

Specification

Revised 2019/04/08

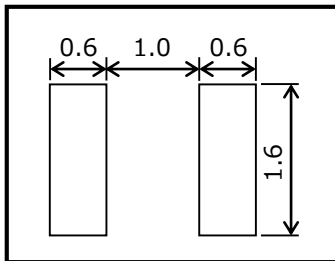
Liquialloy™ Power Inductor GLUHK Series

Features

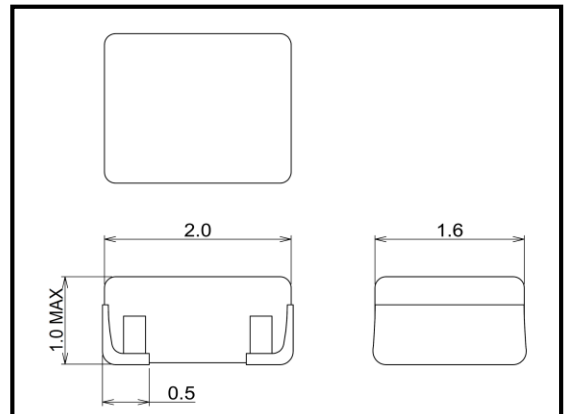
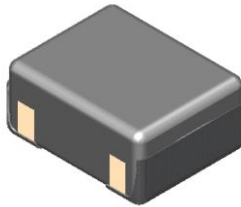
- 2.0mm×1.6mm square and 1.0mm max height
- Under surface terminal
- Liquialloy™ ; Super low core loss material for high switching frequency DC/DC converter
- Excellent low heat generating characteristics due to low DCR
- Metal composite structure (compact and high current capability)
- RoHS compliant.
- Halogen Free.

Application

- For use in DC/DC converter in portable device
(Smartphone , Tablet PC , SSD , HDD , DSC , Game etc.)



Recommended pattern



Unit: mm

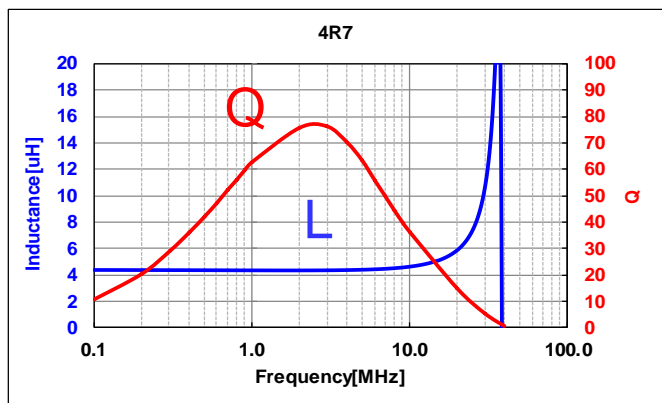
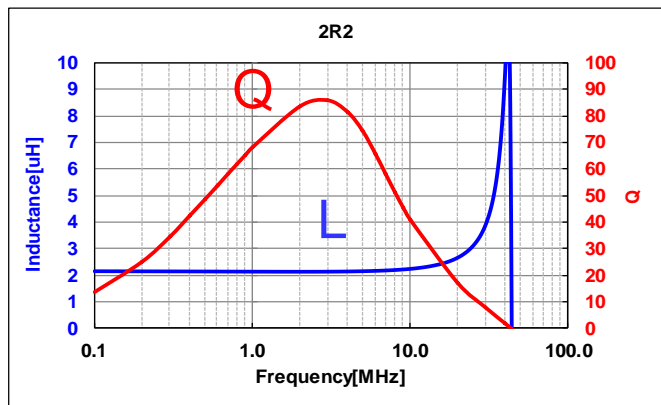
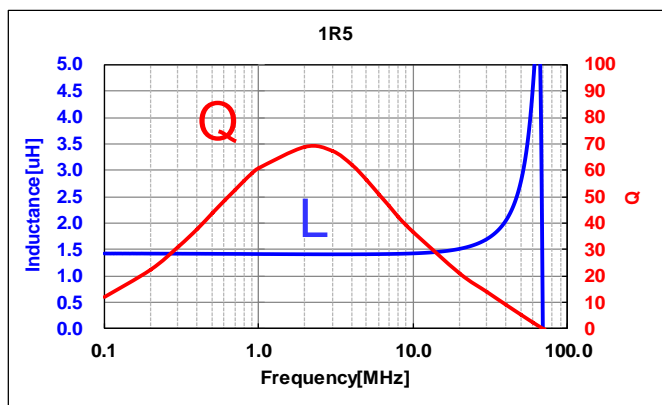
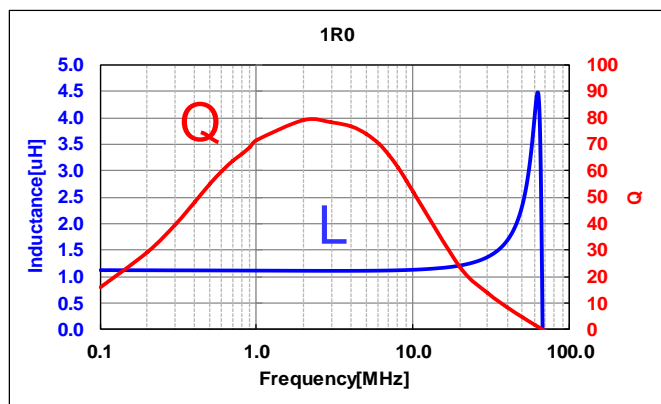
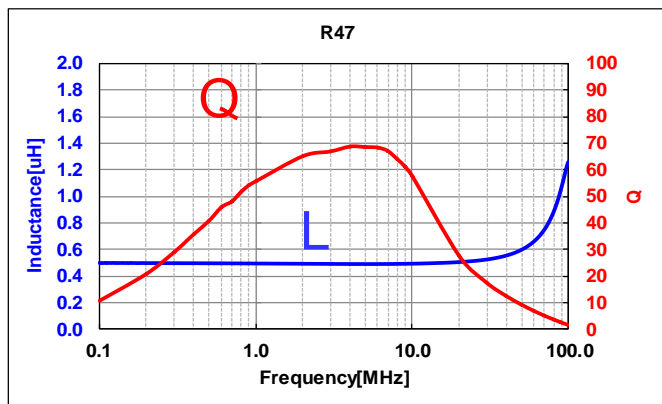
- Operating Temperature : -40 to +125 [°C]
(Including self temperature rise)
- Withstand DC Voltage : 20[V]
- Operating Voltage : 16[V]

