

<b>Product Series :</b> GNR	<b>Brand :</b> GOTREND
<b>File Version :</b> GNR-SERIES-AE-V1R1	<b>Editor :</b> Qiuyi Wu
<b>Established Date :</b> 2009.08.19	<b>Description :</b> SMD Shielded Power Inductor
<b>Latest Edit Date :</b> 2022.12.08	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

**Version Information :**

SN	Date	Version Code	Modify Description	Editor	Check
01	2021.11.05	V1R0	New version update release	/	David Wang
02	2022.12.08	V1R1	Removed GNR2512P-R47□-AE	Qiuyi Wu	張文明

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## REMINDERS

- ◆ Product information in this catalog is subject to change without notice, and is for reference only. Therefore, please contact GOTREND Technology to check for the latest information before practical application or usage of the products.
- ◆ This catalog contains only typical specifications, please contact GOTREND Technology for further details if you can not find special components or information you need in this catalogue. Please also approve our product specifications or transact the approval sheet for product specifications before ordering.
- ◆ This catalogue only applies to products purchased through GOTREND Technology or its official agencies. This catalogue does not apply to products that are purchased through other third parties.
- ◆ Please read Attention and CAUTION note (for storage, operating, rating, soldering, mounting and handling) in this catalog to ensure product proper usage.
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- ◆ Information and data provided in the brochure can and do vary in different applications, and actual performance may vary over time.
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- ◆ Any reproduction or extraction of the contents in this catalog is prohibited without prior permission from GOTREND Technology.
- ◆ Products listed in this catalog are intended for general electronic device usage under normal operation and use condition including telecommunication equipment, home appliances, sports equipment AV equipment, industrial machine, office equipment etc. Please take note that our products are not designed, intended or authorized for use in below mentioned applications unless explicitly agreed in writing between the parties to avoid product failure that could result in situation where personal injury or death could occur.

- (1) Aerospace/Aviation equipment
- (2) Atomic energy-related equipment
- (3) Disaster prevention/crime prevention equipment
- (4) Electric heating apparatus, burning equipment
- (5) Medical equipment
- (6) Military equipment
- (7) Power-generation control equipment
- (8) Public information-processing equipment
- (9) Safety equipment
- (10) Seabed equipment
- (11) Transportation control equipment
- (12) Transportation equipment (cars, electric trains, ships, etc.)
- (13) Other applications that are not considered general-purpose applications

- ◆ Our manufacturing sites fully compliance with requirement regarding the quality management system in the automotive industry under the IATF 16949 standard. GOTREND Technology respect individual agreements with reference to customer requirements and customer specific requirements (CSR). We will like to emphasize that only requirements mutually agreed upon will in implemented in our Quality Management System taking into consideration that IATF 16949 may appear to support the acceptance of unilateral requirements. We will only legally bind to this individually agreed upon agreement under the IATF 16949 standard.

- ◆ The product itself is a powder metallurgy product, so the structure is relatively fragile, and it should not be used for products that are easy to fall. In addition, when this product is assembled, it should avoid collision with the tool or mechanism shell.



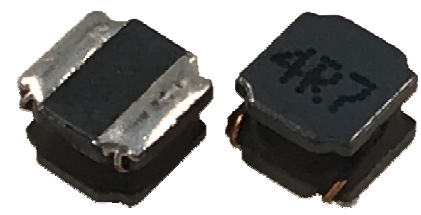
- ◆ It is not recommended to use hot air gun for disassembling of this product. When using of hot air gun to repair other parts, please also take note that long time or high temperature exposure of this product will also damage the inductance device. If you need to use the hot air gun to disassemble the product, it is recommended to adjust the hot air gun temperature to 380 deg.C±5 deg.C. The blower head of the hot air gun should be perpendicular and at least 1cm away from the product. After heating the product to the tin material melting point, use tweezers to remove the product from the PCB.



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**Features & Application :**

- \* Power supply PWM circuit input / output inductor
- \* Power line noise suppression
- \* DC-DC Converter
- \* To help you go pass CE/FCC standard
- \* TFT / WiFi / Mobile Phone / MP3 / PDA .... etc. Application
- \* Low Profile for all compact design



( Picture for reference only )

**Part No. Example :**

PN	:	<b>GNR</b>	<b>3010</b>	<b>P</b>	<b>[ ]</b>	-	<b>6R8</b>	<b>M</b>	<b>[ ]</b>	-	<b>AE</b>
ID	:	1	2	3	4		5	6	7		8
1	:	GOTREND Series Code									
2	:	Dimension Code : 3010 = ( L ) 3.1 x ( W ) 3.1 x ( H ) 1.0 mm									
3	:	RoHS Compliance									
4	:	[ ] : For GNR3010P / 3015P Marking series Code [ A / C / L ] : Material Code									
5	:	Inductance : 6R8 = 6.8uH , Ex : 100 = 10uH , 101 = 100uH									
6	:	Inductance Tolerance : M = +/-20% , N = +/-30%									
7	:	[ 1 ~ 9 ] : For customer special design.									
8	:	[ AE ] : Reliability comply with AEC-Q200 standard type.									

**Basic Information :**

<b>Made in</b>	China
<b>Pin Foot</b>	SMD
<b>Shielding</b>	Yes
<b>J-STD-020</b>	MSL Level 1
<b>RoHS</b>	Compliant
<b>REACH</b>	Compliant
<b>Halogen</b>	Free
<b>Automotive</b>	AEC Q200



**Operating & Storage Condition :**

- \* Operating Temp -40 ~ +125 °C ( Including self - temperature rise )
- \* Storage Temp 1. -10 ~ +45 °C , 50 ~ 60% RH ( Product with taping )  
2. -40 ~ +125 °C ( On board )
- \* Storage Life Time 6 Month ( Less than 40 °C and 60% RH )

**Attention & Caution :**

- \* Keep out of Splashing water or salt water
- \* Avoid Toxic Gas (Hydrogen sulfide, Sulfurous acid, Chlorine, Ammonia)
- \* Avoid Vibrations or shocks which exceed the specified condition
- \* Avoid Dew condense
- \* Avoid Layout near the edge of PCB
- \* Avoid Over flexure after SMT mounting & PCBA

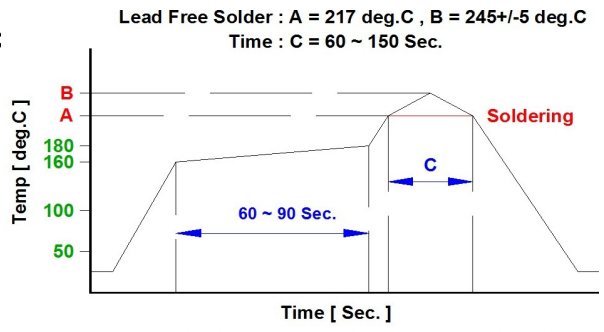


- \* Pin foot or SMD pad solderability: Pb free type is best within 6 months after delivery
- \* Humidity sensitive , IPC/JEDEC J-STD-020 MSL if over Level 1, recommend bake 30mins@150 degree before PCBA
- \* Caution for human life relative applications : PLS contact & consult with GOTREND team in design stage.

**Test Condition :**

- \* Equipment HP4284A , HP42841A - L , Q , DCR , IDC  
HP8753D Network analyzer - SRF
- \* Standard Atmosphere Conditions:  
Ambient Temperature 20 ± 15 °C  
Humidity RH 65 ± 20%
- \* If there may be any doubt on the test result ,  
Measurement shall be made within the following limits:  
Ambient Temperature 25 ± 5 °C  
Humidity RH 75 ± 10%

**Recommend IR Reflow Curve :**

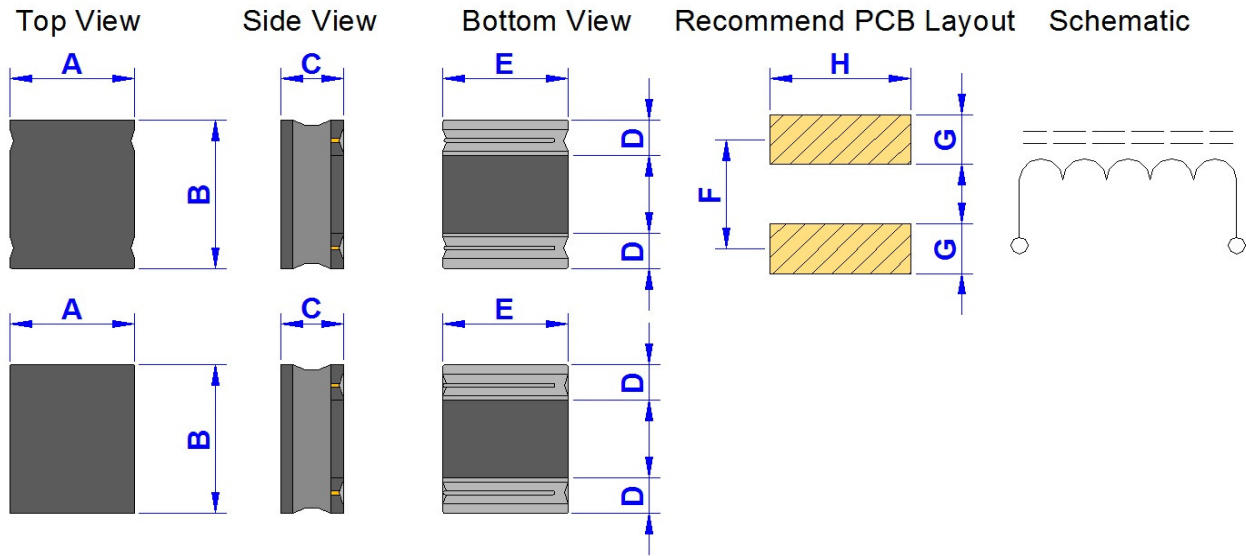


Notice : Iron Soldering , Solder < 30 Watt ,  
Direct touch the terminal x 3 Sec. Max. @ 350 deg.C

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### GNR2510P-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
2.20	2.70	1.00	0.85	2.00	1.65	0.85	2.00

### Electrical Characteristics :

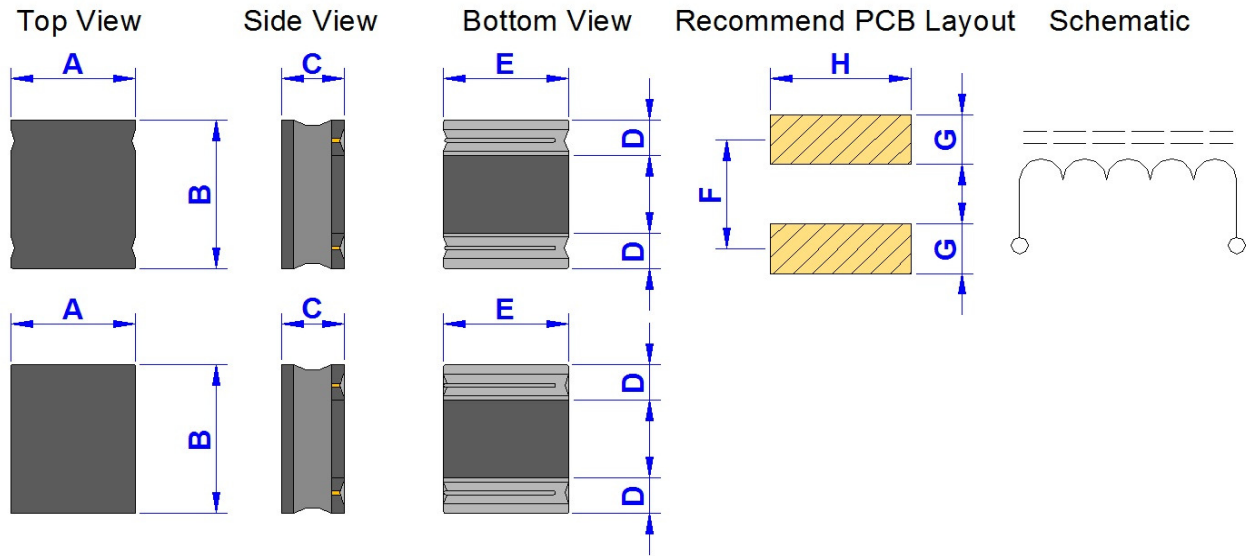
Part No.	Inductance (uH)	Inductance Tolerance	RDC (m Ohm) Typ.	RDC (m Ohm) Max.	Isat (mA) Typ.	Irms (mA) Typ.
GNR2510P-R47□-AE	0.47	M / N	40.0	48.0	2500	2650
GNR2510P-R68□-AE	0.68	M / N	52.0	64.0	2200	2200
GNR2510P-1R0□-AE	1.00	M / N	70.0	85.0	1800	1900
GNR2510P-1R5□-AE	1.50	M / N	107.0	128.0	1500	1500
GNR2510P-2R2□-AE	2.20	M	150.0	185.0	1200	1200
GNR2510P-3R3□-AE	3.30	M	225.0	270.0	1000	1000
GNR2510P-4R7□-AE	4.70	M	330.0	398.0	880	820
GNR2510P-6R8□-AE	6.80	M	443.0	532.0	740	710
GNR2510P-100□-AE	10.00	M	712.0	854.0	590	550

- Inductance test Freq. : 1MHz / 0.1V
- Inductance Tolerance : N = +/-30% , M = +/-20%
- The saturation current value ( Isat ) is the DC current value having inductance decrease 30%. ( at 20°C )
- The temperature rise current value ( Irms ) DC current value having temperature increase up to 40°C ( at 20°C )

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### GNR2512P-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
2.20	2.70	1.20	0.85	2.10	1.70	0.90	2.10

