



<b>Product Series :</b> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

## 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.
- ◆ GOTREND Technology is not responsible for issues that occur related to the intellectual property rights or other rights of our company or a third party when you use a product listed in this catalog. GOTREND Technology do not grant license of these rights.
- ◆ Information and data provided in the brochure can and do vary in different applications, and actual performance may vary over time.
- ◆ "Delivery Specification" illustrating precautions for the specifications and safety of each product listed in this catalog is available and we strongly recommend to provide these delivery specifications with customers that use these products.
- ◆ For exporting of product in this catalog, please take note it may be a restricted item according to the "Foreign Exchange and Foreign Trade Control Law". In such cases, it is necessary to acquire export permission in accordance to this law.
- ◆ 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.



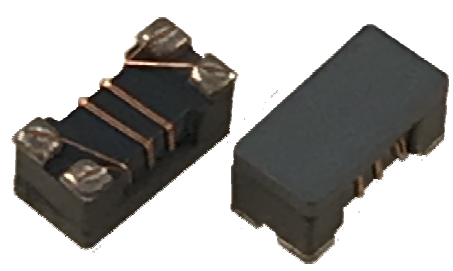
- ◆ It is not recommended to use hot air gun for disassembling of this product. When using of hot air gun to repair other parts, please also take note that long time or high temperature exposure of this product will also damage the inductance device. If you need to use the hot air gun to disassemble 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.



<b>Product Series :</b> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

**Features & Application :**

- \* Common Mode Filter for high speed signal line
- \* Fit for signal line circuit : USB2.0 / IEEE1394
- \* To help you go pass the CE/FCC standard.
- \* Mobile Device / Handheld Device / LowProfile Device



( Picture for reference only )

**Part No. Example :**

PN	:	<b>GTHW</b>	<b>4532</b>	<b>P</b>	<b>T</b>	<b>L</b>	-	<b>110</b>	<b>T</b>
-----		-----	-----	-----	---	---		-----	---
ID	:	1	2	3	4	5		6	7
1	:	GOTREND Series Code							
2	:	Type Size Code : Length 4.5 mm X Width 3.2 mm							
3	:	Pb free <1000ppm							
4	:	[ E ][ T ][ H ] : Material Code							
5	:	[ L ] Value : Inductance							
6	:	Inductance [uH] @ 100KHz = 11 uH							
7	:	Tolerance T = Typical							

**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

**Operating & Storage Condition :**

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



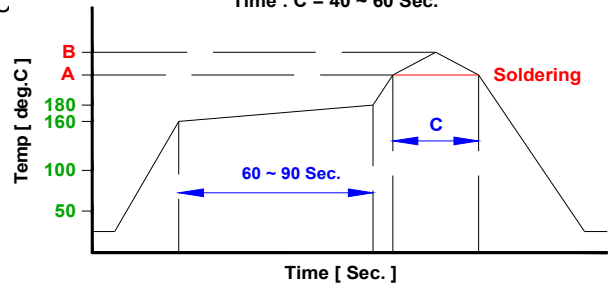
- \* Pin foot or SMD pad solderability: Pb free type is best within 6 months after delivery
- \* Humidity sensitive , IPC/JEDEC J-STD-020 MSL if over Level 1, recommend bake 30mins@150 degree before PCBA
- \* Caution for human life relative applications : PLS contact & consult with GOTREND team in design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

**Test Condition :**

- \* Equipment HP4284A , HP42841A - L , Q , DCR , IDC  
HP8753D Network analyzer - SRF
- \* Standard Atmosphere Conditions:  
Ambient Temperature 20 ± 15 deg.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 deg.C  
Humidity RH 75 ± 10%

**Recommend IR Reflow Curve : GTX-IR-FILE001**

Lead Free Solder : A = 217 deg.C , B = 245+/-5 deg.C  
Time : C = 40 ~ 60 Sec.

