Part No.	Inductance at 1MHz (μ H) $\pm 20\%$	DC Resistance (m Ω) Max. (Typ.)	Saturation Current Idc1(A) Max.(Typ.)	Heat Rating Current Idc2(A) Max. (Typ.)
GLUHKR4701A	0.47	30 (25)	3.0 (3.6)	3.6 (4.3)
GLUHK1R001A	1.0	58 (48)	2.2 (2.8)	2.4 (2.9)
GLUHK1R501A	1.5	89 (74)	1.8 (2.3)	1.9 (2.3)
GLUHK2R201A	2.2	126 (105)	1.5 (1.9)	1.7 (2.0)
GLUHK4R701A	4.7	266 (222)	1.0 (1.3)	1.1 (1.4)

- ACR=Rs-DCR (Rs:equivalent series resistance)
- The saturation current (Idc1) is the DC current value having inductance decrease down to 30%.
(at 20°C)
- The heat rating current (Idc2) is the DC current value having temperature increase up to 40°C.
(at 20°C)

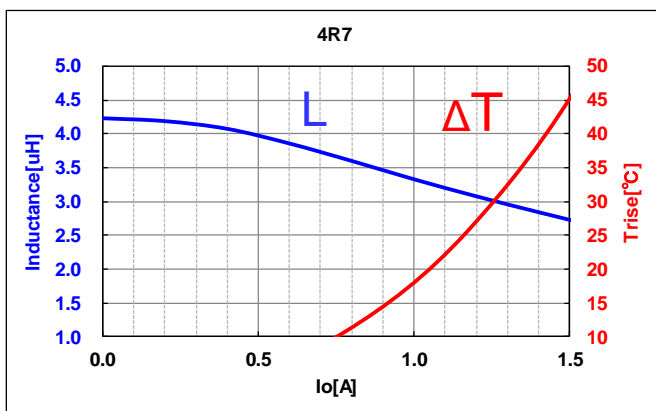
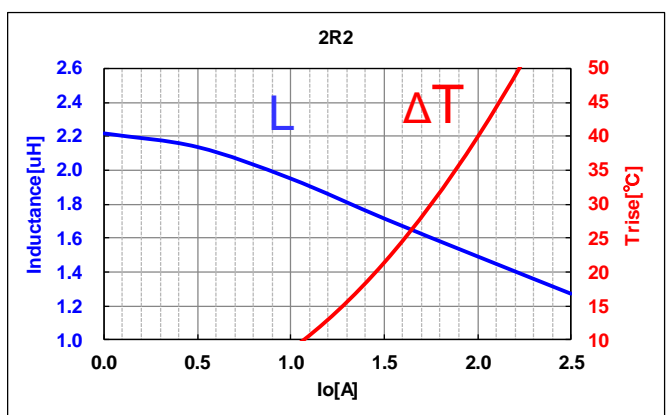
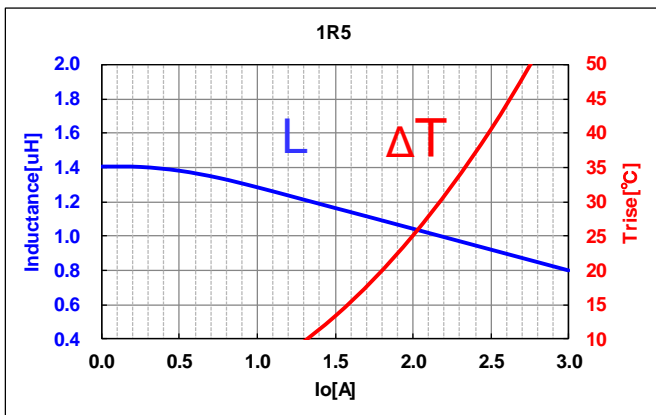
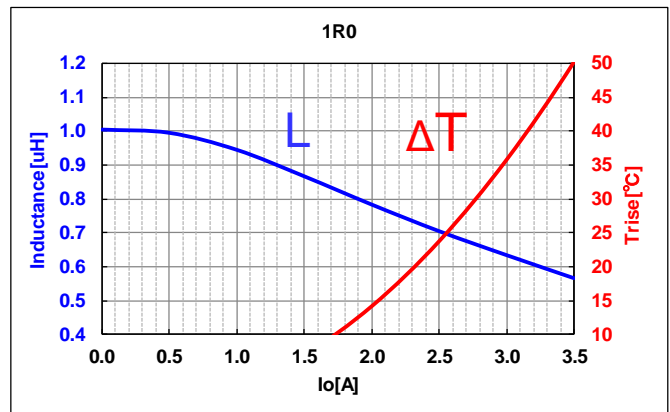
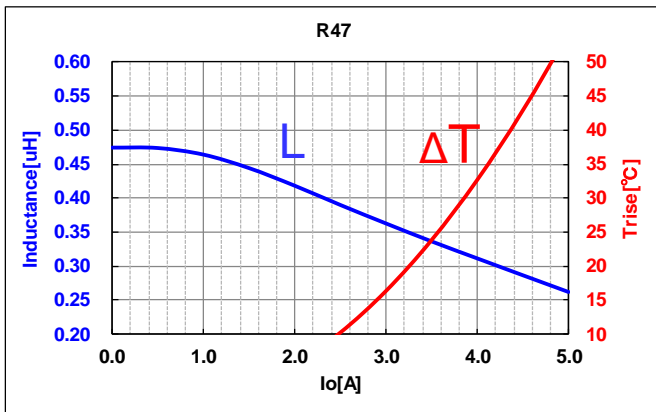
Typical Inductance & Q vs. Frequency

