



NEWS RELEASE

New Product: Metal Composite Type 'XRJ0420 Series'



Sagami Elec Co., Ltd. is pleased to announce the development of the metal composite power inductor '[XRJ0420 Series](#)' (W4.1 mm × D4.1 mm × H2.0 mm), with sample now available.

This product expands our metal composite power inductor lineup [XRJ Series](#) with a compact **4mm size** design. The [XRJ0420 Series](#) offers a wide inductance range from **0.56 µH to 4.7 µH**, is **AEC-Q200 compliant**, and features **reduced DCR** with optimized allowable current balance for each inductance value. As a result, the series achieves **higher rated current performance than conventional products**, making it well suited for applications requiring increased current capacity.

In addition to a wide range of power module applications, the [XRJ0420 Series](#) is also ideal for **audio-visual equipment** and **applications exposed to harsh temperature environments**, benefiting from stable DC bias characteristics with minimal variation due to changes in ambient temperature.

Main Applications:

Automotive / ECU

LED headlights

Car audio, car navigation

Audio-visual equipment

LED lighting
PC peripherals
Power supplies
Industrial equipment

Features:

Rated voltage: 40 V
Compact size and high current capability achieved using metal magnetic material
Flat wire construction for low resistance and high current performance
Minimal variation in DC bias characteristics with changes in ambient temperature
Gapless integrated structure for low audible noise
AEC-Q200 compliant
Operating temperature range: -40°C to +125°C (including self-heating)

Electrical Characteristics:

Part Number	L(μH)	DCR (mΩ)		Isat (A)	Irat (A)
		Max	Typical		
XRJ0420-R08M	0.08 ± 20%	1.6	1.3	30	22
XRJ0420-R12M	0.12 ± 20%	1.6	1.3	24	22
XRJ0420-R24M	0.24 ± 20%	2.7	2.35	17	20
XRJ0420-R33M	0.33 ± 20%	3.85	3.2	11.5	17.5
XRJ0420-R47M	0.47 ± 20%	5.1	4.1	13.5	16
XRJ0420-R56M	0.56 ± 20%	6.3	5.5	11	14

XRJ0420-R68M	0.68 ± 20%	7.2	6.2	10	12.5
XRJ0420-1R0M	1 ± 20%	9	7.5	9	11.5
XRJ0420-1R2M	1.2 ± 20%	11	9	7.5	11.2
XRJ0420-1R5M	1.5 ± 20%	14.5	12.3	7.5	10
XRJ0420-2R2M	2.2 ± 20%	21	17.5	6.5	8
XRJ0420-3R3M	3.3 ± 20%	34.5	30	5.5	6.5
XRJ0420-4R7M	4.7 ± 20%	52	45	4	5.5

Inductance Measurement Conditions:

100 kHz, 1V

DC Bias Allowable Current:

Current at which inductance decreases by 30% from the initial value.

Allowable Current for Temperature Rise:

Current at which the core surface temperature rises by 40°C

Sagami Elec Co., Ltd. will continue to expand its product lineup to address evolving market needs and to support a wide range of solutions.

Product Details:

<https://www.sagami-elec.co.jp/en/product/detail.php?type=XRJ0420>

Contact:

For inquiries regarding this product, including quotations and sample requests, please contact us via the [inquiry form](#).