402 25V 0.1pF ±0.05pF	CBR04C108B3GAC	0402 25V 0.1pF ±0.1pF	CBR04C108A5GAC	0402 50V 0.1pF ±0.05pF	CBR04C108B5GAC	0402 50V 0.1pF ±0.1pF		Length (L)		Width (W)		Thickness (T)		Bandwidth (B)		Current	New	Current	New	Current	New	Current	New	0201	0.60±0.03	0.60±0.03	0.30 ± 0.03	0.30 ± 0.03	0.30±0.03	0.30±0.03	0.15±0.05	0.15±0.05	0402	1.00±0.05	1.00±0.05	0.50±0.05	0.50±0.05	0.50±0.05	0.50±0.05	0.25+0.05/-0.10	0.25+0.05/-0.10	0603	1.60±0.10	1.60±0.10	0.80±0.10	0.80±0.10	0.80±0.07	0.80 ± 0.1	0.40±0.15	0.40±0.20	0805	2.00±0.20	2.00±0.20	1.25±0.20	1.25 ± 0.20	0.85±0.10	0.85±0.10	0.50±0.20	0.50±0.25
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Product Series Ordering Information	<p>KEMET will now be offering two reeling size options (7" and 13"). All orders received on or after PCN implementation date will require a packaging C-SPEC at order entry for 13" Reeling option. If ordering with 7" reeling option, no C-SPEC is required.</p> <p>Blank = 7" Reel/Unmarked, All case sizes 7411 = 13" Reel/Unmarked, EIA 0603 and smaller case sizes 7210 = 13" Reel/Unmarked, EIA 0805 and larger case sizes</p> <p>Ordering Code</p> <table border="1" data-bbox="381 422 1409 709"> <thead> <tr> <th>CBR</th> <th>02</th> <th>C</th> <th>330</th> <th>F</th> <th>9</th> <th>G</th> <th>A</th> <th>C</th> <th></th> </tr> <tr> <th>Series</th> <th>Case Size (L"x W")</th> <th>Specification/ Series</th> <th>Capacitance Code (pF)</th> <th>Capacitance Tolerance</th> <th>Rated Voltage (VDC)</th> <th>Dielectric</th> <th>Termination Style</th> <th>Termination Finish</th> <th>Packaging/ Grade (C-Spec)¹</th> </tr> </thead> <tbody> <tr> <td>CBR</td> <td>02 = 0201 04 = 0402 06 = 0603 08 = 0805</td> <td>C = Standard</td> <td>Two significant digits and number of zeros Use 9 for 1.0 – 9.9 pF Use 8 for 0.1 – 0.99 pF e.g., 2.2 pF = 229 e.g., 0.5 pF = 508</td> <td>A = ±0.05 pF B = ±0.1 pF C = ±0.25 pF D = ±0.5 pF F = ±1% G = ±2% J = ±5%</td> <td>9 = 6.3 V 8 = 10 V 3 = 25 V 5 = 50 V 1 = 100 V 2 = 200 V A = 250 V C = 500 V</td> <td>G = C0G</td> <td>A = N/A</td> <td>C = 100% Matte Sn</td> <td>See "Packaging C-Spec Ordering Options Table"</td> </tr> </tbody> </table> <p>Packaging C-Spec Ordering Options Table</p> <table border="1" data-bbox="381 766 803 863"> <thead> <tr> <th>Packaging Type¹</th> <th>Packaging/Grade Ordering Code (C-Spec)</th> </tr> </thead> <tbody> <tr> <td>7" Reel/Unmarked</td> <td>Blank</td> </tr> <tr> <td>13" Reel/Unmarked</td> <td>7411 (EIA 0603 and smaller case sizes) 7210 (EIA 0805 and larger case sizes)</td> </tr> </tbody> </table>	CBR	02	C	330	F	9	G	A	C		Series	Case Size (L"x W")	Specification/ Series	Capacitance Code (pF)	Capacitance Tolerance	Rated Voltage (VDC)	Dielectric	Termination Style	Termination Finish	Packaging/ Grade (C-Spec) ¹	CBR	02 = 0201 04 = 0402 06 = 0603 08 = 0805	C = Standard	Two significant digits and number of zeros Use 9 for 1.0 – 9.9 pF Use 8 for 0.1 – 0.99 pF e.g., 2.2 pF = 229 e.g., 0.5 pF = 508	A = ±0.05 pF B = ±0.1 pF C = ±0.25 pF D = ±0.5 pF F = ±1% G = ±2% J = ±5%	9 = 6.3 V 8 = 10 V 3 = 25 V 5 = 50 V 1 = 100 V 2 = 200 V A = 250 V C = 500 V	G = C0G	A = N/A	C = 100% Matte Sn	See "Packaging C-Spec Ordering Options Table"	Packaging Type ¹	Packaging/Grade Ordering Code (C-Spec)	7" Reel/Unmarked	Blank	13" Reel/Unmarked	7411 (EIA 0603 and smaller case sizes) 7210 (EIA 0805 and larger case sizes)
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Justification and Benefits	Manufacturing Productivity Improvement																																				
Effective Date and Identification	<p><u>Ultra HiQ-CBR Squared Series, (0505 Case Size)</u> All Ultra HiQ-CBR Squared Series (0505 case size) part numbers will be transitioned to an "End-of-Life" status on December 31st, 2021.</p> <p><u>HiQ-CBR Series (EIA 0201, 0402, 0603, 0805 Case Size)</u> Orders received after December 6th, 2021, may be fulfilled with new dielectric material</p> <ul style="list-style-type: none"> • Current material batch numbers end in "+LA" • New material batch numbers will end in "+QB" <p><u>CBR04C108A3GAC and CBR04C108A5GAC</u> Part numbers will be transitioned to an "End-of-Life" status on December 31st, 2021.</p>																																				
For General Information Contact	Mark R. Laps Technical Product Manager Ceramic Business Unit marklaps@kemet.com																																				
Affected Part Numbers	Please refer to "Affected Part Types" Excel file for KEMET part numbers being affected by this change.																																				