### Electrical Characteristics :

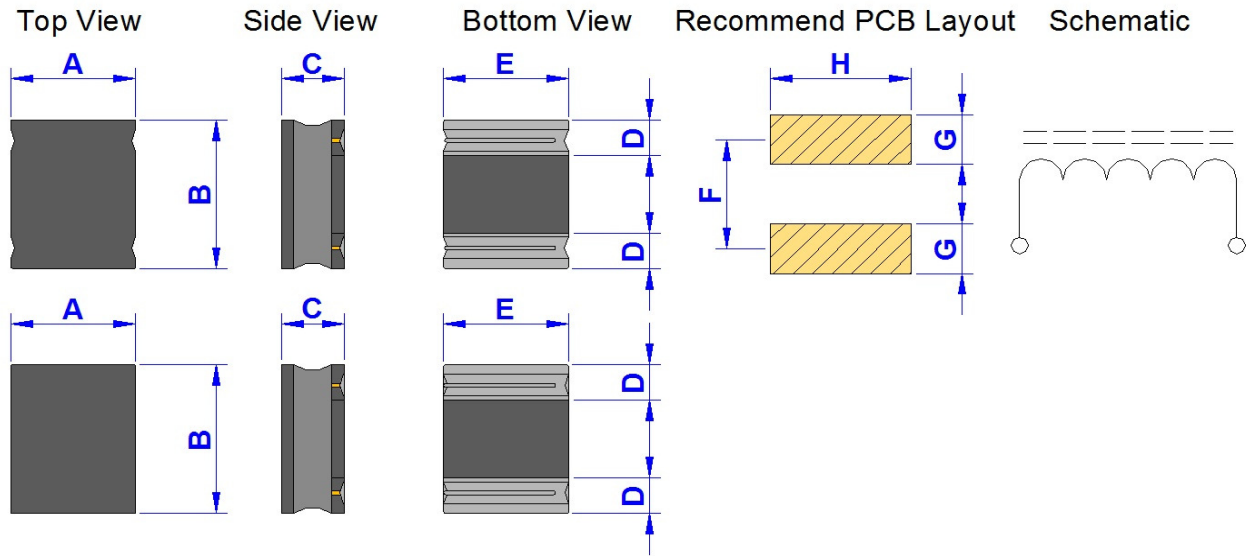
Part No.	Inductance ( uH )	Inductance Tolerance	RDC ( m Ohm ) Typ.	RDC ( m Ohm ) Max.	Isat ( mA ) Typ.	Irms ( mA ) Typ.
GNR2512P-1R0□-AE	1.00	M / N	73.0	88.0	2700	1800
GNR2512P-1R5□-AE	1.50	M / N	105.0	126.0	2200	1500
GNR2512P-2R2□-AE	2.20	M	129.0	155.0	2000	1300
GNR2512P-3R3□-AE	3.30	M	227.0	272.0	1600	1000
GNR2512P-4R7□-AE	4.70	M	338.0	406.0	1300	810
GNR2512P-5R6□-AE	5.60	M	375.0	450.0	1150	720
GNR2512P-6R8□-AE	6.80	M	510.0	612.0	1100	660
GNR2512P-100□-AE	10.00	M	630.0	756.0	900	590

- Inductance test Freq. : 1MHz / 0.1V
- Inductance Tolerance : N = +/-30% , M = +/-20%
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### GNR2512PA-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
2.20	2.70	1.20	0.85	2.10	1.70	0.90	2.10

### Electrical Characteristics :

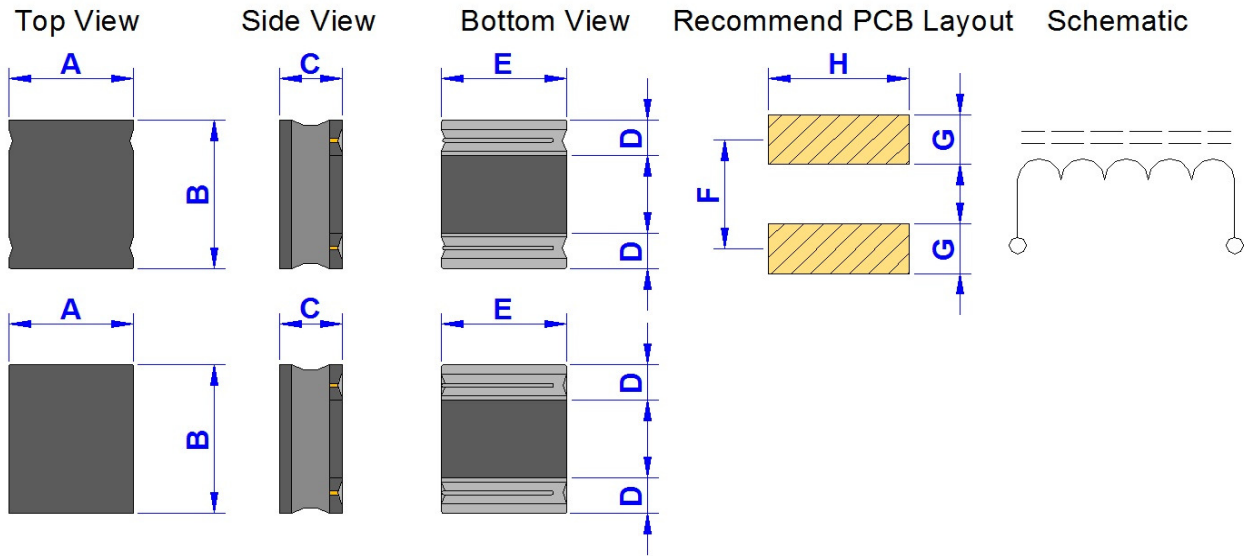
Part No.	Inductance (uH)	Inductance Tolerance	RDC (m Ohm) Typ.	RDC (m Ohm) Max.	Isat (mA) Typ.	Irms (mA) Typ.
GNR2512PA-R47□-AE	0.47	M	29.0	39.0	4500	3900
GNR2512PA-R68□-AE	0.68	M	36.0	48.0	4200	3400
GNR2512PA-1R0□-AE	1.00	M	45.0	59.0	3450	3200
GNR2512PA-1R5□-AE	1.50	M	60.0	72.0	2750	2600
GNR2512PA-1R8□-AE	1.80	M	80.0	96.0	2550	2600
GNR2512PA-2R2□-AE	2.20	M	90.0	108.0	2450	2350
GNR2512PA-3R3□-AE	3.30	M	120.0	140.0	2000	1800
GNR2512PA-4R7□-AE	4.70	M	200.0	240.0	1700	1500
GNR2512PA-6R8□-AE	6.80	M	300.0	360.0	1340	1100

- Inductance test Freq. : 1MHz / 0.1V
- Inductance Tolerance : M = +/-20%
- The saturation current value ( Isat ) is the DC current value having inductance decrease 30%. ( at 20°C )
- The temperature rise current value ( Irms ) DC current value having temperature increase up to 40°C ( at 20°C )

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### GNR2512PL-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
2.20	2.70	1.20	0.85	2.10	1.70	0.90	2.10

### Electrical Characteristics :

Part No.	Inductance ( uH )	Inductance Tolerance	RDC ( m Ohm ) Typ.	RDC ( m Ohm ) Max.	Isat ( mA ) Typ.	Irms ( mA ) Typ.
GNR2512PL-R24□-AE	0.24	M	24.0	29.0	4280	3900
GNR2512PL-R47□-AE	0.47	M	34.0	41.0	3200	3700
GNR2512PL-R68□-AE	0.68	M	42.0	51.0	2750	3300
GNR2512PL-1R0□-AE	1.00	M	50.0	60.0	2550	2600
GNR2512PL-1R5□-AE	1.50	M	72.0	87.0	2100	2200
GNR2512PL-2R2□-AE	2.20	M	96.0	116.0	2000	1850
GNR2512PL-3R3□-AE	3.30	M	140.0	168.0	1450	1450
GNR2512PL-4R7□-AE	4.70	M	210.0	252.0	1280	1200
GNR2512PL-6R8□-AE	6.80	M	406.0	487.0	850	1000
GNR2512PL-8R2□-AE	8.20	M	500.0	600.0	800	820
GNR2512PL-100□-AE	10.00	M	450.0	540.0	720	750
GNR2512PL-220□-AE	22.00	M	1138.0	1366.0	480	500

■ Inductance test Freq. : 1MHz / 1.0V

■ Inductance Tolerance : M = +/-20%

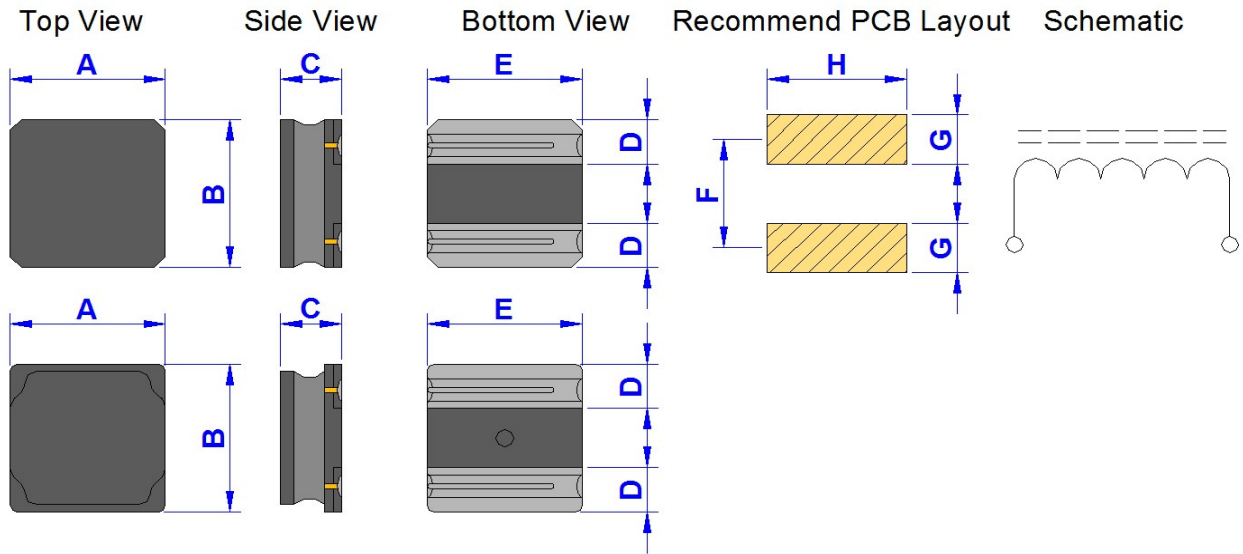
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■ The temperature rise current value ( Irms ) DC current value having temperature increase up to 40°C ( at 20°C )

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### GNR3010P-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
3.10	3.10	1.00	0.90	2.70	2.20	1.00	2.70

### Electrical Characteristics :

Part No.	Inductance (uH)	Inductance Tolerance	RDC (m Ohm) Typ.	RDC (m Ohm) Max.	Isat (mA) Typ.	Irms (mA) Typ.
GNR3010P-1R0□-AE	1.00	M / N	65.0	78.0	1950	1700
GNR3010P-1R2□-AE	1.20	M / N	80.0	96.0	1900	1650
GNR3010P-1R5□-AE	1.50	M / N	80.0	96.0	1600	1650
GNR3010P-1R8□-AE	1.80	N	88.0	105.0	1520	1520
GNR3010P-2R2□-AE	2.20	M	95.0	114.0	1450	1450
GNR3010P-3R3□-AE	3.30	M	160.0	192.0	1050	1300
GNR3010P-4R7□-AE	4.70	M	190.0	228.0	950	1100
GNR3010P-6R8□-AE	6.80	M	300.0	360.0	760	850
GNR3010P-100□-AE	10.00	M	450.0	540.0	610	720
GNR3010P-150□-AE	15.00	M	740.0	888.0	480	560
GNR3010P-220□-AE	22.00	M	980.0	1176.0	420	500
GNR3010P-330□-AE	33.00	M	1550.0	1860.0	340	415
GNR3010P-470□-AE	47.00	M	2000.0	2400.0	270	320

■ Inductance test Freq. : 1MHz / 0.1V

■ Inductance Tolerance : N = +/-30% , M = +/-20%

■ The saturation current value ( Isat ) is the DC current value having inductance decrease 30%. ( at 20°C )

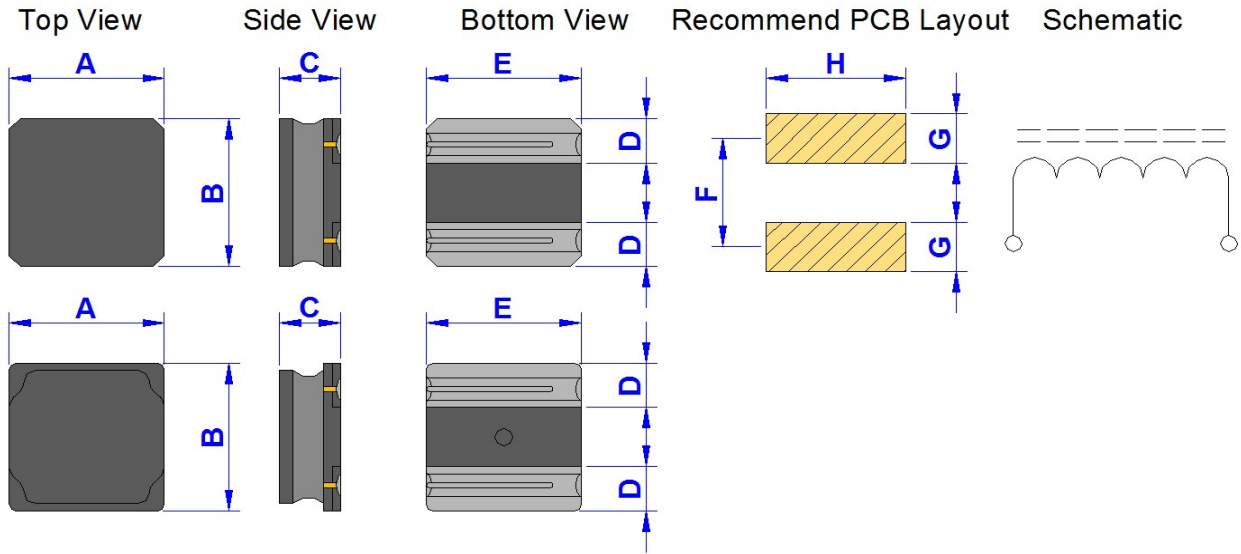
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### GNR3012P-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
3.10	3.10	1.20	0.90	2.70	2.20	1.00	2.70

### Electrical Characteristics :

Part No.	Inductance (uH)	Inductance Tolerance	RDC (m Ohm) Typ.	RDC (m Ohm) Max.	Isat (mA) Typ.	Irms (mA) Typ.
GNR3012P-R50□-AE	0.50	M	35.0	42.0	2800	2800
GNR3012P-1R0□-AE	1.00	M	43.0	52.0	2600	2500
GNR3012P-1R5□-AE	1.50	M	65.0	78.0	2000	1900
GNR3012P-2R2□-AE	2.20	M	82.0	98.0	1900	1700
GNR3012P-3R3□-AE	3.30	M	100.0	120.0	1700	1500
GNR3012P-4R7□-AE	4.70	M	105.0	126.0	1500	1200
GNR3012P-6R8□-AE	6.80	M	170.0	204.0	1200	1000
GNR3012P-100□-AE	10.00	M	250.0	300.0	1000	800
GNR3012P-150□-AE	15.00	M	470.0	564.0	750	650
GNR3012P-220□-AE	22.00	M	630.0	756.0	670	550
GNR3012P-330□-AE	33.00	M	910.0	1092.0	550	460
GNR3012P-470□-AE	47.00	M	1250.0	1500.0	450	350