Revised 2019/04/08



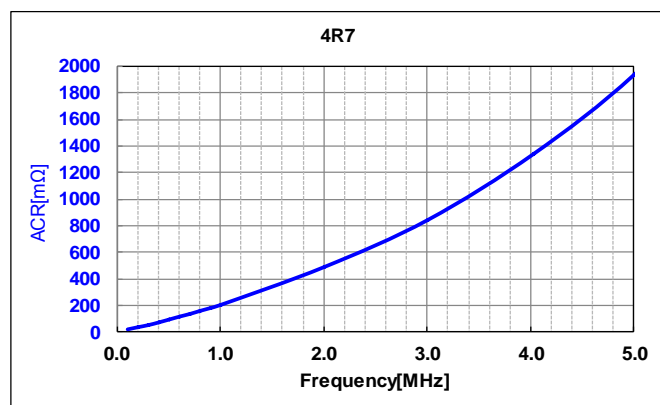
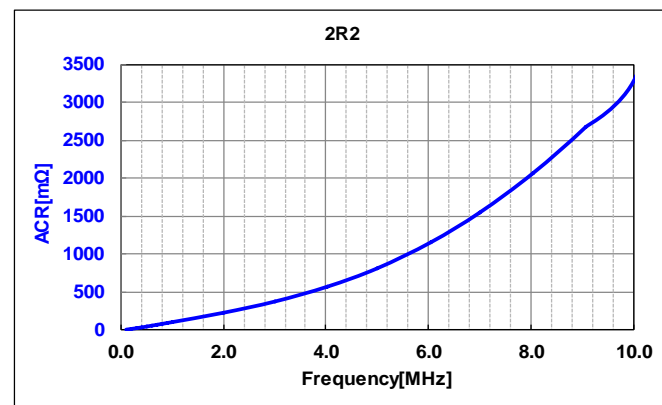
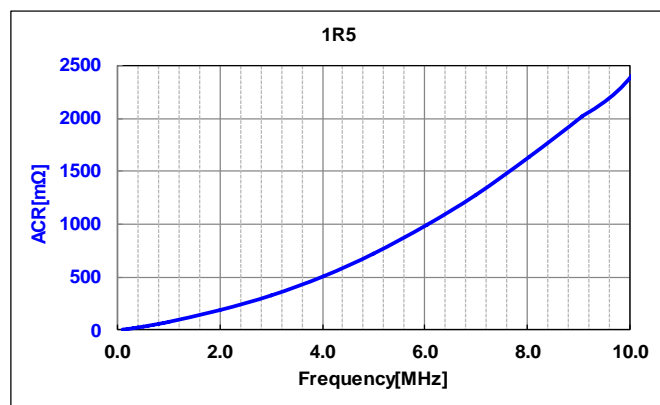
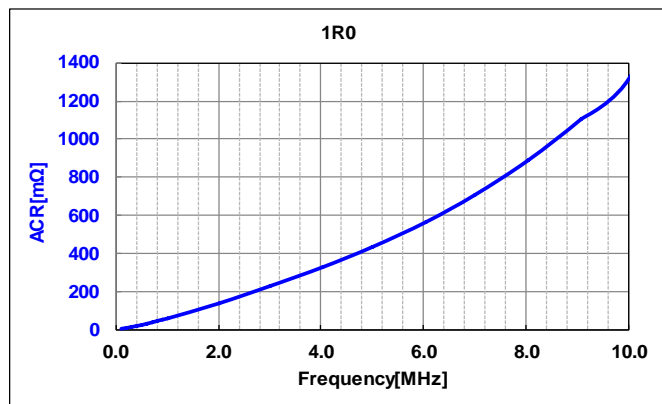
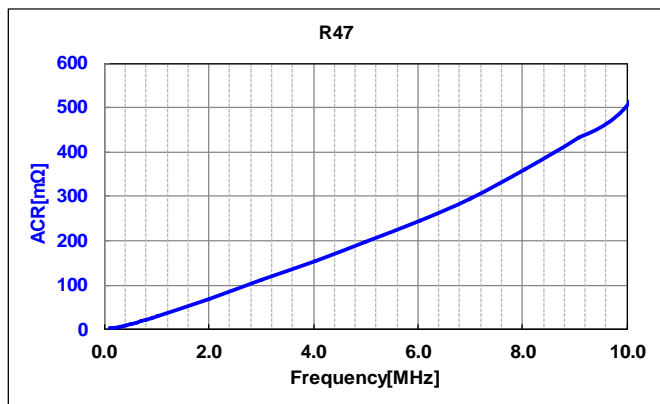
Typical Inductance & Δ Temperature vs. Load Current

Revised 2019/04/08



Typical ACR vs. Frequency

Revised 2019/04/08



Attention

Revised 2019/04/08

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Inquiries about this product

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Products Information Site
[Http://www.alps.com/products/e/](http://www.alps.com/products/e/)

ALPSALPINE CO., LTD.