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KEMET Proprietary Information

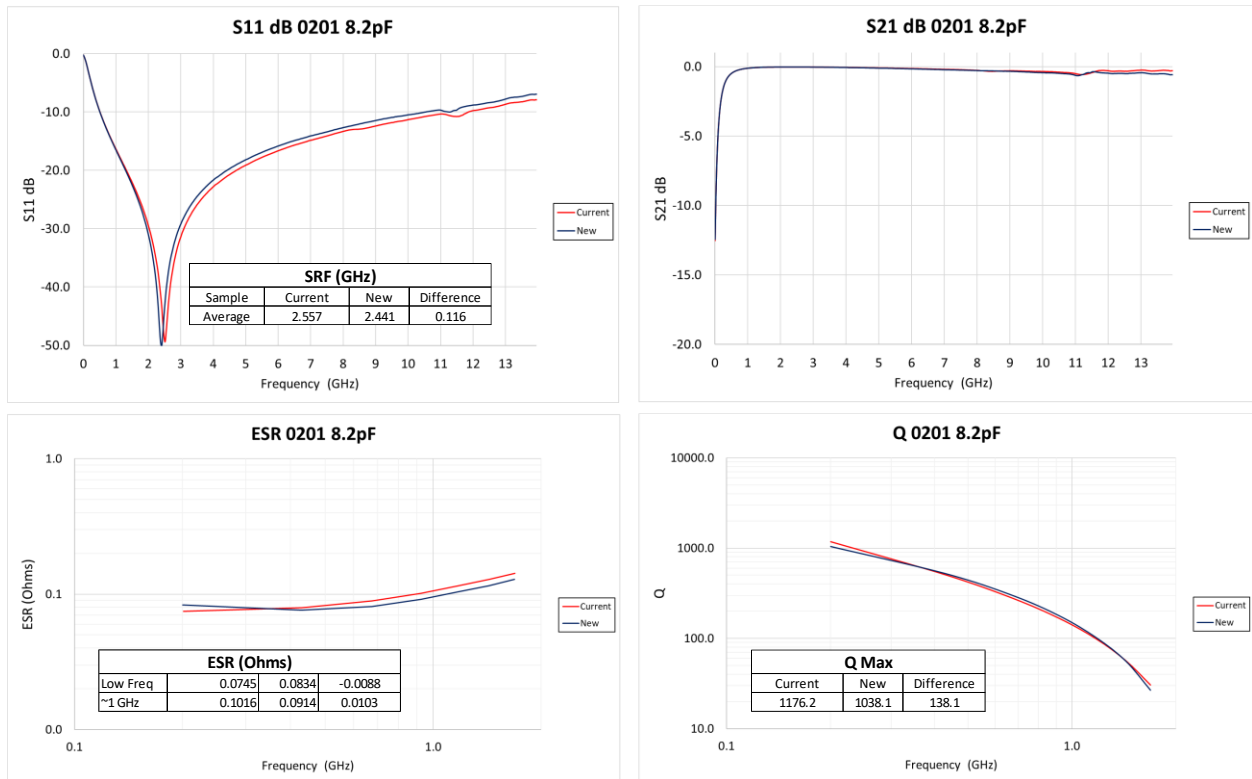


Figure 1 – CBR 0201 8.2pF S-Parameter, ESR, and Q comparison. Current vs New