■ Inductance test Freq. : 1MHz / 0.1V

■ Inductance Tolerance : M = +/-20%

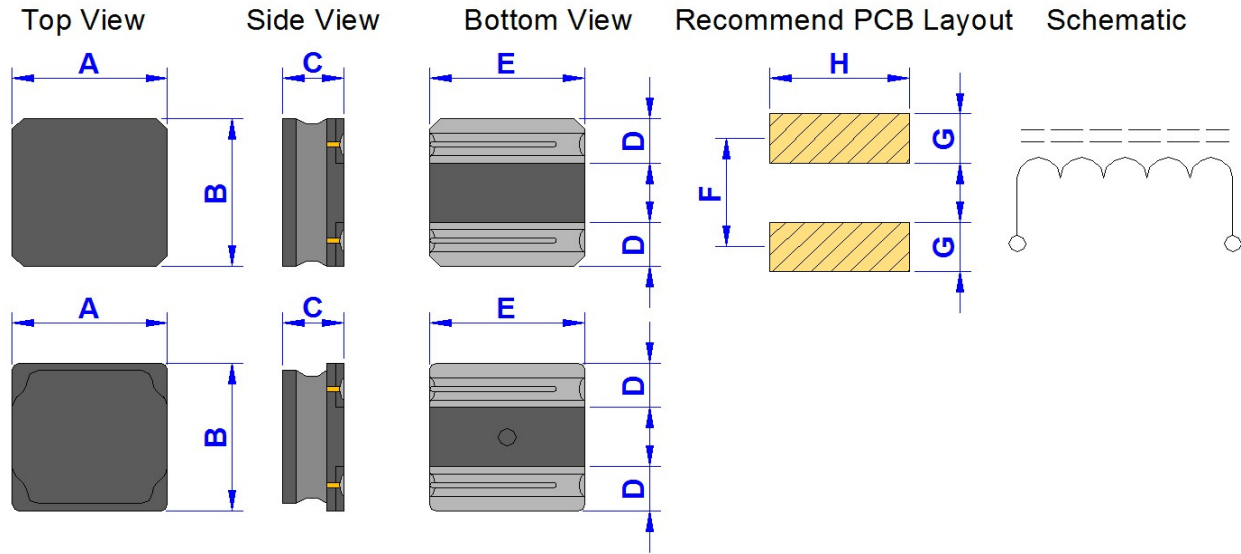
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### GNR3012PC-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
3.10	3.10	1.20	0.90	2.70	2.20	1.00	2.70

### Electrical Characteristics :

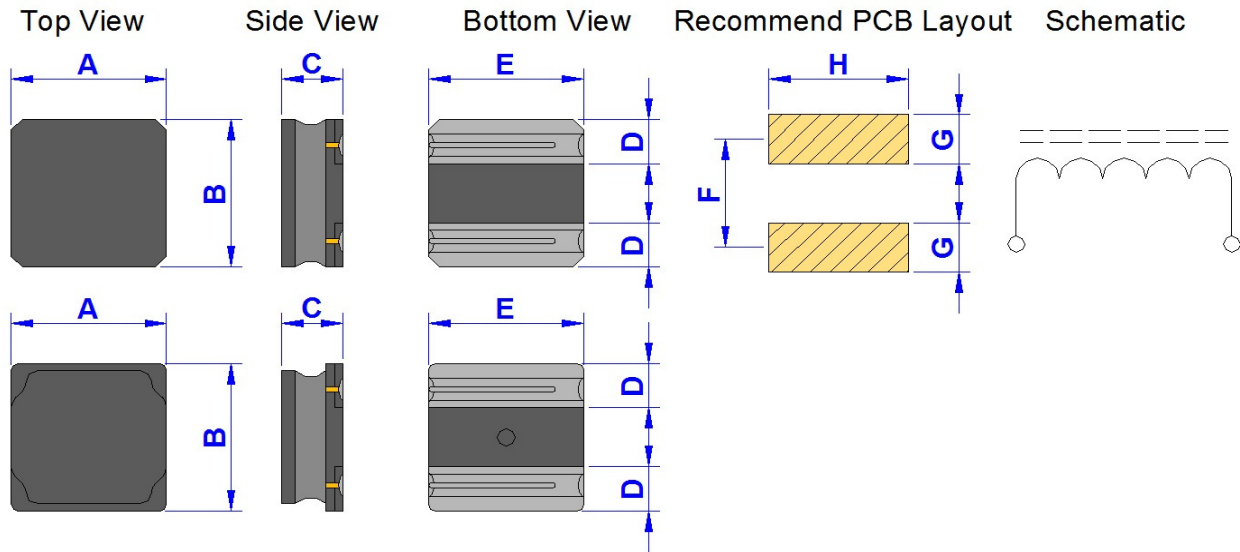
Part No.	Inductance ( uH )	Inductance Tolerance	RDC ( m Ohm ) Typ.	RDC ( m Ohm ) Max.	Isat ( mA ) Typ.	Irms ( mA ) Typ.
GNR3012PC-1R0□-AE	1.00	N	42.0	50.4	2500	2200
GNR3012PC-1R5□-AE	1.50	N	56.0	67.2	2000	2000
GNR3012PC-2R2□-AE	2.20	M	80.0	96.0	1800	1900
GNR3012PC-3R3□-AE	3.30	M	100.0	120.0	1500	1700
GNR3012PC-4R7□-AE	4.70	M	130.0	156.0	1300	1500
GNR3012PC-6R8□-AE	6.80	M	180.0	216.0	1200	1200
GNR3012PC-100□-AE	10.00	M	245.0	294.0	900	1000
GNR3012PC-150□-AE	15.00	M	386.0	463.2	800	900
GNR3012PC-220□-AE	22.00	M	580.0	696.0	600	700

- Inductance test Freq. : 1MHz / 0.1V
- Inductance Tolerance : N = +/-30% , M = +/-20%
- The saturation current value ( Isat ) is the DC current value having inductance decrease 30%. ( at 20°C )
- The temperature rise current value ( Iirms ) DC current value having temperature increase up to 40°C ( at 20°C )

<b>Product Series :</b> GNR	<b>Brand :</b> GOTREND
<b>File Version :</b> GNR-SERIES-AE-V1R1	<b>Editor :</b> Qiuyi Wu
<b>Established Date :</b> 2009.08.19	<b>Description :</b> SMD Shielded Power Inductor
<b>Latest Edit Date :</b> 2022.12.08	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GNR3015P-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
3.10	3.10	1.50	0.90	2.70	2.20	1.00	2.70

### Electrical Characteristics :

Part No.	Inductance (uH)	Inductance Tolerance	RDC (m Ohm) Typ.	RDC (m Ohm) Max.	Isat (mA) Typ.	Irms (mA) Typ.
GNR3015P-1R0□-AE	1.00	M / N	40.0	48.0	2350	2350
GNR3015P-1R5□-AE	1.50	M / N	55.0	66.0	2000	2100
GNR3015P-1R8□-AE	1.80	N	60.0	72.0	1830	1950
GNR3015P-2R2□-AE	2.20	M	60.0	72.0	1650	1800
GNR3015P-3R3□-AE	3.30	M	93.0	112.0	1400	1600
GNR3015P-4R7□-AE	4.70	M	113.0	136.0	1200	1400
GNR3015P-5R6□-AE	5.60	M	131.0	157.0	1100	1250
GNR3015P-6R8□-AE	6.80	M	176.0	211.0	1050	1100
GNR3015P-100□-AE	10.00	M	234.0	276.0	880	1000
GNR3015P-150□-AE	15.00	M	352.0	422.0	680	800
GNR3015P-220□-AE	22.00	M	510.0	622.0	580	600
GNR3015P-330□-AE	33.00	M	799.0	959.0	460	500
GNR3015P-470□-AE	47.00	M	1172.0	1406.0	380	400
GNR3015P-101□-AE	100.00	M	2433.0	2920.0	270	290

■ Inductance test Freq. : 1MHz / 0.1V

■ Inductance Tolerance : N = +/-30% , M = +/-20%

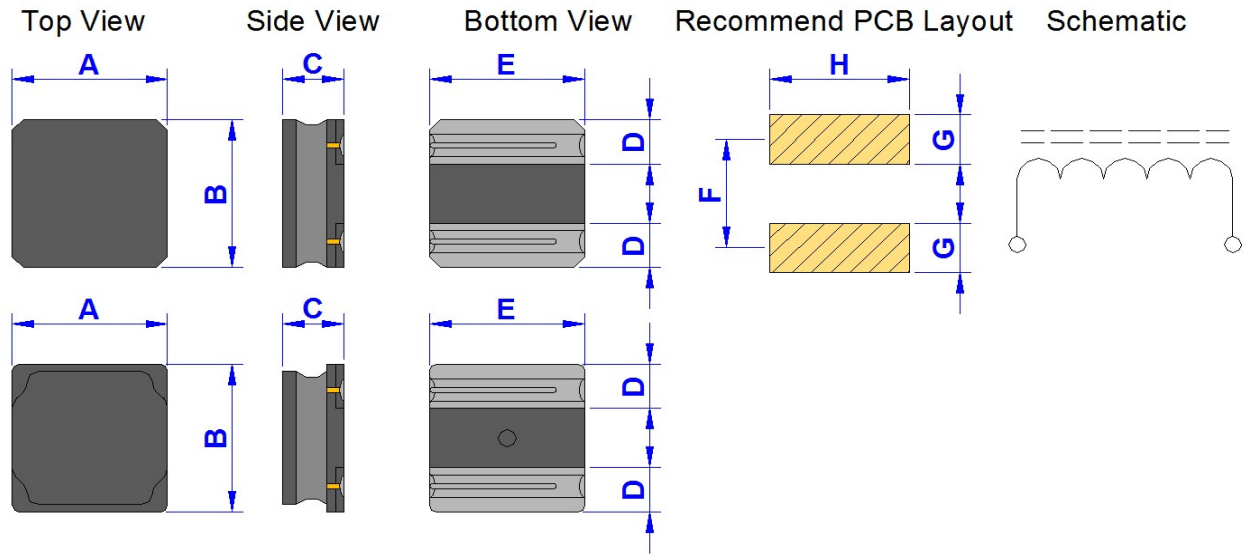
■ The saturation current value ( Isat ) is the DC current value having inductance decrease 30%. ( at 20°C )

■ The temperature rise current value ( I rms ) DC current value having temperature increase up to 40°C ( at 20°C )

<b>Product Series :</b> GNR	<b>Brand :</b> GOTREND
<b>File Version :</b> GNR-SERIES-AE-V1R1	<b>Editor :</b> Qiuyi Wu
<b>Established Date :</b> 2009.08.19	<b>Description :</b> SMD Shielded Power Inductor
<b>Latest Edit Date :</b> 2022.12.08	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GNR3015PC-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
3.10	3.10	1.50	0.90	2.70	2.20	1.00	2.70

### Electrical Characteristics :

Part No.	Inductance (uH)	Inductance Tolerance	RDC (m Ohm) Typ.	RDC (m Ohm) Max.	Isat (mA) Typ.	Irms (mA) Typ.
GNR3015PC-1R0□-AE	1.00	N	30.0	36.0	2200	2200
GNR3015PC-1R5□-AE	1.50	N	40.0	48.0	2000	2000
GNR3015PC-2R2□-AE	2.20	M	60.0	72.0	1700	1700
GNR3015PC-3R3□-AE	3.30	M	80.0	96.0	1400	1400
GNR3015PC-4R7□-AE	4.70	M	120.0	144.0	1200	1200
GNR3015PC-6R8□-AE	6.80	M	160.0	192.0	1000	1000
GNR3015PC-100□-AE	10.00	M	220.0	264.0	750	700
GNR3015PC-150□-AE	15.00	M	320.0	360.0	650	600
GNR3015PC-220□-AE	22.00	M	460.0	552.0	550	500
GNR3015PC-330□-AE	33.00	M	800.0	960.0	400	450
GNR3015PC-470□-AE	47.00	M	1200.0	1440.0	350	300

■ Inductance test Freq. : 1MHz / 0.1V

■ Inductance Tolerance : N = +/-30% , M = +/-20%

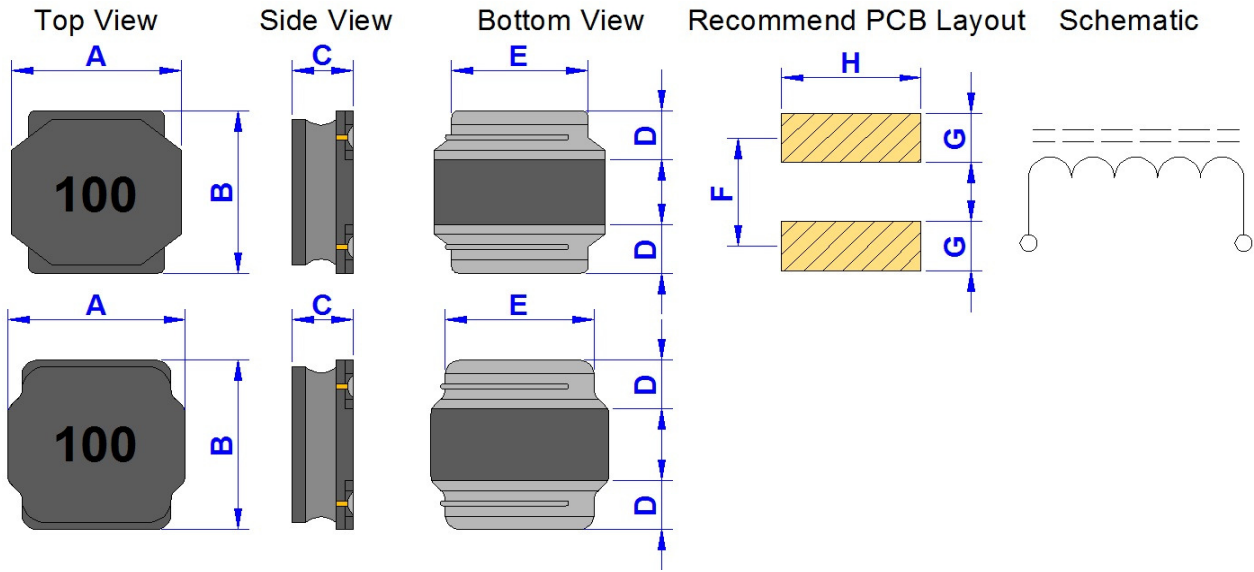
■ The saturation current value ( Isat ) is the DC current value having inductance decrease 30%. ( at 20°C )

■ The temperature rise current value ( I rms ) DC current value having temperature increase up to 40°C ( at 20°C )

Product Series : GNR	Brand : GOTREND
File Version : GNR-SERIES-AE-V1R1	Editor : Qiuyi Wu
Established Date : 2009.08.19	Description : SMD Shielded Power Inductor
Latest Edit Date : 2022.12.08	Product Type : <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GNR4010P-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
4.20	4.20	1.00	1.10	3.50	2.80	1.20	3.70