1-7, Yukigaya-otsukamachi, Ota-ku, Tokyo, Japan 145-8501

Specification

Revised 2019/01/31

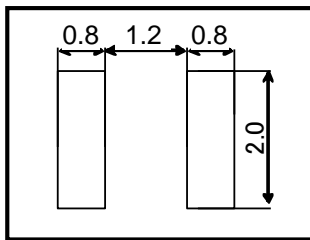
Liqualloy™ Power Inductor GLULK Series

Features

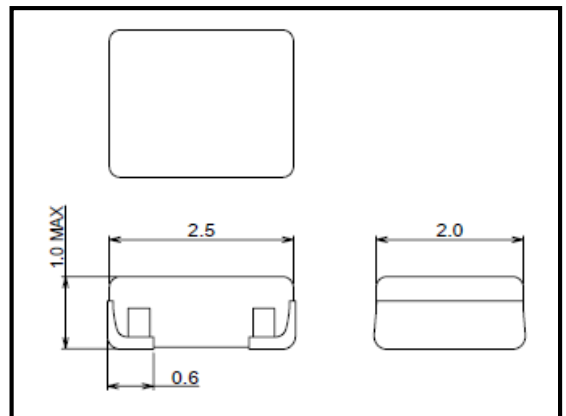
- 2.5mm × 2.0mm square and 1.0mm max height
- Under surface terminal
- Liqualloy™ ; Super low core loss material for high switching frequency DC/DC converter
- Excellent low heat generating characteristics due to low DCR
- Metal composite structure (compact and high current capability)
- RoHS compliant.
- Halogen Free.

Application

- For use in DC/DC converter in portable device
(Smartphone , Tablet PC , SSD , HDD , DSC , Game etc.)



Recommended pattern



Unit: mm

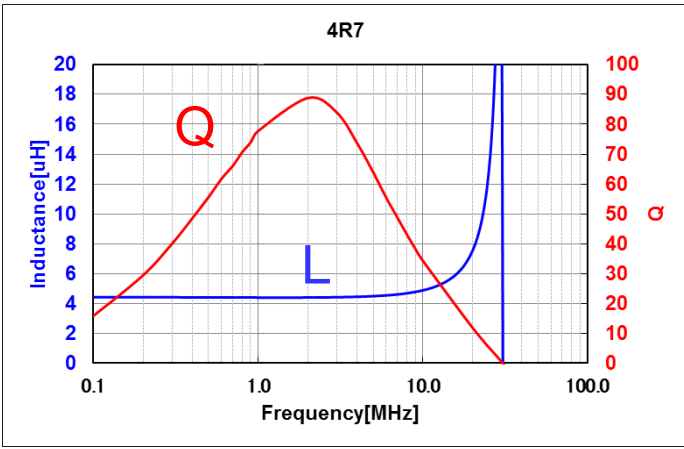
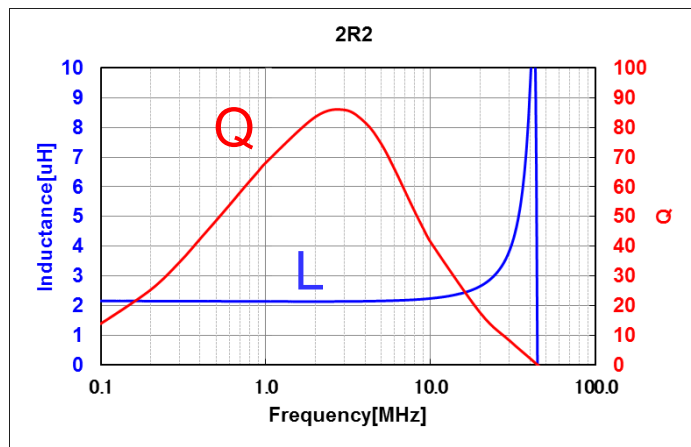
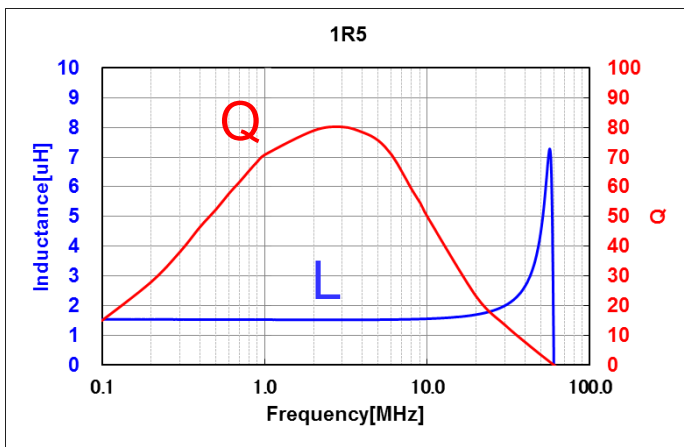
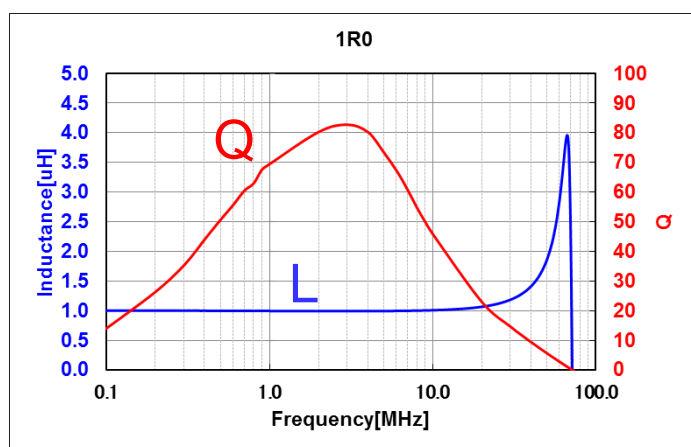
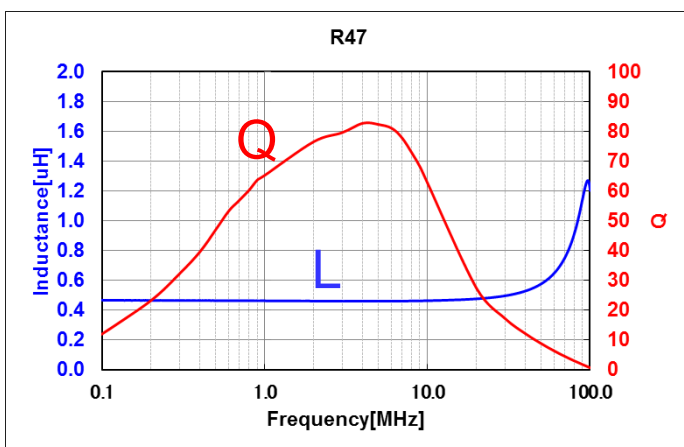
- Operating Temperature: -40 to +125 [°C]
(Including self temperature rise)
- Withstand DC Voltage : 20[V]
- Operating Voltage : 16[V]

