Reference: QOD-510

Product/Process Change Notification

PCN-071521-MRL

ID Number/Date	**ID Number (MMDDYY):** PCN-071521-MRL, August 27th, 2021
Affected Product/s	**Product Series:** HiQ-CBR Series • EIA 0201, 0402, 0603, 0805 Ultra HiQ-CBR Squared Series • 0505 **Form Factor/s:** Surface Mount **Case Size/s:** ALL **Voltage Rating/s (Vdc):** ALL **Dielectric/s:** C0G **Packaging C-Spec/s:** ALL **Packaging Suffix/s:** N/A
Change Overview	**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. **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. In addition to the above changes, the below part numbers will be transitioned to an "End-of-Life" status.

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

Dimensional Changes (Highlighted in Blue)

	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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<table>
<tr><td>Product Series Ordering Information</td><td>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.
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

Ordering Code
<table>
<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>
<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>
</table>
Packaging C-Spec Ordering Options Table
<table>
<tr><th>Packaging Type[1]</th><th>Packaging/Grade Ordering Code (C-Spec)</th></tr>
<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>
</table>
</td></tr>
<tr><td>Justification and Benefits</td><td>Manufacturing Productivity Improvement</td></tr>
<tr><td>Effective Date and Identification</td><td><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.
<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
• Current material batch numbers end in “+LA”
• New material batch numbers will end in “+QB”
<u>CBR04C108A3GAC and CBR04C108A5GAC</u>
Part numbers will be transitioned to an “End-of-Life” status on December 31st, 2021.</td></tr>
<tr><td>For General Information Contact</td><td>Mark R. Laps
Technical Product Manager
Ceramic Business Unit
marklaps@kemet.com</td></tr>
<tr><td>Affected Part Numbers</td><td>Please refer to “Affected Part Types” Excel file for KEMET part numbers being affected by this change.</td></tr>
</table>

