



FEATURES

- Shielded structure
- Low DCR with high efficiency
- Large current with small size
- High reliability
- AEC-Q200 qualified
- RoHS compliant

APPLICATIONS

- DC-DC power supply and noise filter circuits
- Tablet, notebook PC, workstation and server etc
- Telecom for basestation etc
- LED lighting
- Automotive

ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE ($\mu\text{H} \pm 20\%$)	DCR (m Ω) MAX	SATURATION CURRENT ⁴ (A) MAX	RMS CURRENT ³ (A) MAX
MGV1203R10M-10	0.10	0.96	84.0	43.0
MGV1203R15M-10	0.15	1.20	75.0	41.0
MGV1203R22M-10	0.22	1.30	65.0	38.5
MGV1203R33M-10	0.33	1.50	62.0	36.5
MGV1203R47M-10	0.47	2.00	55.0	32.0
MGV1203R60M-10	0.60	2.20	51.0	29.0
MGV1203R68M-10	0.68	2.50	49.0	28.0
MGV1203R82M-10	0.82	3.00	44.0	25.0
MGV12031R0M-10	1.00	3.50	40.0	24.0
MGV12031R5M-10	1.50	5.50	35.0	19.0
MGV12031R8M-10	1.80	7.00	30.0	16.5
MGV12032R2M-10	2.20	8.00	29.0	16.0
MGV12033R3M-10	3.30	12.00	27.0	12.0
MGV12034R7M-10	4.70	16.00	24.0	10.0
MGV12035R6M-10	5.60	19.00	19.0	9.5
MGV12036R8M-10	6.80	22.00	18.0	9.0
MGV12038R2M-10	8.20	28.00	16.0	8.5
MGV1203100M-10	10.00	34.00	14.0	7.0

Remark:

1 Tolerance: M: $\pm 20\%$

2 Inductance tested at 100KHz, 0.25V

3 RMS Current is defined based on temperature rise approximate 40°C without core loss.(ambient temperature 25 $\pm$ 5°C)

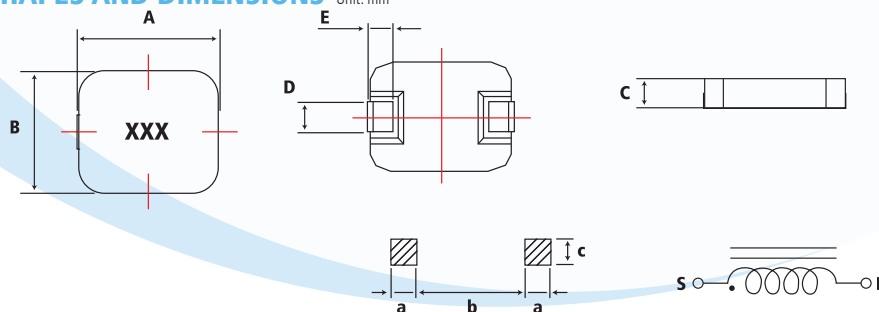
4 Saturation Current is the DC current at which the inductance drops off approximately 25% from its value without current. (ambient temperature 25 $\pm$ 5°C)