Part No.	Inductance at 1MHz (μ H) $\pm 20\%$	DC Resistance (m Ω) Max. (Typ.)	AC Resistance at 1MHz (m Ω) Typ	Saturation Current Idc1 (A) Max.(Typ.)	Heat Rating Current Idc2 (A) Max. (Typ.)
GLULKR4701A	0.47	24 (20)	22	3.6 (4.5)	3.9 (4.9)
GLULK1R001A	1.0	48 (40)	58	2.4 (3.1)	2.6 (3.3)
GLULK1R501A	1.5	70 (58)	79	2.1 (2.7)	2.2 (2.8)
GLULK2R201A	2.2	102 (85)	111	1.8 (2.3)	1.7 (2.2)
GLULK4R701A	4.7	192 (160)	196	1.2 (1.6)	1.3 (1.7)

- ACR=Rs-DCR (Rs:equivalent series resistance)
- The saturation current (Idc1) is the DC current value having inductance decrease down to 30%.
(at 20°C)
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(at 20°C)

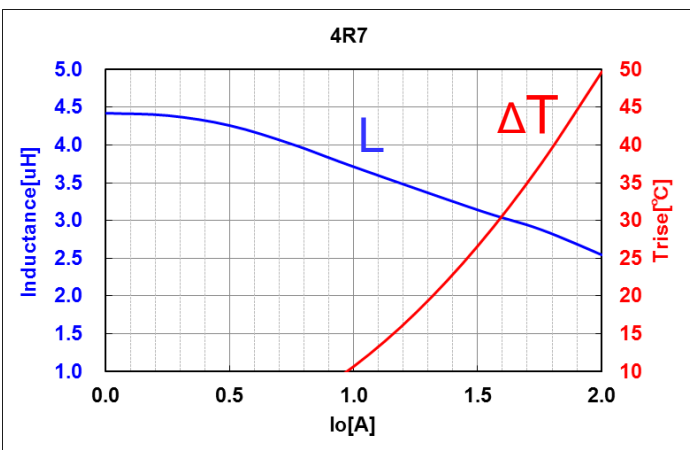
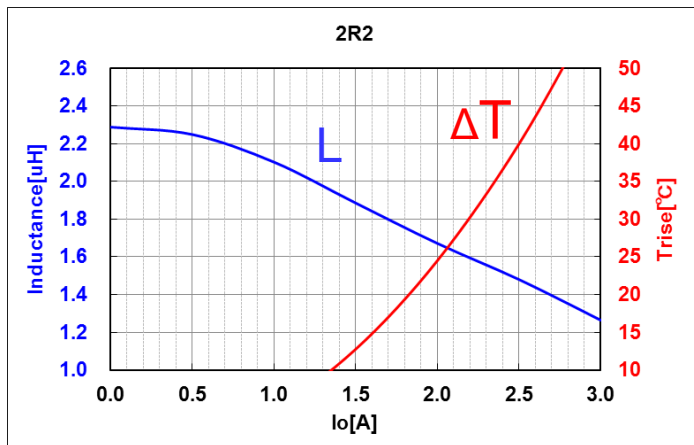
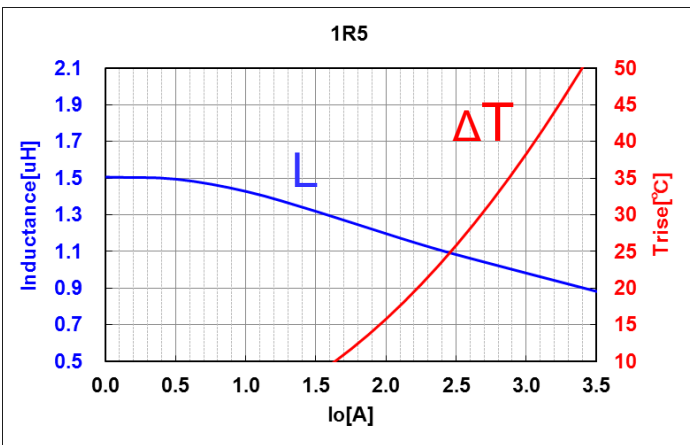
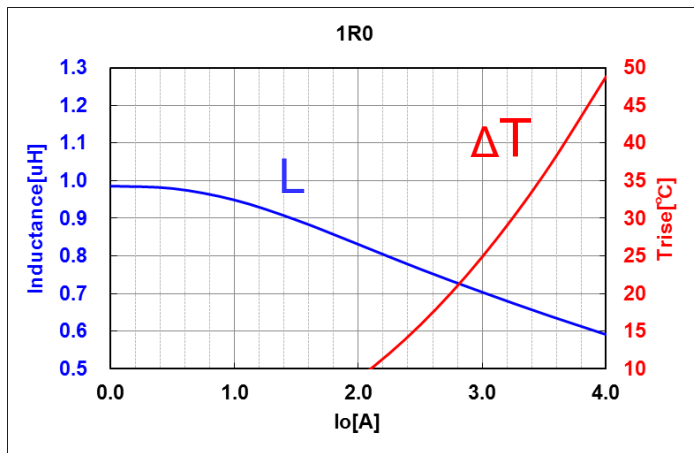
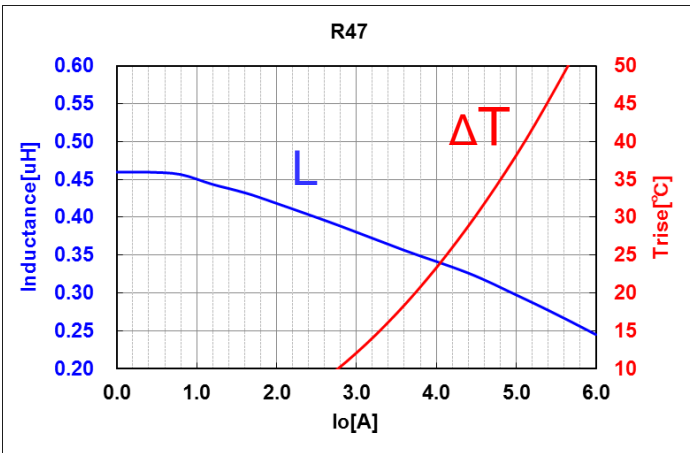
Typical Inductance & Q vs. Frequency