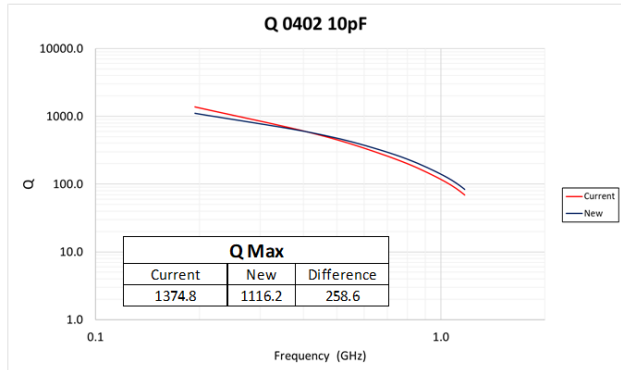
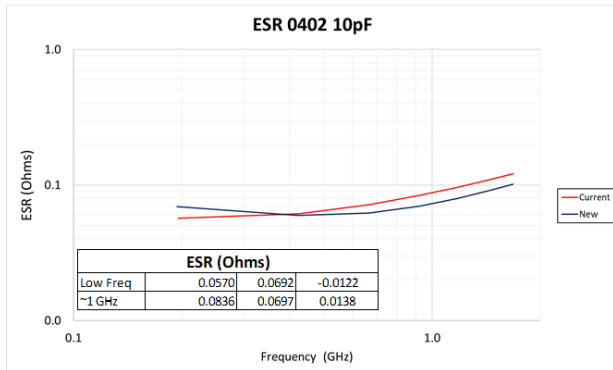
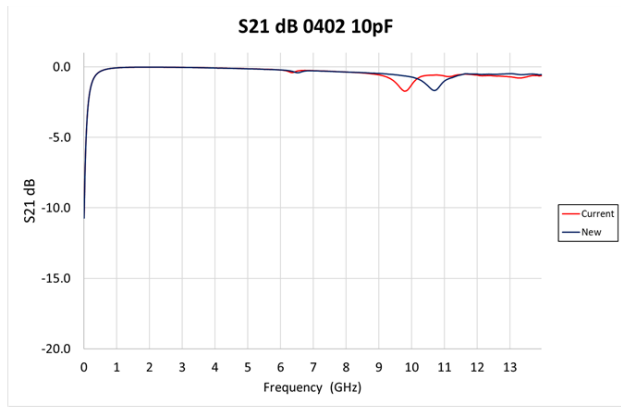
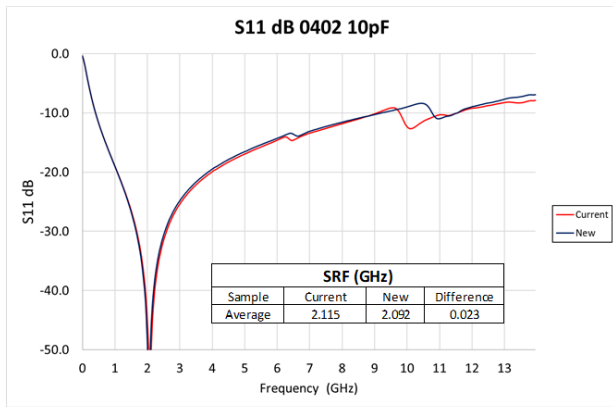


Figure 2 – CBR 0402 10pF S-Parameter, ESR, and Q comparison. Current vs New