5. Operating temperature range:-40°C~+125°C (including self-temperature rise)

6. Storage temperature range (packaging conditions): 25 $\pm$ 5°C and RH 70%(MAX.)

SHAPES AND DIMENSIONS

Unit: mm



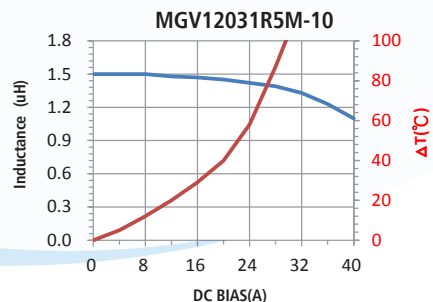
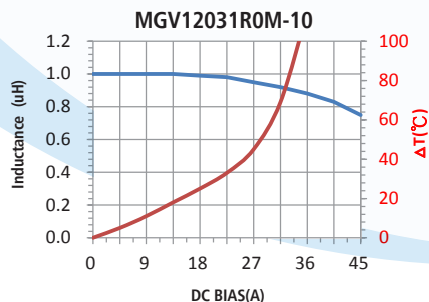
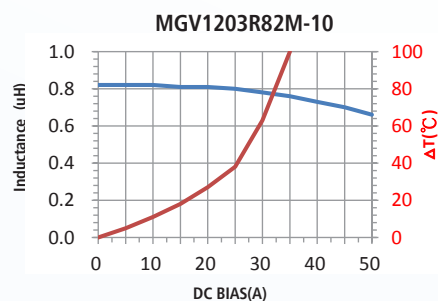
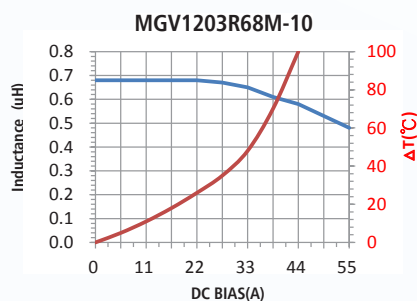
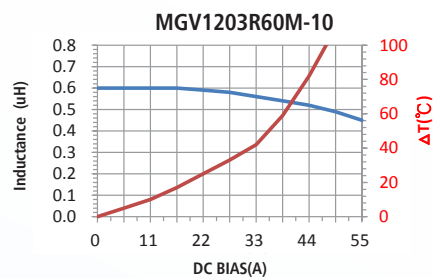
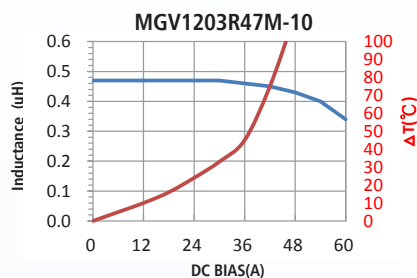
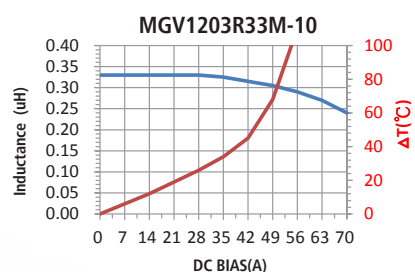
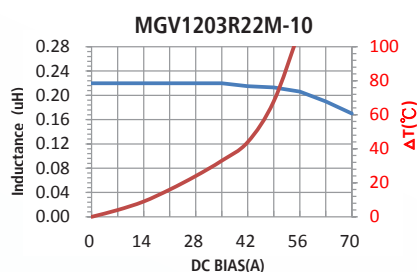
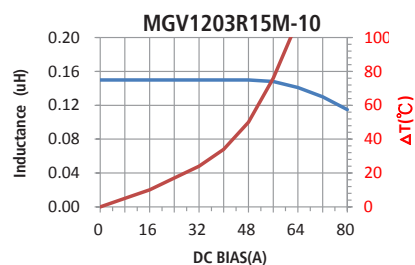
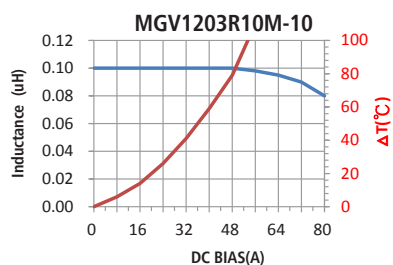
PCB Pattern