Revised 2019/01/31



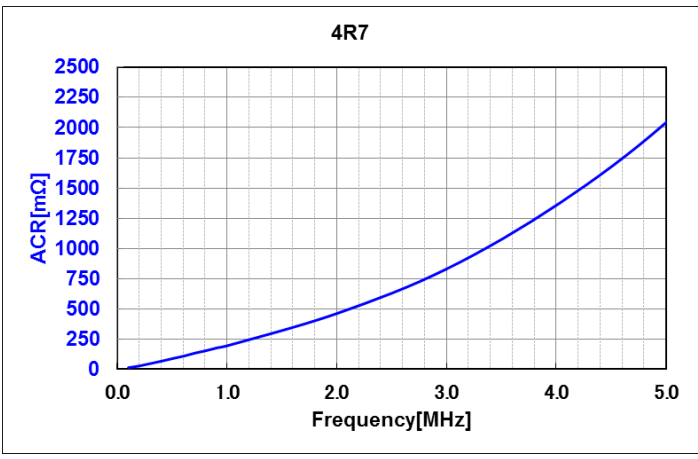
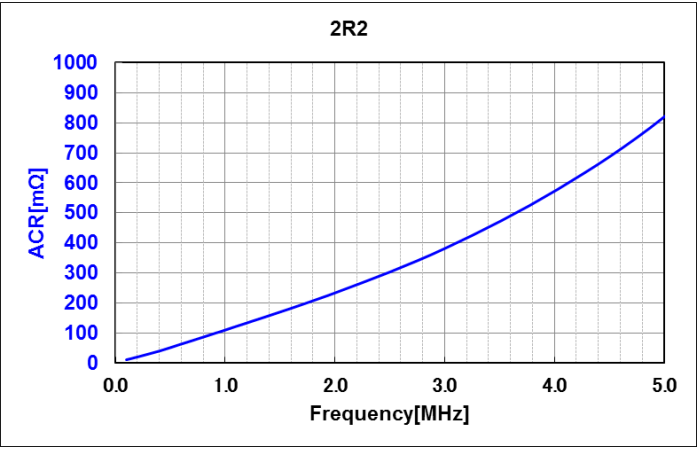
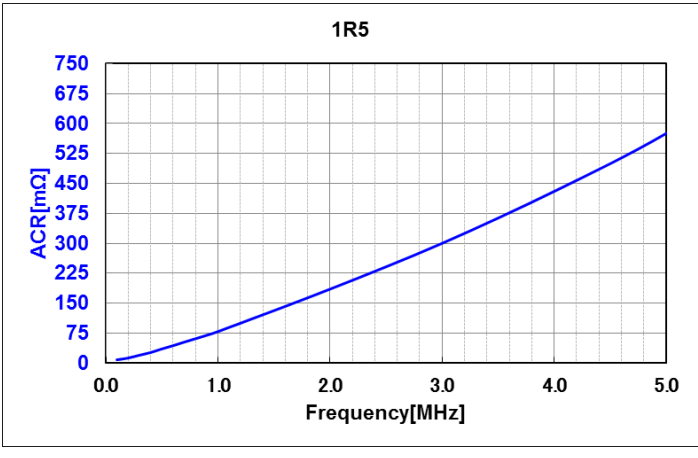
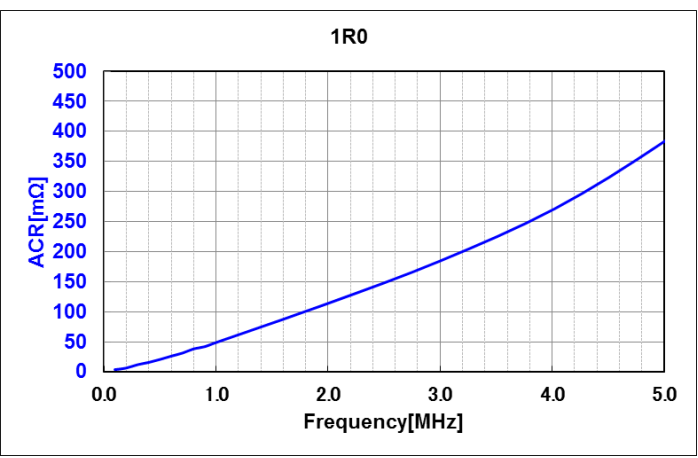
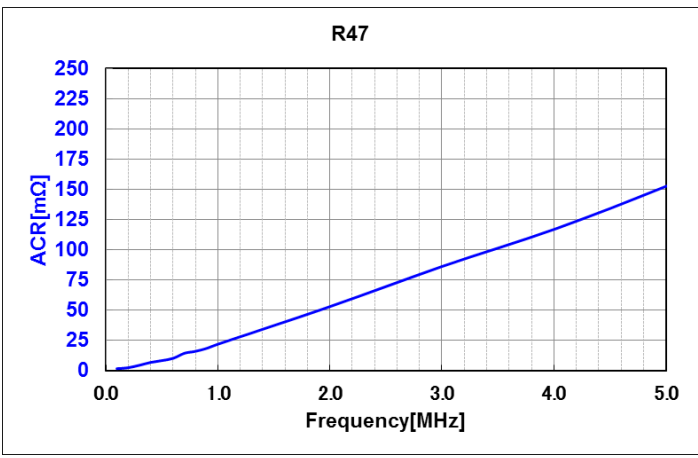
Typical Inductance & Δ Temperature vs. Load Current