### Electrical Characteristics :

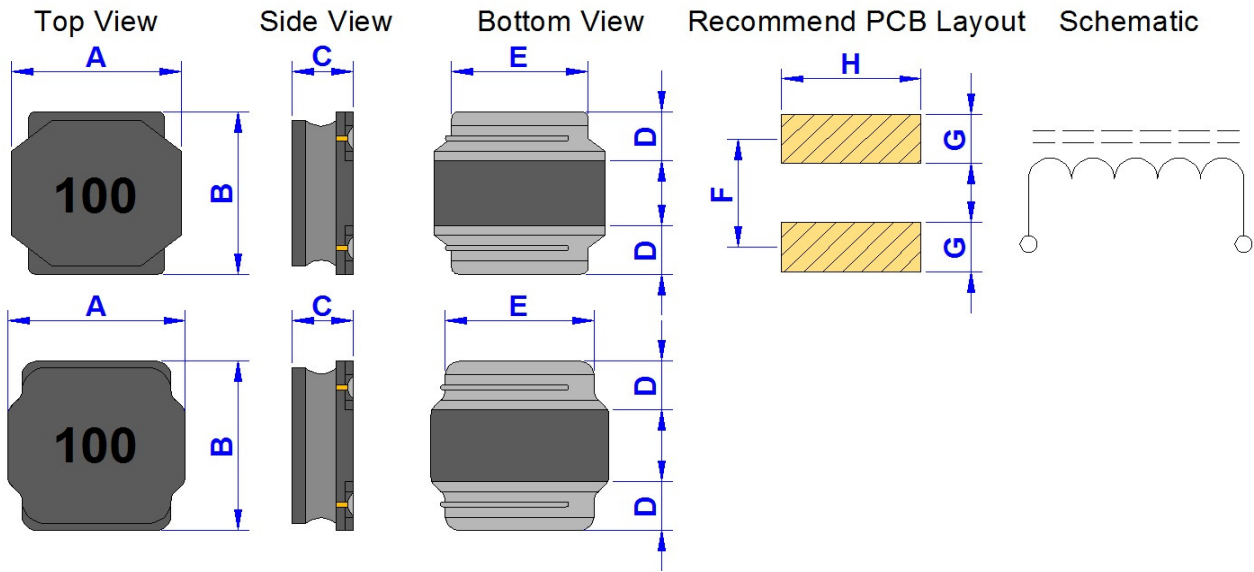
Part No.	Inductance (uH)	Inductance Tolerance	RDC (m Ohm) Typ.	RDC (m Ohm) Max.	Isat (mA) Typ.	Irms (mA) Typ.
GNR4010P-1R0□-AE	1.00	N	100.0	120.0	1800	1050
GNR4010P-2R2□-AE	2.20	N	150.0	180.0	1150	890
GNR4010P-3R3□-AE	3.30	M	180.0	216.0	1100	820
GNR4010P-4R7□-AE	4.70	M	210.0	252.0	900	750
GNR4010P-6R8□-AE	6.80	M	300.0	360.0	740	620
GNR4010P-100□-AE	10.00	M	380.0	456.0	560	600
GNR4010P-150□-AE	15.00	M	510.0	612.0	470	510
GNR4010P-220□-AE	22.00	M	870.0	1044.0	360	400
GNR4010P-330□-AE	33.00	M	1540.0	1848.0	280	300
GNR4010P-470□-AE	47.00	M	1810.0	2172.0	240	280

- Inductance test Freq. : 100KHz / 0.1V
- Inductance Tolerance : N = +/-30% , M = +/-20%
- The saturation current value ( Isat ) is the DC current value having inductance decrease 30%. ( at 20°C )
- The temperature rise current value ( I rms ) DC current value having temperature increase up to 40°C ( at 20°C )

<b>Product Series :</b> GNR	<b>Brand :</b> GOTREND
<b>File Version :</b> GNR-SERIES-AE-V1R1	<b>Editor :</b> Qiuyi Wu
<b>Established Date :</b> 2009.08.19	<b>Description :</b> SMD Shielded Power Inductor
<b>Latest Edit Date :</b> 2022.12.08	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GNR4018P-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
4.20	4.20	1.80	1.10	3.50	2.80	1.20	3.70

### Electrical Characteristics :

Part No.	Inductance ( uH )	Inductance Tolerance	RDC ( m Ohm ) Typ.	RDC ( m Ohm ) Max.	Isat ( mA ) Typ.	Irms ( mA ) Typ.
GNR4018P-R56□-AE	0.56	N	22.0	30.0	4500	2200
GNR4018P-1R0□-AE	1.00	N	31.5	42.0	3700	1850
GNR4018P-1R2□-AE	1.20	N	31.5	42.0	3700	1850
GNR4018P-1R5□-AE	1.50	N	40.0	48.0	3500	1700
GNR4018P-2R2□-AE	2.20	M	60.0	72.0	2700	1440
GNR4018P-3R3□-AE	3.30	M	72.0	86.0	2200	1230
GNR4018P-4R7□-AE	4.70	M	80.0	96.0	1700	1200
GNR4018P-6R8□-AE	6.80	M	110.0	132.0	1450	1060
GNR4018P-100□-AE	10.00	M	180.0	216.0	1200	840
GNR4018P-150□-AE	15.00	M	250.0	300.0	940	650
GNR4018P-220□-AE	22.00	M	360.0	432.0	800	590
GNR4018P-330□-AE	33.00	M	530.0	636.0	650	490
GNR4018P-470□-AE	47.00	M	650.0	780.0	570	420
GNR4018P-680□-AE	68.00	M	1000.0	1200.0	470	320
GNR4018P-101□-AE	100.00	M	1500.0	1800.0	400	270
GNR4018P-151□-AE	150.00	M	2500.0	3000.0	310	220
GNR4018P-221□-AE	220.00	M	4000.0	4800.0	270	170

■ Inductance test Freq. : 100KHz / 0.1V

■ Inductance Tolerance : N = +/-30% , M = +/-20%

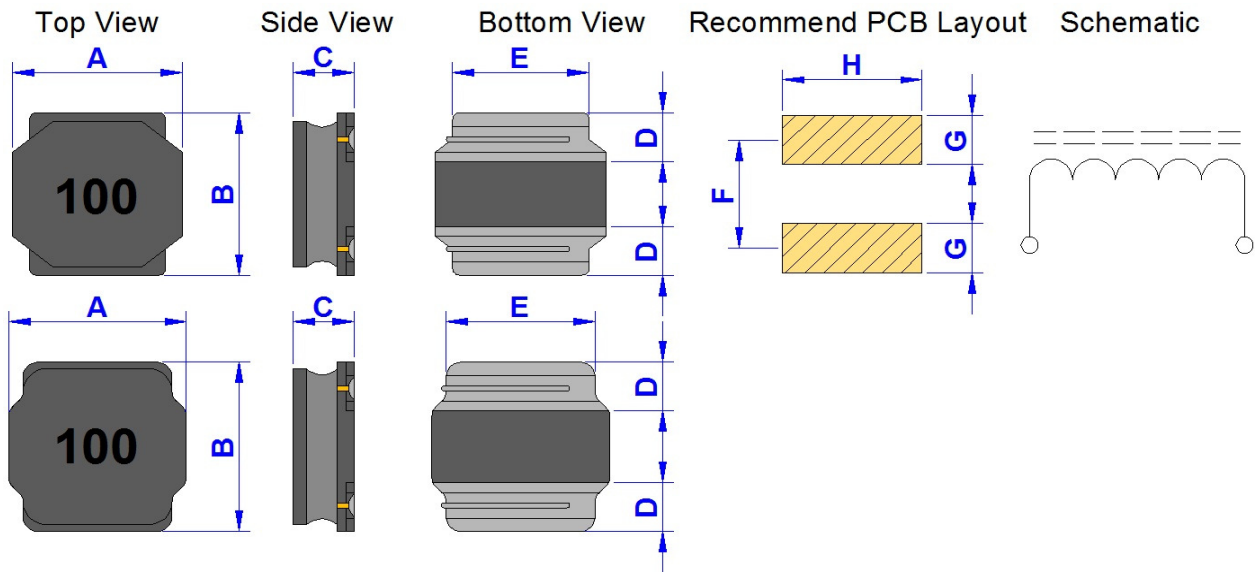
■ The saturation current value ( Isat ) is the DC current value having inductance decrease 30%. ( at 20°C )

■ The temperature rise current value ( Irms ) DC current value having temperature increase up to 40°C ( at 20°C )

<b>Product Series :</b> GNR	<b>Brand :</b> GOTREND
<b>File Version :</b> GNR-SERIES-AE-V1R1	<b>Editor :</b> Qiuyi Wu
<b>Established Date :</b> 2009.08.19	<b>Description :</b> SMD Shielded Power Inductor
<b>Latest Edit Date :</b> 2022.12.08	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GNR4018PL-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
4.20	4.20	1.80	1.10	3.50	2.80	1.20	3.70

### Electrical Characteristics :

Part No.	Inductance (uH)	Inductance Tolerance	RDC (m Ohm) Typ.	RDC (m Ohm) Max.	Isat (mA) Typ.	Irms (mA) Typ.
GNR4018PL-R56□-AE	0.56	M	17.0	22.0	5500	5400
GNR4018PL-1R0□-AE	1.00	M	20.0	25.0	3800	3800
GNR4018PL-1R2□-AE	1.20	M	25.0	30.0	3600	3600
GNR4018PL-1R5□-AE	1.50	M	33.0	40.0	3500	3200
GNR4018PL-1R8□-AE	1.80	M	34.0	41.0	3100	3100
GNR4018PL-2R2□-AE	2.20	M	35.0	45.0	3000	3000
GNR4018PL-3R3□-AE	3.30	M	45.0	56.0	2400	2700
GNR4018PL-4R7□-AE	4.70	M	70.0	90.0	2000	2200
GNR4018PL-6R8□-AE	6.80	M	90.0	115.0	1700	1900
GNR4018PL-8R2□-AE	8.20	M	105.0	132.0	1600	1500
GNR4018PL-100□-AE	10.00	M	135.0	170.0	1550	1400
GNR4018PL-150□-AE	15.00	M	185.0	222.0	1000	1250
GNR4018PL-220□-AE	22.00	M	250.0	315.0	830	1200
GNR4018PL-330□-AE	33.00	M	405.0	486.0	680	900
GNR4018PL-470□-AE	47.00	M	495.0	594.0	560	800
GNR4018PL-680□-AE	68.00	M	885.0	1062.0	480	580
GNR4018PL-101□-AE	100.00	M	1545.0	1854.0	450	420
GNR4018PL-221□-AE	220.00	M	3150.0	3780.0	330	300
GNR4018PL-331□-AE	330.00	M	4200.0	5040.0	250	270

■ Inductance test Freq. : 100KHz / 0.1V

■ Inductance Tolerance : M = +/-20%

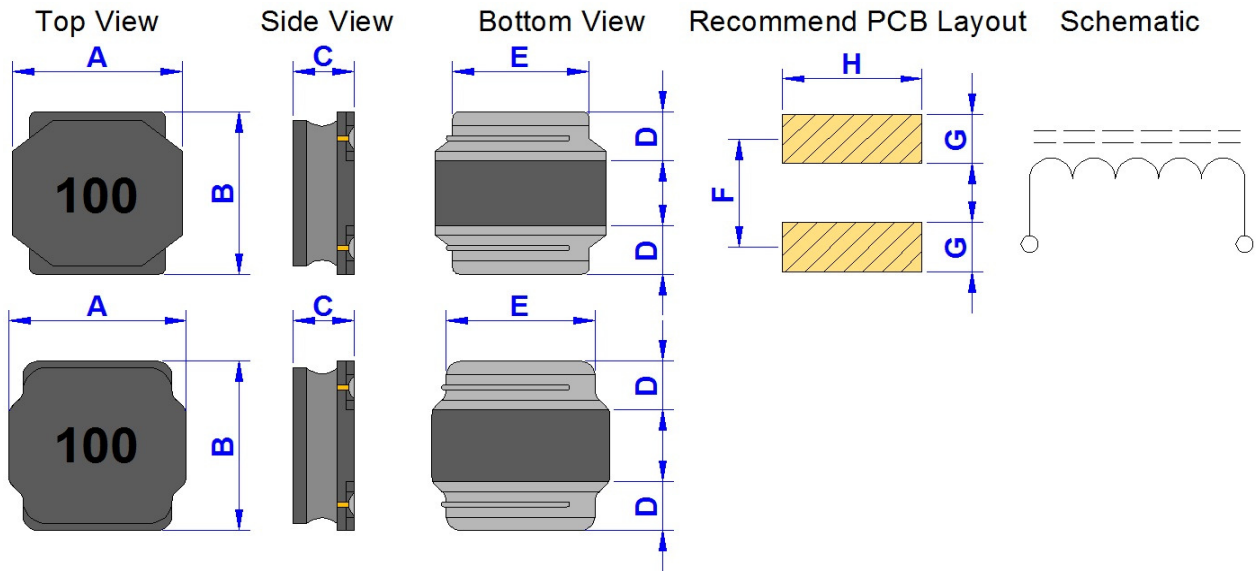
■ The saturation current value ( Isat ) is the DC current value having inductance decrease 30%. ( at 20°C )

■ The temperature rise current value ( Irms ) DC current value having temperature increase up to 40°C ( at 20°C )

<b>Product Series :</b> GNR	<b>Brand :</b> GOTREND
<b>File Version :</b> GNR-SERIES-AE-V1R1	<b>Editor :</b> Qiuyi Wu
<b>Established Date :</b> 2009.08.19	<b>Description :</b> SMD Shielded Power Inductor
<b>Latest Edit Date :</b> 2022.12.08	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GNR4020P-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
4.20	4.20	2.00	1.10	3.50	2.80	1.20	3.70

### Electrical Characteristics :

Part No.	Inductance (uH)	Inductance Tolerance	RDC (m Ohm) Typ.	RDC (m Ohm) Max.	Isat (mA) Typ.	Irms (mA) Typ.
GNR4020P-1R0□-AE	1.00	N	32.0	38.4	4100	2800
GNR4020P-1R2□-AE	1.20	N	32.0	38.4	4000	2700
GNR4020P-2R2□-AE	2.20	N	60.0	72.0	2800	2500
GNR4020P-3R3□-AE	3.30	M / N	70.0	84.0	2200	2100
GNR4020P-4R7□-AE	4.70	M / N	90.0	108.0	2000	1700
GNR4020P-6R8□-AE	6.80	M	110.0	132.0	1600	1500
GNR4020P-100□-AE	10.00	M	170.0	204.0	1400	1200
GNR4020P-150□-AE	15.00	M	250.0	300.0	1000	1000
GNR4020P-220□-AE	22.00	M	350.0	420.0	900	850
GNR4020P-330□-AE	33.00	M	530.0	636.0	800	700
GNR4020P-470□-AE	47.00	M	720.0	864.0	700	560
GNR4020P-680□-AE	68.00	M	1000.0	1200.0	560	450
GNR4020P-101□-AE	100.00	M	1500.0	1800.0	460	380
GNR4020P-151□-AE	150.00	M	2500.0	3000.0	350	300
GNR4020P-221□-AE	220.00	M	4000.0	4800.0	280	230

■ Inductance test Freq. : 100KHz / 0.1V

■ Inductance Tolerance : N = +/-30% , M = +/-20%

■ The saturation current value ( Isat ) is the DC current value having inductance decrease 30%. ( at 20°C )