Reference: QOD-510

KEMET Proprietary Information

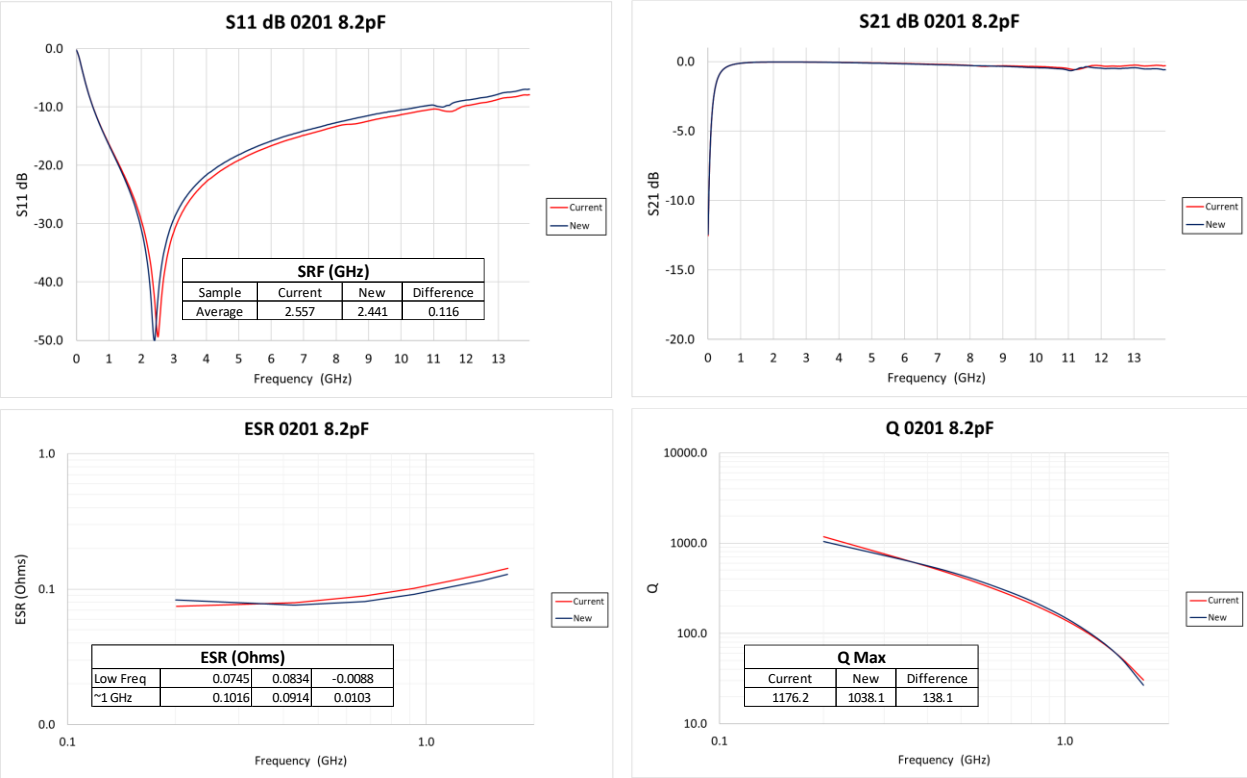

Figure 1 – CBR 0201 8.2pF S-Parameter, ESR, and Q comparison. Current vs New

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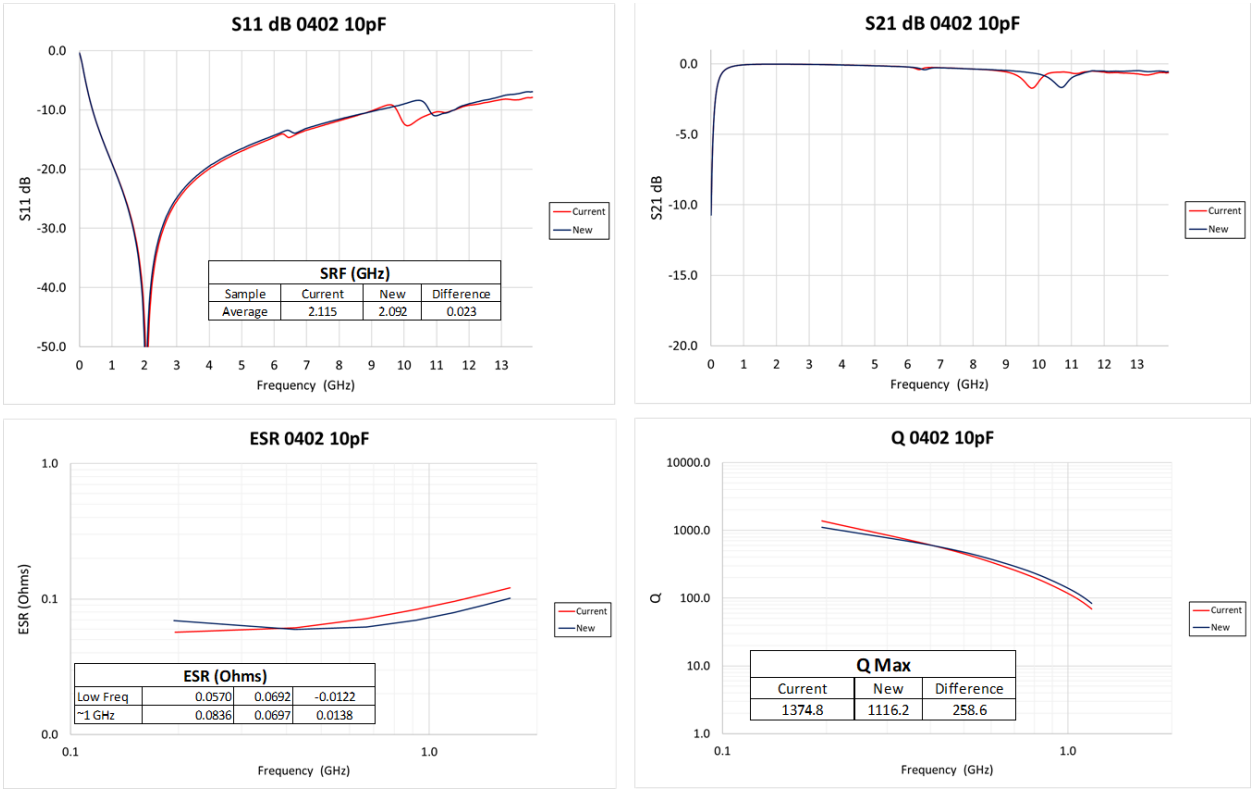

Figure 2 – CBR 0402 10pF S-Parameter, ESR, and Q comparison. Current vs New