Revised 2019/01/31



Typical ACR vs. Frequency

Revised 2019/01/31



Attention

Revised 2019/01/31

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1-7, Yukigaya-otsukamachi, Ota-ku, Tokyo, Japan 145-8501

Specification

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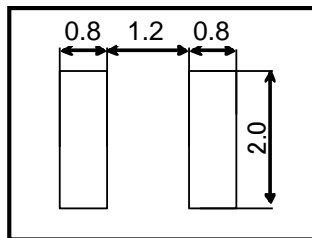
Liqualloy™ Power Inductor GLULM Series

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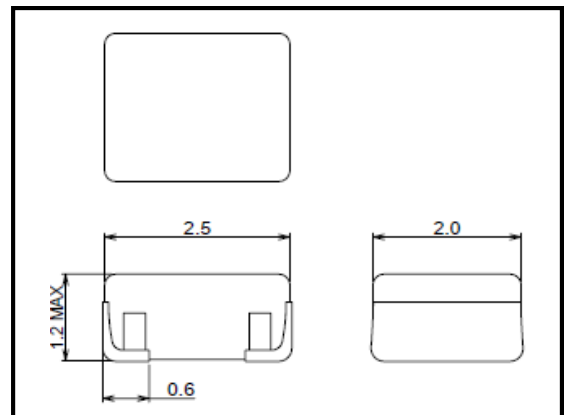
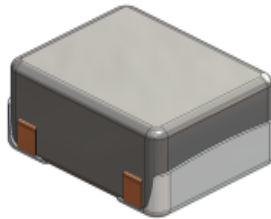
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Recommended pattern



Unit: mm

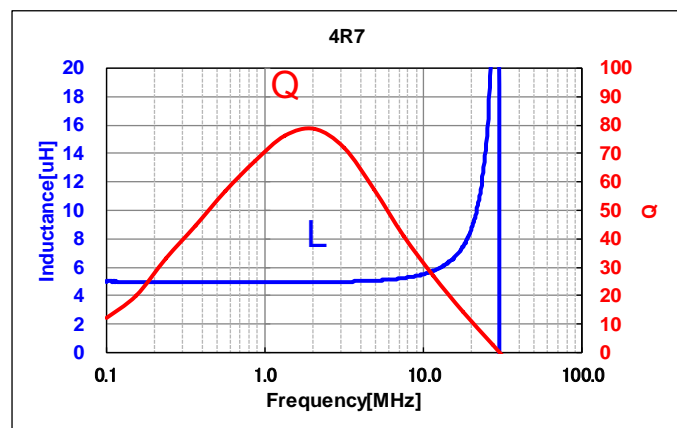
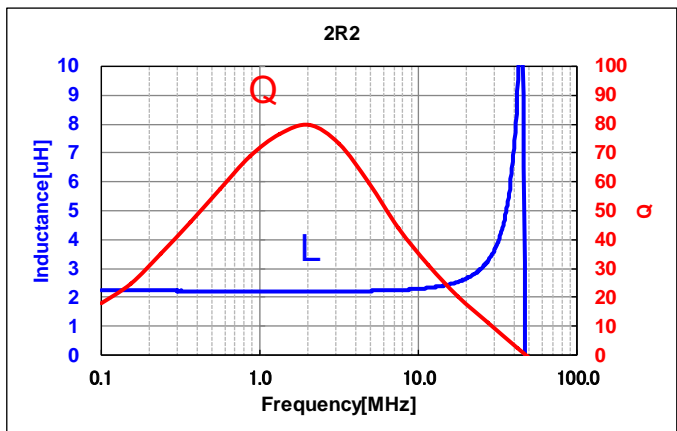
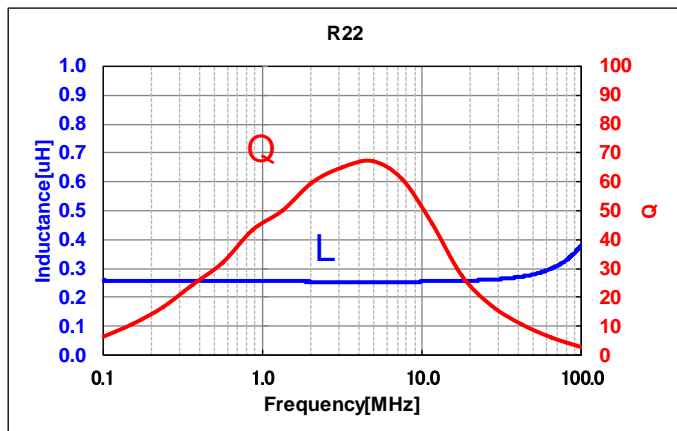
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(Including self temperature rise)
- Withstand DC Voltage : 20[V]
- Operating Voltage : 16[V]

Part No.	Inductance at 1MHz (μH) $\pm 20\%$	DC Resistance ($\text{m}\Omega$) Max. (Typ.)	Idc1: Saturation Current $\Delta L/L=30\%$ (A) Max. (Typ.)	Idc2: Heat Rating Current $\Delta T=40^\circ\text{C}$ (A) Max. (Typ.)
GLULMR2201A	0.22	11 (9)	5.2 (6.5)	5.5 (7.0)
GLULM2R201A	2.2	82 (68)	2.2 (2.7)	2.3 (2.9)
GLULM4R701A	4.7	186 (155)	1.5 (1.9)	1.4 (1.8)