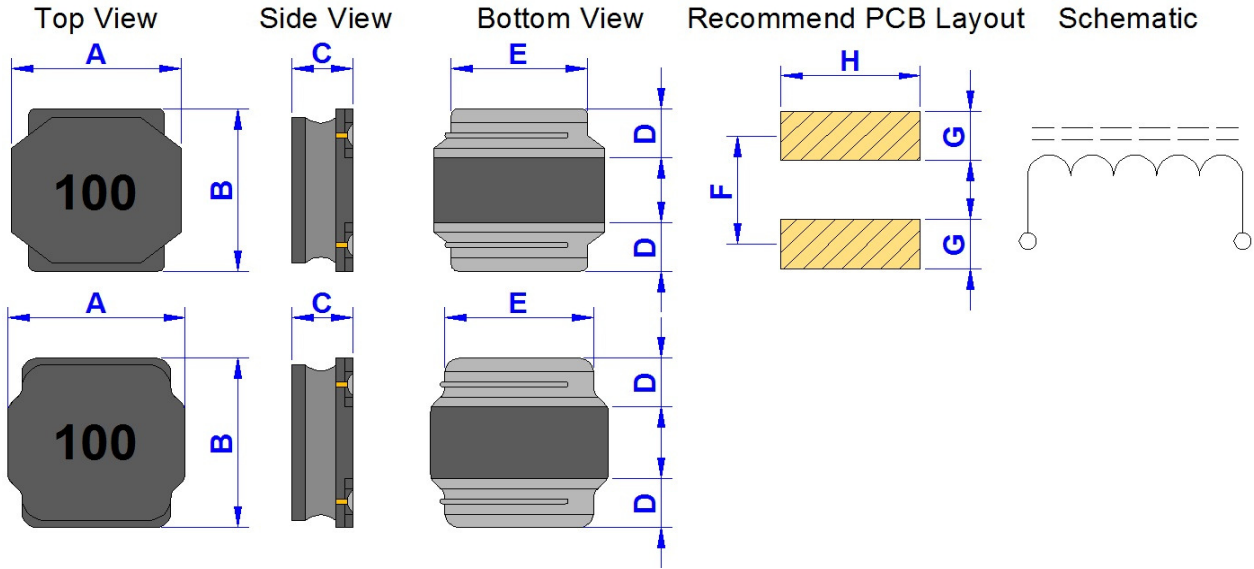
■ The temperature rise current value ( Irms ) DC current value having temperature increase up to 40°C ( at 20°C )



Product Series : GNR	Brand : GOTREND
File Version : GNR-SERIES-AE-V1R1	Editor : Qiuyi Wu
Established Date : 2009.08.19	Description : SMD Shielded Power Inductor
Latest Edit Date : 2022.12.08	Product Type : <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GNR4030P-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
4.30	4.30	3.00	1.10	3.30	3.00	1.10	3.70

Electrical Characteristics :

Part No.	Inductance (uH)	Inductance Tolerance	RDC (m Ohm) Typ.	RDC (m Ohm) Max.	Isat (mA) Typ.	Irms (mA) Typ.
GNR4030P-1R0□-AE	1.00	N	15.0	19.5	5900	3400
GNR4030P-1R5□-AE	1.50	N	25.0	32.5	4850	3300
GNR4030P-2R2□-AE	2.20	M	35.0	45.5	4100	2950
GNR4030P-3R3□-AE	3.30	M	40.0	52.0	3300	2400
GNR4030P-3R9□-AE	3.90	M	57.0	74.1	3000	2100
GNR4030P-4R7□-AE	4.70	M	60.0	78.0	2900	2000
GNR4030P-5R6□-AE	5.60	M	70.0	91.0	2750	1950
GNR4030P-6R8□-AE	6.80	M	75.0	97.5	2600	1700
GNR4030P-7R5□-AE	7.50	M	90.0	117.0	2200	1650
GNR4030P-8R2□-AE	8.20	M	100.0	130.0	2100	1600
GNR4030P-100□-AE	10.00	M	115.0	149.5	1950	1500
GNR4030P-120□-AE	12.00	M	140.0	182.0	1700	1350
GNR4030P-150□-AE	15.00	M	190.0	247.0	1650	1150
GNR4030P-180□-AE	18.00	M	215.0	279.5	1400	1100
GNR4030P-220□-AE	22.00	M	225.0	292.5	1300	1000
GNR4030P-330□-AE	33.00	M	330.0	429.0	1100	840
GNR4030P-470□-AE	47.00	M	500.0	650.0	900	720
GNR4030P-560□-AE	56.00	M	560.0	728.0	850	650
GNR4030P-680□-AE	68.00	M	750.0	975.0	750	550
GNR4030P-820□-AE	82.00	M	950.0	1235.0	680	500
GNR4030P-101□-AE	100.00	M	1150.0	1495.0	600	450
GNR4030P-151□-AE	150.00	M	2350.0	3055.0	500	350

■ Inductance test Freq. : 100KHz / 0.1V ; Inductance Tolerance : N = +/-30% , M = +/-20%

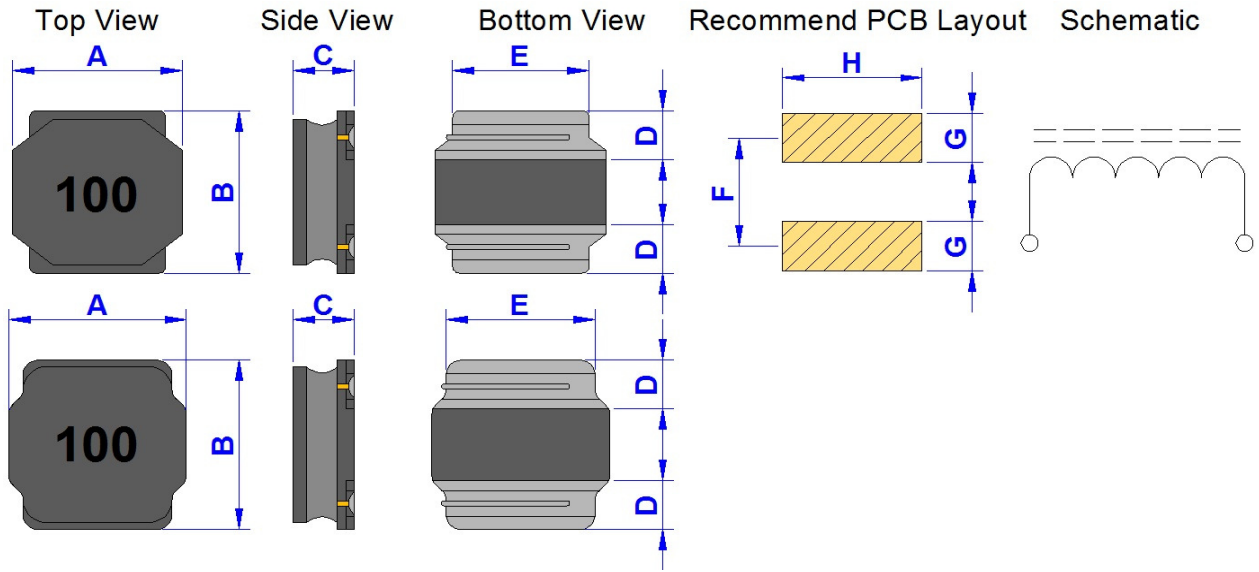
■ The saturation current value ( Isat ) is the DC current value having inductance decrease 30%. ( at 20°C )

■ The temperature rise current value ( Irms ) DC current value having temperature increase up to 40°C ( at 20°C )

<b>Product Series :</b> GNR	<b>Brand :</b> GOTREND
<b>File Version :</b> GNR-SERIES-AE-V1R1	<b>Editor :</b> Qiuyi Wu
<b>Established Date :</b> 2009.08.19	<b>Description :</b> SMD Shielded Power Inductor
<b>Latest Edit Date :</b> 2022.12.08	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GNR5014P-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
5.20	5.20	1.40	1.00	4.80	3.80	1.40	5.00

### Electrical Characteristics :

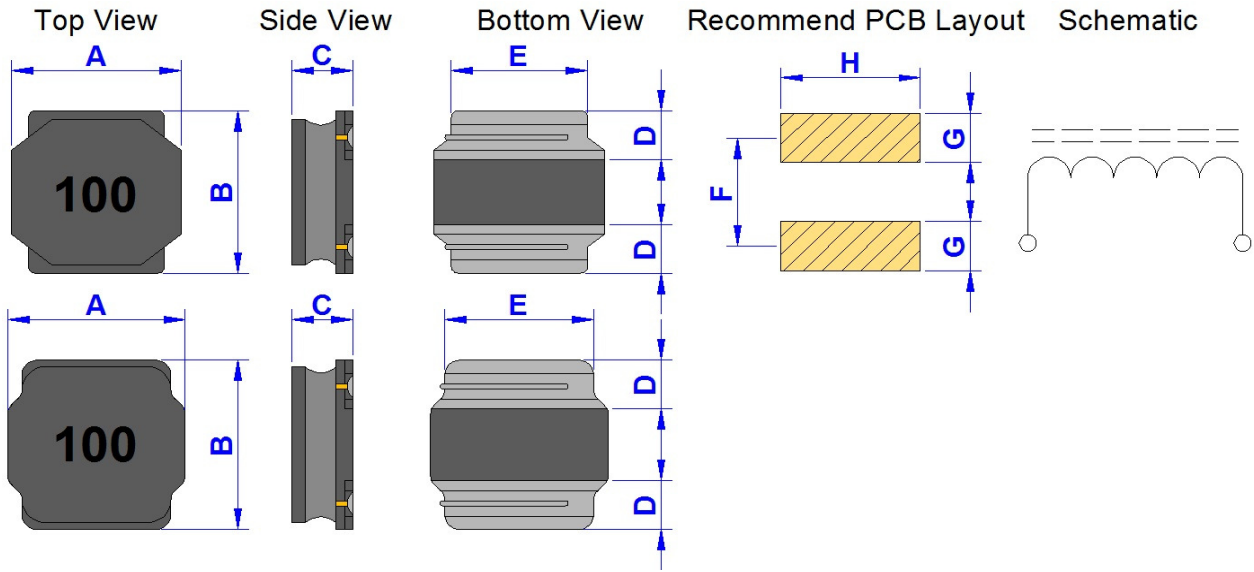
Part No.	Inductance ( uH )	Inductance Tolerance	RDC ( m Ohm ) Typ.	RDC ( m Ohm ) Max.	Isat ( mA ) Typ.	Irms ( mA ) Typ.
GNR5014P-1R0□-AE	1.00	N	45.0	54.0	3800	2400
GNR5014P-1R2□-AE	1.20	N	45.0	54.0	3800	2400
GNR5014P-1R5□-AE	1.50	M	55.0	71.5	3000	2100
GNR5014P-2R2□-AE	2.20	N	65.0	78.0	2800	2000
GNR5014P-3R3□-AE	3.30	N	80.0	96.0	2350	1700
GNR5014P-4R7□-AE	4.70	N	100.0	120.0	2050	1400
GNR5014P-6R8□-AE	6.80	M	150.0	180.0	1600	1200
GNR5014P-100□-AE	10.00	M	200.0	240.0	1400	1050

- Inductance test Freq. : 100KHz / 0.1V
- Inductance Tolerance : N = +/-30% , M = +/-20%
- The saturation current value ( Isat ) is the DC current value having inductance decrease 30%. ( at 20°C )
- The temperature rise current value ( Irms ) DC current value having temperature increase up to 40°C ( at 20°C )

<b>Product Series :</b> GNR	<b>Brand :</b> GOTREND
<b>File Version :</b> GNR-SERIES-AE-V1R1	<b>Editor :</b> Qiuyi Wu
<b>Established Date :</b> 2009.08.19	<b>Description :</b> SMD Shielded Power Inductor
<b>Latest Edit Date :</b> 2022.12.08	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GNR5020P-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
5.20	5.20	2.00	1.00	4.80	3.80	1.40	5.00

### Electrical Characteristics :

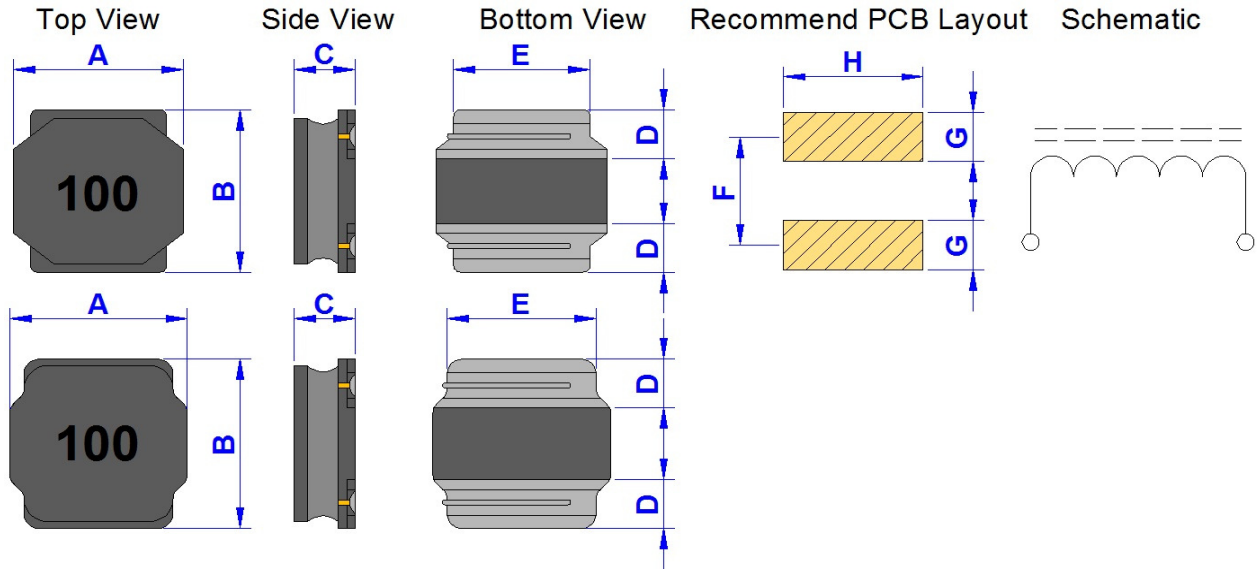
Part No.	Inductance ( uH )	Inductance Tolerance	RDC ( m Ohm ) Typ.	RDC ( m Ohm ) Max.	Isat ( mA ) Typ.	Irms ( mA ) Typ.
GNR5020P-R68□-AE	0.68	N	14.2	18.2	5000	4000
GNR5020P-1R0□-AE	1.00	N	18.5	21.0	4400	3600
GNR5020P-1R5□-AE	1.50	N	22.5	26.0	3500	3200
GNR5020P-2R0□-AE	2.00	N	27.0	35.0	3200	2900
GNR5020P-2R2□-AE	2.20	N	27.0	35.0	3000	2900
GNR5020P-3R3□-AE	3.30	M	40.0	48.0	2600	2400
GNR5020P-4R7□-AE	4.70	M	55.0	60.0	2000	2000
GNR5020P-6R8□-AE	6.80	M	80.0	90.0	1600	1650
GNR5020P-100□-AE	10.00	M	105.0	120.0	1300	1450
GNR5020P-150□-AE	15.00	M	148.0	165.0	1100	1200
GNR5020P-220□-AE	22.00	M	220.0	260.0	900	1000
GNR5020P-330□-AE	33.00	M	340.0	380.0	800	760
GNR5020P-470□-AE	47.00	M	590.0	760.0	600	580