Equivalent Circuit

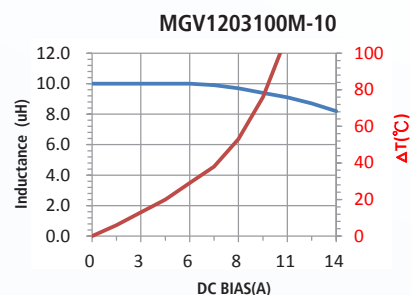
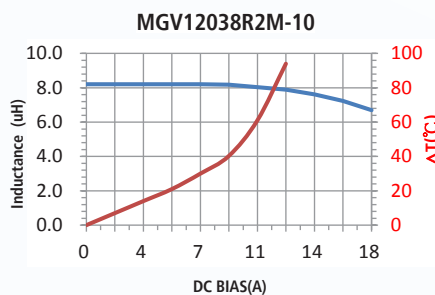
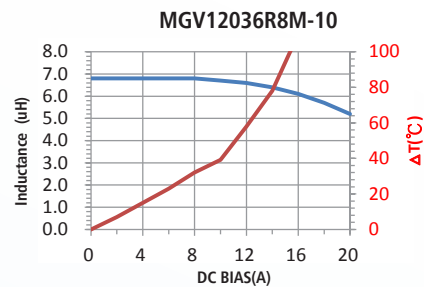
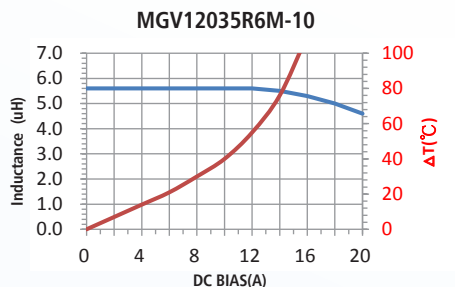
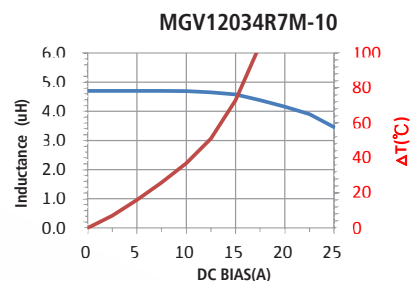
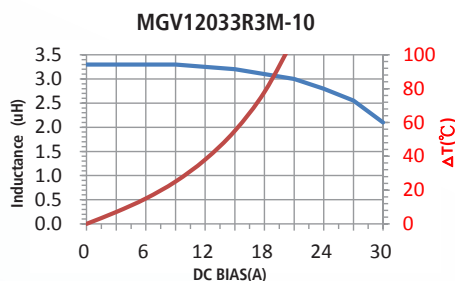
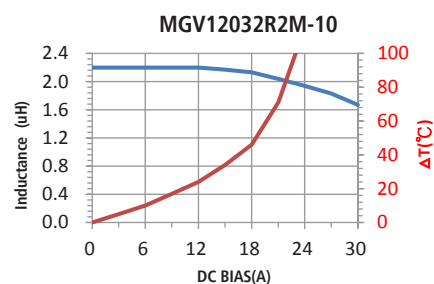
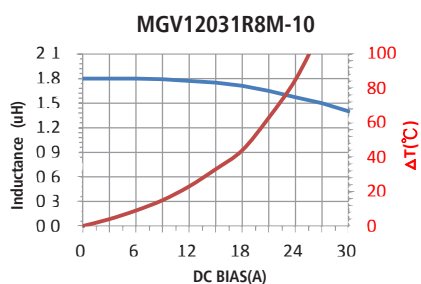
A	B	C	D	E	a	b	c
13.5 $\pm$ 0.5	12.6 $\pm$ 0.3	3.5 $\pm$ 0.3	3.6 $\pm$ 0.5	2.3 $\pm$ 0.5	2.9 ref	7.9 ref	5.0 ref

USA: +1.866.928.8181
Europe: +49.0.8031.2460.0
Asia: +86.755.2714.1166

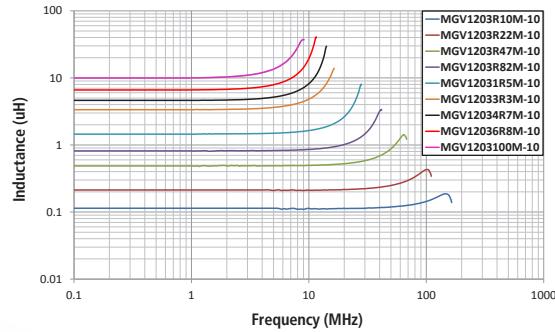
TYPICAL ELECTRICAL CHARACTERISTICS



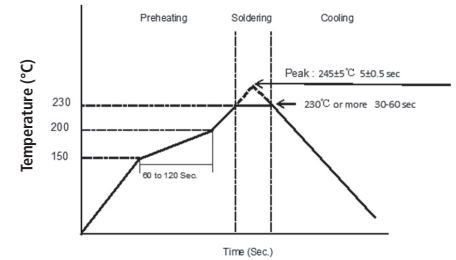
TYPICAL ELECTRICAL CHARACTERISTICS



INDUCTANCE VS FREQUENCY CURVE



TEMPERATURE PROFILE OF REFLOW SOLDERING



ORDERING INFORMATION

PART NUMBER EXAMPLE

M	G	V	1	2	0	3	1	R	5	M	-	1	0
Product series code			Part size code			Inductance value code (i.e. 1R5: 1.5uH)			Tolerance % (i.e. M: ±20%)		PB free code (i.e. 10: PB free)		

PACKAGING INFORMATION

- Standard Tape and Reel Quantity (PCS) = 1000
- Reel Size = 13 inches

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Laird Technologies:

[MGV12038R2M-10](#) [MGV1203R10M-10](#) [MGV1203R15M-10](#) [MGV1203R22M-10](#) [MGV1203R60M-10](#)
[MGV1203R68M-10](#) [MGV1203R82M-10](#) [MGV1203R33M-10](#) [MGV1203R47M-10](#) [MGV1203100M-10](#) [MGV12031R0M-](#)
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[MGV12035R6M-10](#) [MGV12036R8M-10](#)