- $ACR=Rs-DCR$ (Rs :equivalent series resistance)
- The saturation current (Idc1) is the DC current value having inductance decrease down to 30%.
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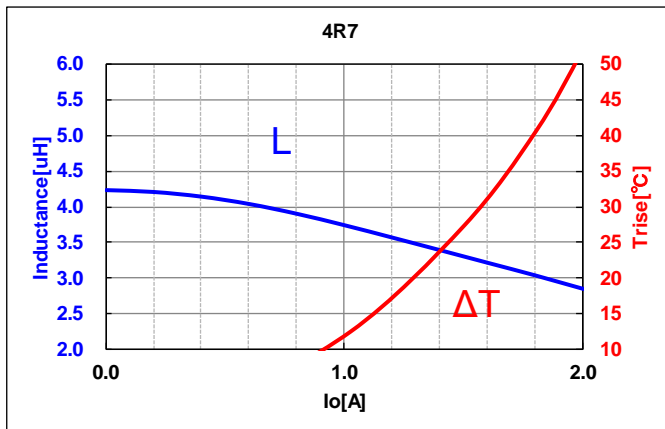
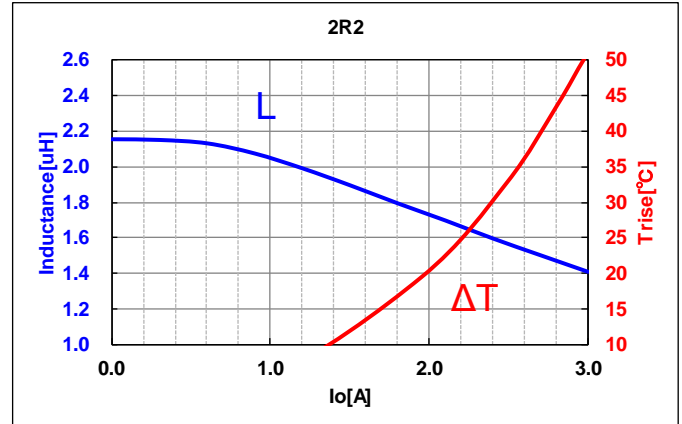
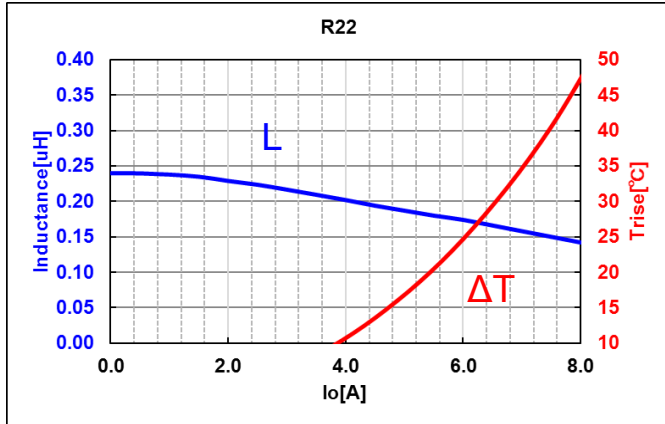
Typical Inductance & Q vs. Frequency

Revised 2019/06/27



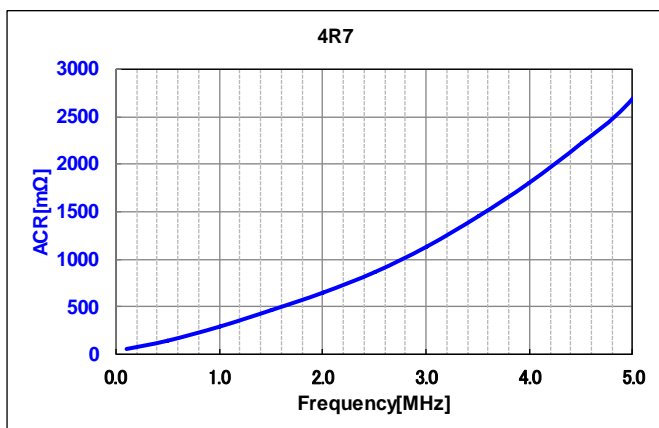
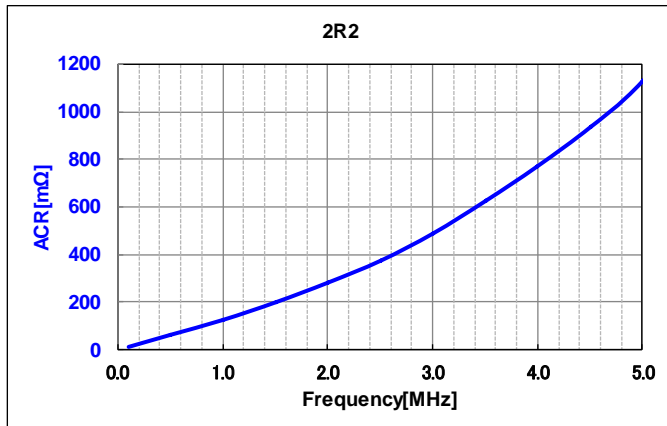
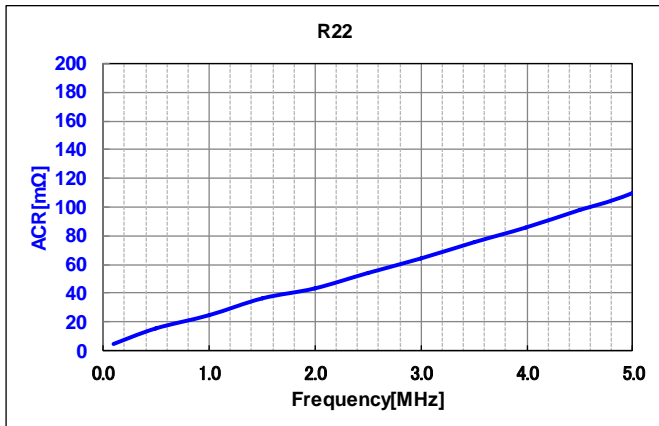
Typical Inductance & Δ Temperature vs. Load Current

Revised 2019/06/27



Typical ACR vs. Frequency

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[GLULK4R701A](#) [GLULKR4701A](#) [GLULMR2201A](#)