- Inductance test Freq. : 100KHz / 0.1V
- Inductance Tolerance : N = +/-30% , M = +/-20%
- The saturation current value ( Isat ) is the DC current value having inductance decrease 30%. ( at 20°C )
- The temperature rise current value ( Iirms ) DC current value having temperature increase up to 40°C ( at 20°C )

<b>Product Series :</b> GNR	<b>Brand :</b> GOTREND
<b>File Version :</b> GNR-SERIES-AE-V1R1	<b>Editor :</b> Qiuyi Wu
<b>Established Date :</b> 2009.08.19	<b>Description :</b> SMD Shielded Power Inductor
<b>Latest Edit Date :</b> 2022.12.08	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GNR5040P-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
5.30	5.30	4.00	1.00	4.80	3.80	1.40	5.00

Electrical Characteristics :

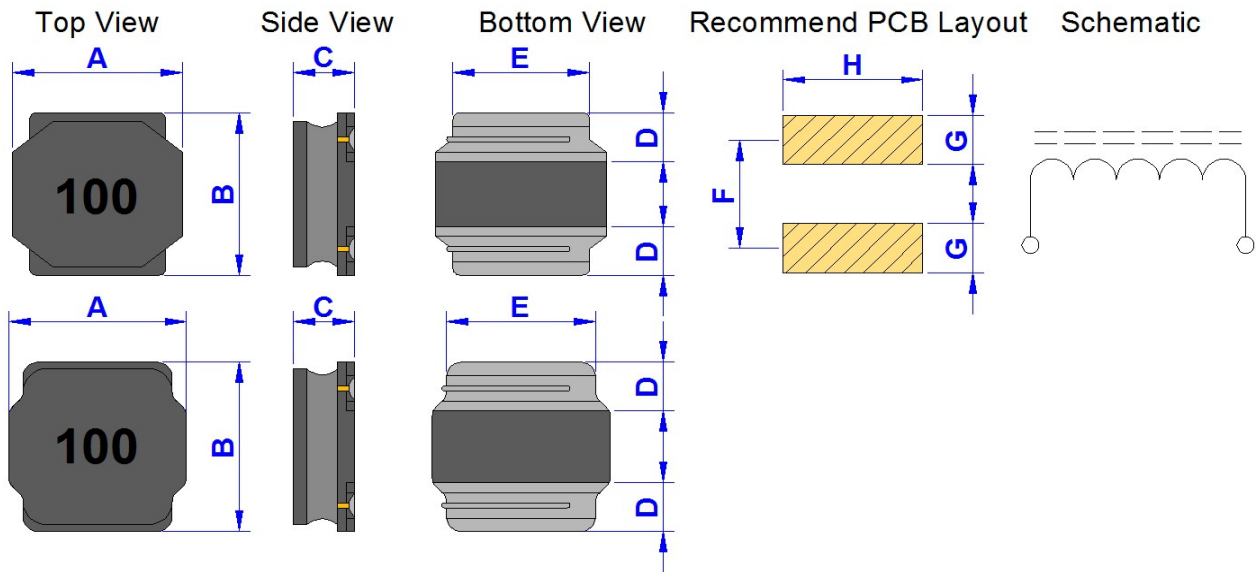
Part No.	Inductance (uH)	Inductance Tolerance	RDC (m Ohm) Typ.	RDC (m Ohm) Max.	Isat (mA) Typ.	Irms (mA) Typ.
GNR5040P-1R5□-AE	1.50	N	20.0	26.0	6000	3600
GNR5040P-2R2□-AE	2.20	N	22.0	28.6	4600	3500
GNR5040P-3R3□-AE	3.30	M / N	27.0	35.1	3800	3300
GNR5040P-3R6□-AE	3.60	N	27.0	35.1	3720	3200
GNR5040P-4R7□-AE	4.70	M	29.0	37.7	3300	3100
GNR5040P-6R8□-AE	6.80	M	49.0	63.7	2600	2300
GNR5040P-100□-AE	10.00	M	56.0	72.8	2300	2100
GNR5040P-150□-AE	15.00	M	80.0	104.0	2000	1800
GNR5040P-220□-AE	22.00	M	126.0	163.8	1600	1400
GNR5040P-330□-AE	33.00	M	180.0	234.0	1300	1200
GNR5040P-470□-AE	47.00	M	310.0	403.0	1100	900
GNR5040P-102□-AE	1000.00	M	6500.0	8450.0	210	190

- Inductance test Freq. : 100KHz / 0.1V
- Inductance Tolerance : N = +/-30% , M = +/-20%
- The saturation current value ( Isat ) is the DC current value having inductance decrease 30%. ( at 20°C )
- The temperature rise current value ( I rms ) DC current value having temperature increase up to 40°C ( at 20°C )

Product Series : GNR	Brand : GOTREND
File Version : GNR-SERIES-AE-V1R1	Editor : Qiuyi Wu
Established Date : 2009.08.19	Description : SMD Shielded Power Inductor
Latest Edit Date : 2022.12.08	Product Type : <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GNR6012P-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
6.20	6.20	1.20	1.15	5.10	4.70	1.60	5.70

### Electrical Characteristics :

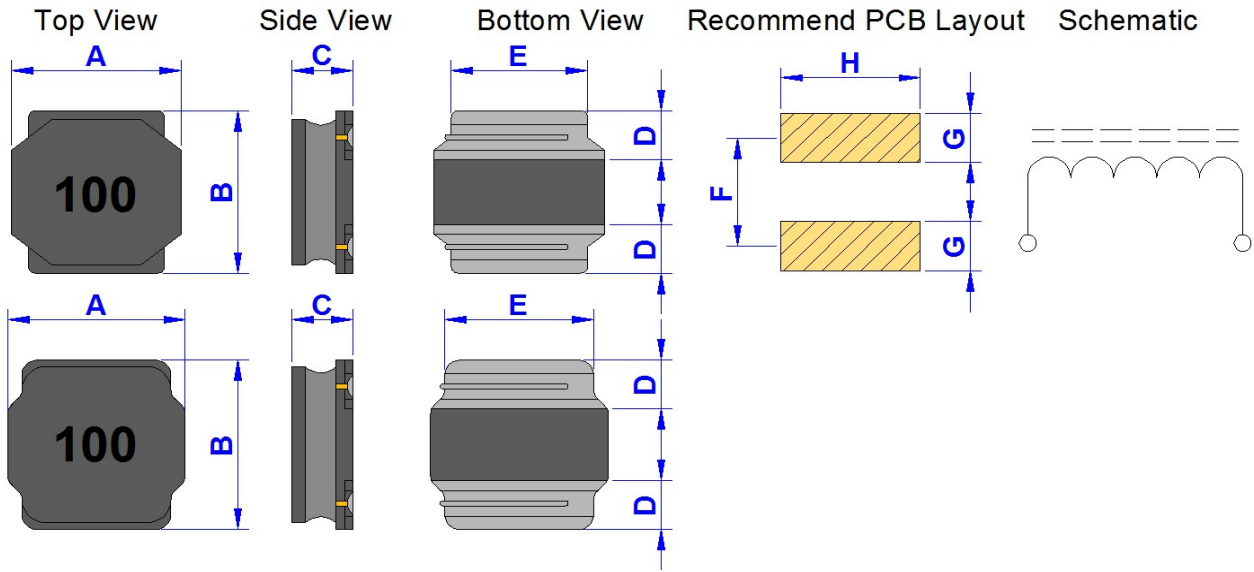
Part No.	Inductance ( uH )	Inductance Tolerance	RDC ( m Ohm ) Typ.	RDC ( m Ohm ) Max.	Isat ( mA ) Typ.	Irms ( mA ) Typ.
GNR6012P-1R0□-AE	1.00	N	50.0	65.0	2800	2300
GNR6012P-1R5□-AE	1.50	N	65.0	85.0	2400	2000
GNR6012P-2R2□-AE	2.20	N	75.0	100.0	2200	1800
GNR6012P-2R5□-AE	2.50	N	90.0	108.0	2100	1730
GNR6012P-3R3□-AE	3.30	M	100.0	120.0	2000	1640
GNR6012P-4R0□-AE	4.00	N	105.0	126.0	1800	1570
GNR6012P-4R7□-AE	4.70	N	110.0	145.0	1600	1450
GNR6012P-5R3□-AE	5.30	M	115.0	150.0	1500	1400
GNR6012P-6R8□-AE	6.80	M	165.0	198.0	1300	1180
GNR6012P-100□-AE	10.00	M	235.0	282.0	1000	1000
GNR6012P-150□-AE	15.00	M	330.0	396.0	800	790
GNR6012P-220□-AE	22.00	M	530.0	636.0	760	630
GNR6012P-330□-AE	33.00	M	700.0	840.0	590	530
GNR6012P-470□-AE	47.00	M	1050.0	1260.0	520	460
GNR6012P-680□-AE	68.00	M	1350.0	1620.0	440	410
GNR6012P-101□-AE	100.00	M	2180.0	2616.0	350	320

- Inductance test Freq. : 100KHz / 0.1V
- Inductance Tolerance : N = +/-30% , M = +/-20%
- The saturation current value ( Isat ) is the DC current value having inductance decrease 30%. ( at 20°C )
- The temperature rise current value ( Iirms ) DC current value having temperature increase up to 40°C ( at 20°C )

Product Series : GNR	Brand : GOTREND
File Version : GNR-SERIES-AE-V1R1	Editor : Qiuyi Wu
Established Date : 2009.08.19	Description : SMD Shielded Power Inductor
Latest Edit Date : 2022.12.08	Product Type : <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GNR6020P-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
6.20	6.20	2.00	1.15	5.10	4.70	1.60	5.70

### Electrical Characteristics :

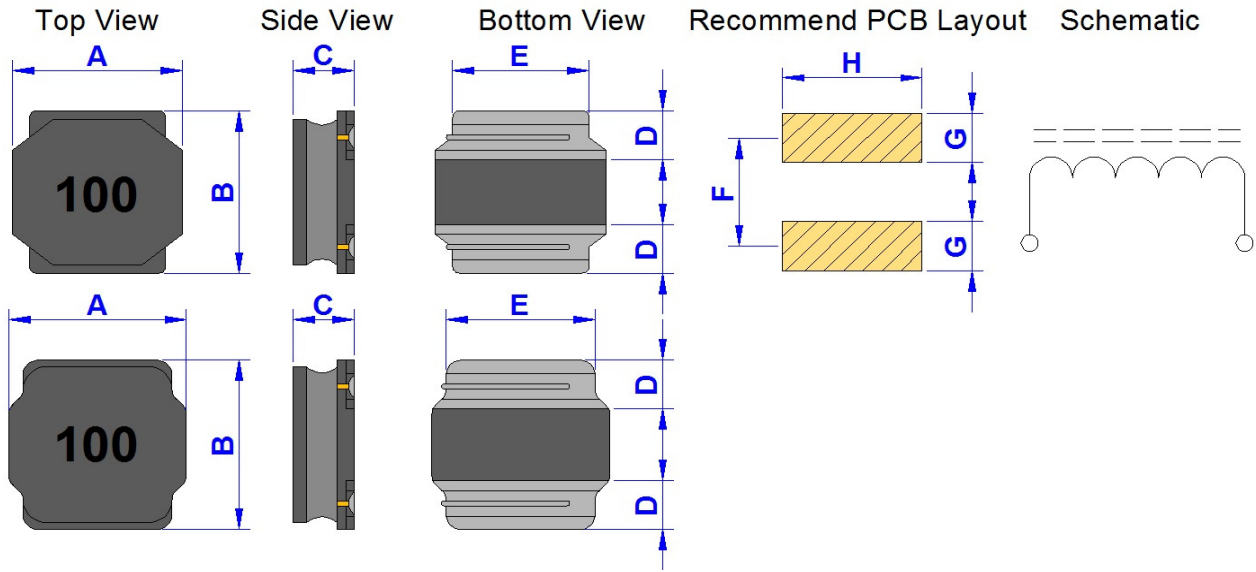
Part No.	Inductance (uH)	Inductance Tolerance	RDC (m Ohm) Typ.	RDC (m Ohm) Max.	Isat (mA) Typ.	Irms (mA) Typ.
GNR6020P-R80□-AE	0.8	N	16.0	21.0	4500	5100
GNR6020P-1R0□-AE	1.0	N	21.0	27.3	4200	4000
GNR6020P-1R5□-AE	1.5	M / N	26.0	33.8	4000	3200
GNR6020P-2R2□-AE	2.2	N	34.0	44.2	3200	2700
GNR6020P-3R3□-AE	3.3	M	40.0	52.0	2800	2600
GNR6020P-4R7□-AE	4.7	N	48.0	62.4	2400	2000
GNR6020P-6R8□-AE	6.8	M	85.0	110.5	2000	1800
GNR6020P-100□-AE	10.0	M	125.0	162.5	1700	1400
GNR6020P-220□-AE	22.0	M	220.0	290.0	1050	900
GNR6020P-330□-AE	33.0	M	260.0	450.0	900	800
GNR6020P-470□-AE	47.0	M	430.0	560.0	850	650

- Inductance test Freq. : 100KHz / 0.1V
- Inductance Tolerance : N = +/-30% , M = +/-20%
- The saturation current value ( Isat ) is the DC current value having inductance decrease 30%. ( at 20°C )
- The temperature rise current value ( I rms ) DC current value having temperature increase up to 40°C ( at 20°C )

<b>Product Series :</b> GNR	<b>Brand :</b> GOTREND
<b>File Version :</b> GNR-SERIES-AE-V1R1	<b>Editor :</b> Qiuyi Wu
<b>Established Date :</b> 2009.08.19	<b>Description :</b> SMD Shielded Power Inductor
<b>Latest Edit Date :</b> 2022.12.08	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GNR6028P-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
6.20	6.20	2.80	1.15	5.10	4.70	1.60	5.70

Electrical Characteristics :

Part No.	Inductance ( uH )	Inductance Tolerance	RDC ( m Ohm ) Typ.	RDC ( m Ohm ) Max.	Isat ( mA ) Typ.	Irms ( mA ) Typ.
GNR6028P-R90□-AE	0.90	N	13.0	16.9	6600	4600
GNR6028P-1R5□-AE	1.50	N	16.0	20.8	5000	4200
GNR6028P-2R2□-AE	2.20	N	20.0	26.0	4200	3700
GNR6028P-3R0□-AE	3.00	N	23.0	29.9	3600	3400
GNR6028P-4R7□-AE	4.70	M	31.0	40.3	2700	3000
GNR6028P-6R0□-AE	6.00	M	40.0	52.0	2500	2500
GNR6028P-100□-AE	10.00	M	65.0	84.5	1900	1900
GNR6028P-150□-AE	15.00	M	95.0	123.5	1600	1800
GNR6028P-220□-AE	22.00	M	135.0	175.5	1300	1400
GNR6028P-330□-AE	33.00	M	220.0	286.0	1100	1100
GNR6028P-470□-AE	47.00	M	300.0	390.0	950	920
GNR6028P-680□-AE	68.00	M	420.0	546.0	760	770
GNR6028P-101□-AE	100.00	M	600.0	780.0	620	660

■ Inductance test Freq. : 100KHz / 0.1V

■ Inductance Tolerance : N = +/-30% , M = +/-20%

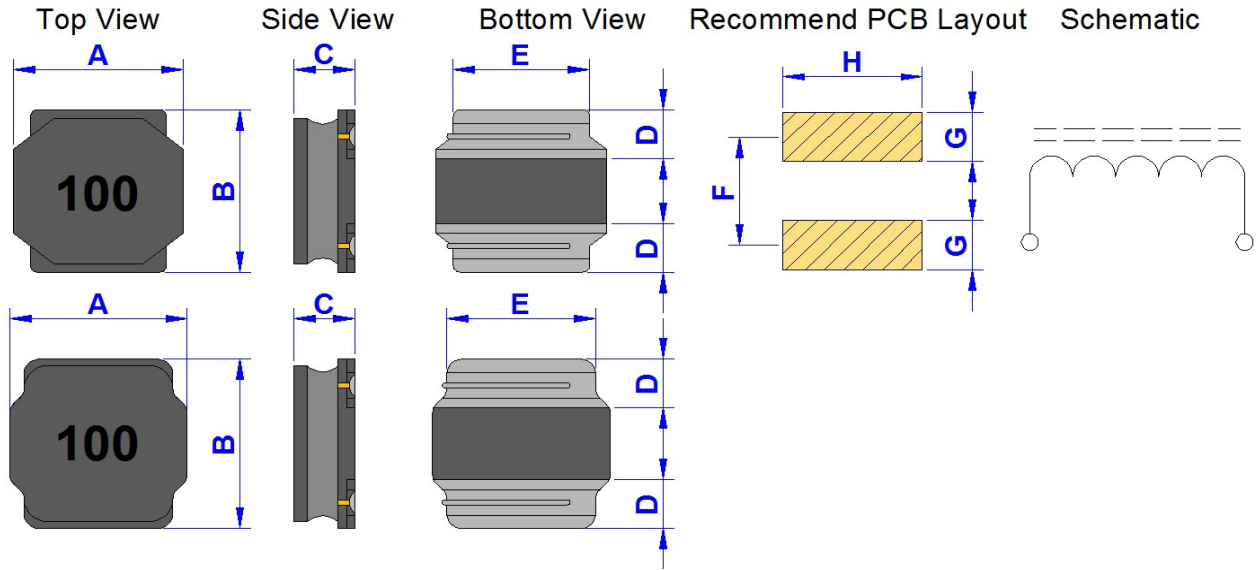
■ The saturation current value ( Isat ) is the DC current value having inductance decrease 30%. ( at 20°C )

■ The temperature rise current value ( Iirms ) DC current value having temperature increase up to 40°C ( at 20°C )

<b>Product Series :</b> GNR	<b>Brand :</b> GOTREND
<b>File Version :</b> GNR-SERIES-AE-V1R1	<b>Editor :</b> Qiuyi Wu
<b>Established Date :</b> 2009.08.19	<b>Description :</b> SMD Shielded Power Inductor
<b>Latest Edit Date :</b> 2022.12.08	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GNR6040P-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
6.20	6.20	4.00	1.15	5.10	4.70	1.60	5.70

Electrical Characteristics :

Part No.	Inductance (uH)	Inductance Tolerance	RDC (m Ohm) Typ.	RDC (m Ohm) Max.	Isat (mA) Typ.	Irms (mA) Typ.
GNR6040P-2R2□-AE	2.20	M	15.0	18.0	7000	5900
GNR6040P-4R7□-AE	4.70	M	23.0	29.0	4700	4200
GNR6040P-6R8□-AE	6.80	M	32.0	40.0	3700	3300
GNR6040P-8R2□-AE	8.20	M	39.0	47.0	3300	2970
GNR6040P-100□-AE	10.00	M	40.0	50.0	3200	2800
GNR6040P-120□-AE	12.00	M	55.0	69.0	2800	2500
GNR6040P-150□-AE	15.00	M	70.0	88.0	2500	2200
GNR6040P-220□-AE	22.00	M	98.0	122.0	2000	1800
GNR6040P-330□-AE	33.00	M	137.0	172.0	1700	1500
GNR6040P-470□-AE	47.00	M	200.0	250.0	1400	1200
GNR6040P-560□-AE	56.00	M	245.0	306.0	1300	1150
GNR6040P-680□-AE	68.00	M	289.0	362.0	1200	1100
GNR6040P-101□-AE	100.00	M	425.0	532.0	1000	900
GNR6040P-121□-AE	120.00	M	484.0	605.0	920	820
GNR6040P-151□-AE	150.00	M	580.0	725.0	840	750
GNR6040P-221□-AE	220.00	M	834.0	1043.0	710	640
GNR6040P-331□-AE	330.00	M	1270.0	1580.0	580	520

■ Inductance test Freq. : 100KHz / 0.1V

■ Inductance Tolerance : M = +/-20%

■ The saturation current value ( Isat ) is the DC current value having inductance decrease 30%. ( at 20°C )

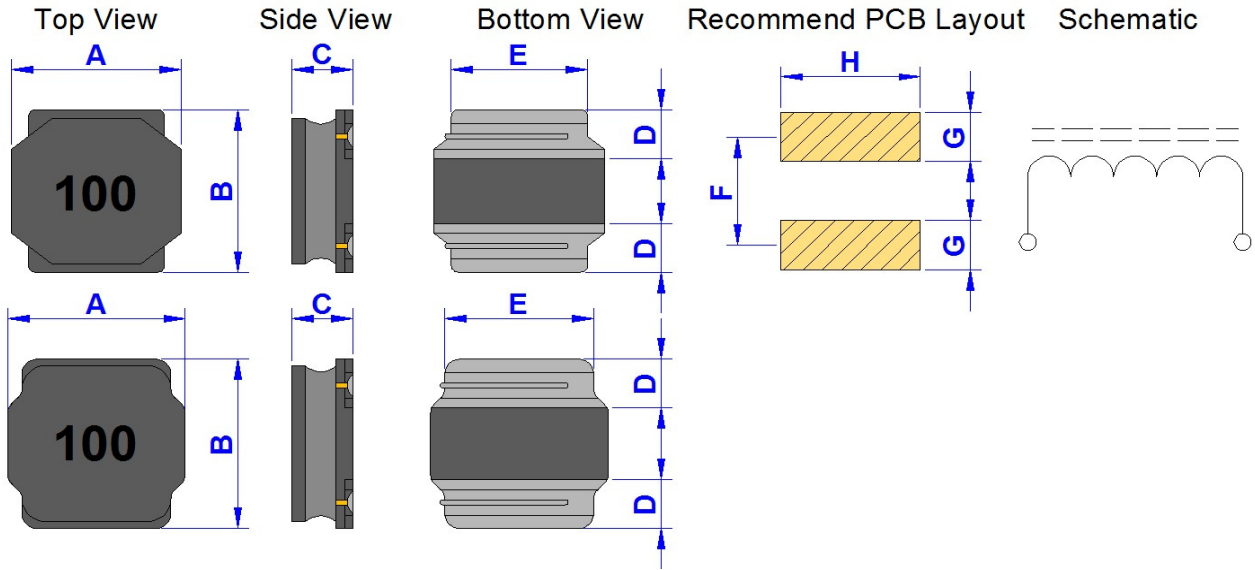
■ The temperature rise current value ( Irms ) DC current value having temperature increase up to 40°C ( at 20°C )



<b>Product Series :</b> GNR	<b>Brand :</b> GOTREND
<b>File Version :</b> GNR-SERIES-AE-V1R1	<b>Editor :</b> Qiuyi Wu
<b>Established Date :</b> 2009.08.19	<b>Description :</b> SMD Shielded Power Inductor
<b>Latest Edit Date :</b> 2022.12.08	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GNR6045P-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
6.20	6.20	4.50	1.15	5.10	4.70	1.60	5.70

### Electrical Characteristics :

Part No.	Inductance (uH)	Inductance Tolerance	RDC (m Ohm) Typ.	RDC (m Ohm) Max.	Isat (mA) Typ.	Irms (mA) Typ.
GNR6045P-R82□-AE	0.82	N	8.0	10.4	10350	4500
GNR6045P-1R0□-AE	1.00	N	14.0	18.2	8500	4200
GNR6045P-1R3□-AE	1.30	N	16.0	20.8	8000	4000
GNR6045P-1R8□-AE	1.80	N	18.0	23.4	7000	3700
GNR6045P-2R2□-AE	2.20	M / N	21.0	27.3	6000	3500
GNR6045P-2R3□-AE	2.30	N	21.0	27.3	6000	3500
GNR6045P-3R0□-AE	3.00	N	24.0	31.2	5000	3200
GNR6045P-3R3□-AE	3.30	N	24.0	31.2	4500	3200
GNR6045P-4R5□-AE	4.50	M	31.0	40.3	4000	3000
GNR6045P-4R7□-AE	4.70	M	31.0	40.3	4000	3000
GNR6045P-6R3□-AE	6.30	M	38.0	49.4	3800	2800
GNR6045P-6R8□-AE	6.80	M	36.0	46.9	3500	2600
GNR6045P-100□-AE	10.00	M	47.0	61.1	3000	2500
GNR6045P-150□-AE	15.00	M	77.0	100.1	2300	1900
GNR6045P-220□-AE	22.00	M	115.0	149.5	1900	1500
GNR6045P-330□-AE	33.00	M	145.0	188.5	1500	1400
GNR6045P-470□-AE	47.00	M	220.0	286.0	1300	1100
GNR6045P-680□-AE	68.00	M	330.0	429.0	1000	900
GNR6045P-101□-AE	100.00	M	500.0	650.0	800	700

■ Inductance test Freq. : 100KHz / 0.1V

■ Inductance Tolerance : N = +/-30% , M = +/-20%

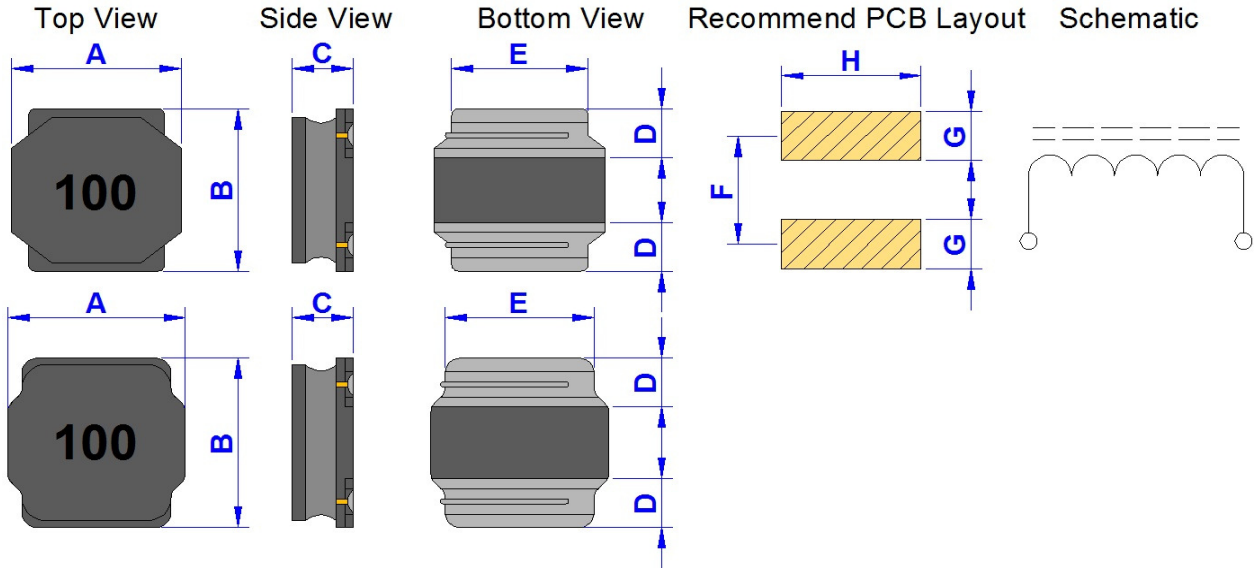
■ The saturation current value ( Isat ) is the DC current value having inductance decrease 30%. ( at 20°C )

■ The temperature rise current value ( I rms ) DC current value having temperature increase up to 40°C ( at 20°C )

<b>Product Series :</b> GNR	<b>Brand :</b> GOTREND
<b>File Version :</b> GNR-SERIES-AE-V1R1	<b>Editor :</b> Qiuyi Wu
<b>Established Date :</b> 2009.08.19	<b>Description :</b> SMD Shielded Power Inductor
<b>Latest Edit Date :</b> 2022.12.08	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GNR8040P-SERIES-AE

Dimension [ mm ] :



A (Max.)	B (Max.)	C (Max.)	D (Ref.)	E (Ref.)	F (Ref.)	G (Ref.)	H (Ref.)
8.20	8.20	4.20	1.60	6.30	5.60	1.80	7.50

### Electrical Characteristics :

Part No.	Inductance (uH)	Inductance Tolerance	RDC (m Ohm) Typ.	RDC (m Ohm) Max.	Isat (mA) Typ.	Irms (mA) Typ.
GNR8040P-R90□-AE	0.90	N	6.0	8.0	11000	7800
GNR8040P-1R4□-AE	1.40	N	7.0	10.0	9000	7000
GNR8040P-1R8□-AE	1.80	M	9.0	11.7	8000	6500
GNR8040P-2R0□-AE	2.00	N	9.0	12.0	7400	6300
GNR8040P-2R2□-AE	2.20	N	9.0	12.0	7400	6300
GNR8040P-2R5□-AE	2.50	N	12.0	16.0	6400	5400
GNR8040P-3R3□-AE	3.30	N	15.0	20.0	5300	4900
GNR8040P-3R6□-AE	3.60	N	15.0	20.0	5300	4900
GNR8040P-4R7□-AE	4.70	N	18.0	24.0	4700	4100
GNR8040P-6R8□-AE	6.80	N	25.0	33.0	4000	3700
GNR8040P-100□-AE	10.00	M	34.0	45.0	3400	3100
GNR8040P-150□-AE	15.00	M	50.0	65.0	2700	2400
GNR8040P-220□-AE	22.00	M	66.0	86.0	2200	2200
GNR8040P-330□-AE	33.00	M	100.0	130.0	1900	1700
GNR8040P-470□-AE	47.00	M	150.0	195.0	1500	1400
GNR8040P-680□-AE	68.00	M	230.0	299.0	1200	1100
GNR8040P-101□-AE	100.00	M	290.0	377.0	1000	1000
GNR8040P-151□-AE	150.00	M	450.0	540.0	800	800

■ Inductance test Freq. : 100KHz / 0.1V

■ Inductance Tolerance : N = +/-30% , M = +/-20%

■ The saturation current value ( Isat ) is the DC current value having inductance decrease 30%. ( at 20°C )

■ The temperature rise current value ( Irms ) DC current value having temperature increase up to 40°C ( at 20°C )

<b>Product Series :</b> GNR	<b>Brand :</b> GOTREND
<b>File Version :</b> GNR-SERIES-AE-V1R1	<b>Editor :</b> Qiuyi Wu
<b>Established Date :</b> 2009.08.19	<b>Description :</b> SMD Shielded Power Inductor
<b>Latest Edit Date :</b> 2022.12.08	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

**Care note :**

Care note for Use :

(1) Storage Condition :

Temperature 25 to 35 °C , Humidity 45 to 60% RH

(2) Use Temperature :

- a. Minimum Temperature : -40 °C Ambient temperature of this product.
- b. Maximum Temperature : +125 °C The value of temperature including ambient and temperature rise of this product.
- c. Reliability test temperature range from -40 ~ +125 °C
- d. However, this is not meant as temperature grade guarantee for UL.

(3) Model :

When this product was used in a similar or as new product to the original one, sometimes it might be unable to satisfy the specifications due to difference in condition of usage.

(4) Drop :

If this product suffered mechanical stress such as drop, characteristics may become poor ( due to damage on coil / bobbin / ferrite ... etc. )

Never use such stressed product.

Care note for Safety :

(1) Provision to Abnormal Condition :

This product itself does not have any protective function in abnormal condition such as overload, short-circuit and open-circuit conditions, etc.

Therefore, it shall be confirmed from the end product that there is no risk of smoking, fire, dielectric withstand voltage insulation resistance, etc. in abnormal conditions to provide protective devices and /or protection circuit in the end product.

(2) Temperature Rise :

Temperature rise on this product depends on the installation condition on end products.

It shall be confirmed on the actual end product that temperature rise of this product is within the specified temperature class limit.

(3) Dielectric Strength :

Dielectric withstanding test with higher voltage than specific value will damage insulating material and shorten its life.

(4) Water :

This product must not be used in wet condition resulted from water, coffee or any liquid contact because insulation strength becomes very low under such condition.

(5) Potting :

If this product is potted in some compound, coating material of magnet wire might be occasionally damaged. Please ask us if you intend to pot this product.

(6) Detergent :

Please consult our company immediately once under such circumstances because product reliability confirmation etc. is needed when this product come in contact with these chemicals.

<b>Product Series :</b> GNR	<b>Brand :</b> GOTREND
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<b>Latest Edit Date :</b> 2022.12.08	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

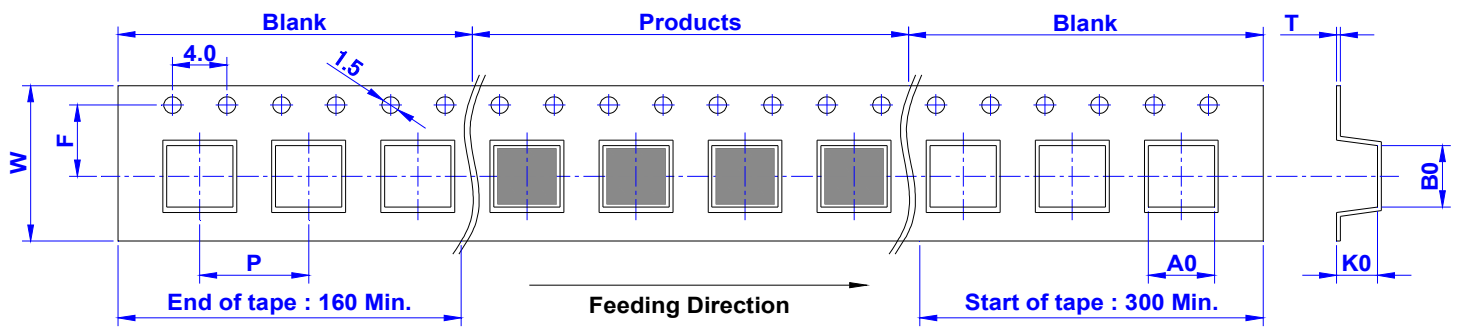
### Reliability :

No	Item	Test Conditions	Specification
1	<b>External Visual</b> MIL-STD-883 Method 2009	Inspect device construction and workmanship. Electrical test not required.	There is no change for appearance ( electrode did not fall off , loose , no breakage , ferrite core did not break , damage )
2	<b>Physical Dimension</b> JESD22 Method JB-100	Verify physical dimensions to the device specification.	For Spec.
3	<b>Thermal Shock</b> MIL-STD-202 Method 107	Temperature : $-40\pm 2$ °C ~ $+125\pm 2$ °C Max transfer time : 20 s. Dwell time : 15 minutes. Air - Air	There is no change for appearance ( electrode did not fall off , loose , no breakage , ferrite core did not break , damage ) Inductor value / resistance change rate $\pm 10\%$ .
4	<b>Humidity Resistance</b> MIL-STD-202 Method 103	Humidity : 85% RH Temperature : 85 °C Test time : 1000 Hours	There is no change for appearance ( electrode did not fall off , loose , no breakage , ferrite core did not break , damage ) Inductor value / resistance change rate $\pm 10\%$ .
5	<b>High Temperature</b> MIL-STD-202 Method 108	Temperature : $125\pm 2$ °C Test time : 1000 Hours	There is no change for appearance ( electrode did not fall off , loose , no breakage , ferrite core did not break , damage ) Inductor value / resistance change rate $\pm 10\%$ .
6	<b>Temperature and Humidity Cycle</b> JESD22 Method JA-104	Temperature : $-40$ °C ~ $+125$ °C Cycles : 1000	There is no change for appearance ( electrode did not fall off , loose , no breakage , ferrite core did not break , damage ) Inductor value / resistance change rate $\pm 10\%$ .
7	<b>Operational Life</b> MIL-PRF-27	Temperature : 125 °C Load : Allowed DC current Test time : 1000 Hours	No short circuit , open circuit.
8	<b>Vibration</b> MIL-STD-202 Method 204	5 g's for 20 minutes , 12 cycles each of 3 orientations. Test from 10Hz ~ 2000Hz	No bad phenomenon.
9	<b>Mechanical Shock</b> MIL-STD-202 Method 213	Figure 1 of Method 213 SMD : Condition C.	No bad phenomenon.
10	<b>Resistance to Soldering Head</b> MIL-STD-202 Method 210	Condition B No pre-heat of samples. Temperature 250 up / 5 s. Temperature 183 up / 90 ~ 120 s.	Tin solder have to cover over 90% area.
11	<b>Solderability</b> J-STD-002	a. Method B , 4 Hours @ 155 °C dry heat @ 235 °C b. Method B @ 215 °C category 3 c. Method D @ 260 °C category 3	No change and transform form the appearance.

<b>Product Series :</b> GNR	<b>Brand :</b> GOTREND
<b>File Version :</b> GNR-SERIES-AE-V1R1	<b>Editor :</b> Qiuyi Wu
<b>Established Date :</b> 2009.08.19	<b>Description :</b> SMD Shielded Power Inductor
<b>Latest Edit Date :</b> 2022.12.08	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

**Packaging Information :**

Tape Dimension ( mm ) :

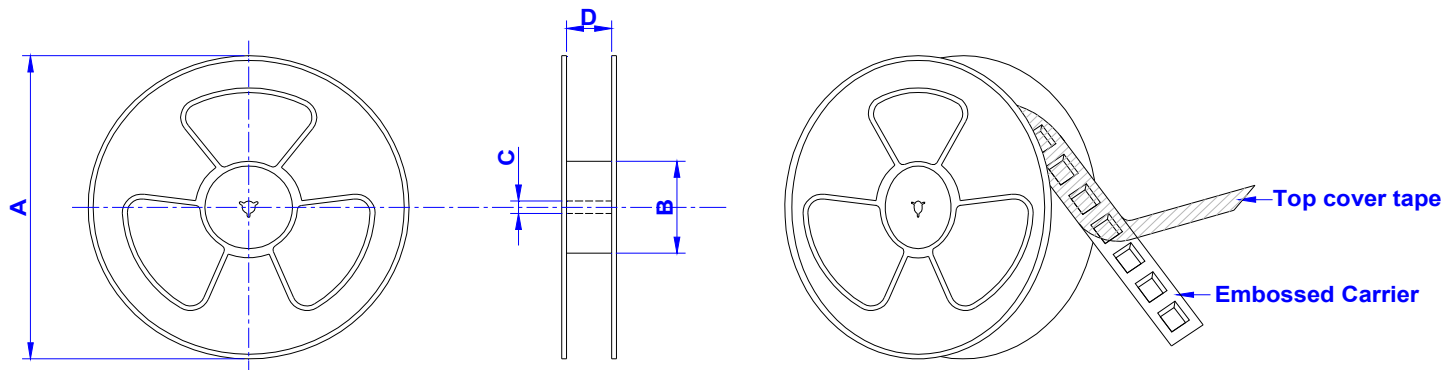


SIZE/mm	W	P	A0	B0	K0	T	F
2510	8	4	2.1	2.6	1.2	0.30	3.5
2512	8	4	2.1	2.6	1.4	0.30	3.5
3010	8	4	3.2	3.2	1.4	0.30	3.5
3012	8	4	3.2	3.2	1.6	0.30	3.5
3015	8	4	3.2	3.2	1.9	0.30	3.5
4010	12	8	4.3	4.3	1.4	0.30	5.5
4018	12	8	4.3	4.3	2.1	0.30	5.5
4020	12	8	4.3	4.3	2.6	0.30	5.5
4030	12	8	4.5	4.5	3.2	0.30	5.5
5014	12	8	5.4	5.4	1.8	0.30	5.5
5020	12	8	5.4	5.4	2.6	0.30	5.5
5040	16	8	5.4	5.4	4.6	0.30	5.5
6012	16	8	6.3	6.3	1.3	0.30	7.5
6020	16	8	6.3	6.3	2.2	0.35	7.5
6028	16	8	6.3	6.3	3.0	0.35	7.5
6040	16	12	6.3	6.3	4.2	0.35	7.5
6045	16	12	6.3	6.3	4.6	0.35	7.5
8040	16	12	8.3	8.3	4.3	0.35	7.5

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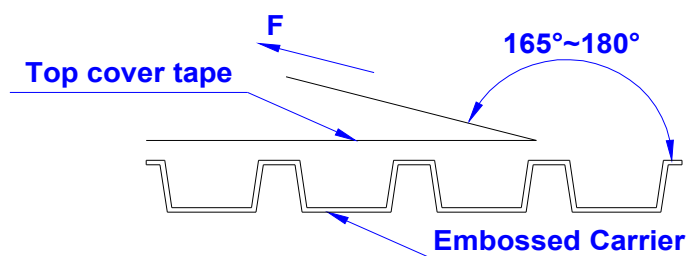
**Packaging Information :**

Reel Dimension ( mm ) :



Size / mm	Reel Size	A	B	C	D	Qty / Reel
2510	7" x 8 mm	178	60	13	8.5	3000
2512	7" x 8 mm	178	60	13	8.5	3000
2512PA/2512PL	7" x 8 mm	178	60	13	8.5	2000
3010	7" x 8 mm	178	60	13	8.5	2000
3012	7" x 8 mm	178	60	13	8.5	2000
3015	7" x 12 mm	178	60	13	12.5	2000
4010	13" x 12 mm	330	100	13	12.5	4500
4018	13" x 12 mm	330	100	13	12.5	3000
4020	13" x 12 mm	330	100	13	12.5	3000
4030	13" x 12 mm	330	100	13	12.5	2000
5014	13" x 12 mm	330	100	13	12.5	3000
5020	13" x 12 mm	330	100	13	12.5	3000
5040	13" x 16 mm	330	100	13	16.5	1500
6012	13" x 16 mm	330	100	13	16.5	3000
6020	13" x 16 mm	330	100	13	16.5	2500
6028	13" x 16 mm	330	100	13	16.5	2000
6040	13" x 16 mm	330	100	13	16.5	1000
6045	13" x 16 mm	330	100	13	16.5	1500
8040	13" x 16 mm	330	100	13	16.5	1000

Tearing Off Force :



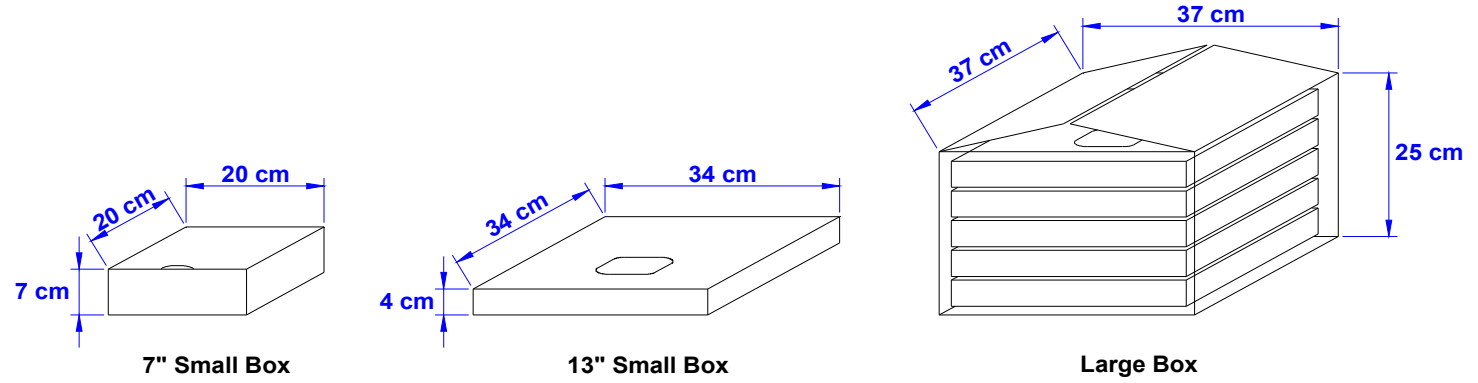
The force for tearing off cover tape is 10 to 130 grams in the arrow direction under the following conditions ( referenced ANSI / EIA - 481 - D - 2008 of 4.11stadnard ).

Room Temp. ( °C )	Room Humidity ( % )	Room Atm. ( hPa )	Tearing Speed ( mm / min )
5 ~ 35	45 ~ 85	860 ~ 1060	300

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<b>Latest Edit Date :</b> 2022.12.08	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

**Packaging Information :**

Box Package :



SIZE/mm	Reels in Small Box	Small Box in Large Box
2510	5	8
2512	5	8
2512PA/2512PL	5	8
3010	5	8
3012	5	8
3015	4	8
4010	2	5
4018	2	5
4020	2	5
4030	2	5
5014	2	5
5020	2	5
5040	1	5
6012	1	5
6020	1	5
6028	1	5
6040	1	5
6045	1	5
8040	1	5