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



**Product Series :** GTHW**Brand :** GOTREND**File Version :** GTHW-SERIES-V4R3**Editor :** Zhenhao Wu**Established Date :** 2009.02.24**Description :** Common Mode Filter**Latest Edit Date :** 2023.12.04**Product Type :**  Standard  Customize

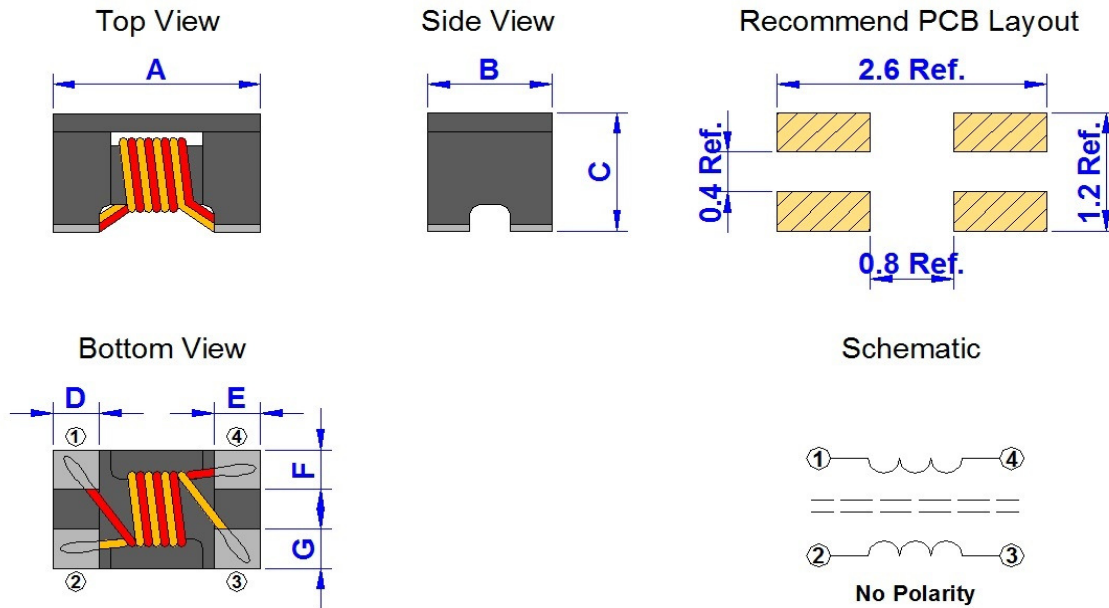
## Common Mode Filter - GTHW Series Type

Image	Part Name	L ( mm ) Typ.	W ( mm ) Typ.	H ( mm ) Typ.	Common Mode Impedance(Ohm)		DCR ( Ohm ) Max.	Rated Current ( mA ) Max.	Page
	GTHW2012P	2.0	1.2	1.2	67	 1000	0.25 ~ 0.8	100 ~ 400	5
	GTHW2012PC	2.0	1.2	1.2	67	 360	0.25 ~ 0.5	300 ~ 400	6 ~ 8
	GTHW2520PT	2.5	2.0	1.2	300	 1000	0.35 ~ 0.9	200 ~ 400	9
	GTHW3216P	3.2	1.6	2.0	90	 2200	0.3 ~ 1.2	200 ~ 370	10
	GTHW3225PA	3.2	2.5	2.2	90	 1000	0.05 ~ 0.3	400 ~ 1000	11 ~ 12
	GTHW3225PM	3.2	2.5	2.5	500	 5100	0.4 ~ 1.5	150 ~ 300	13
	GTHW3225PT	3.2	2.5	2.5	550	 10000	0.4 ~ 1.5	70 ~ 300	14
	GTHW3225PTL	3.3	2.5	2.5	550	 5100	0.4 ~ 1.5	150 ~ 300	15 ~ 16
	GTHW4532PHL	4.5	3.2	2.8	700	 5000	0.6 ~ 3.0	150 ~ 250	17
	GTHW4532PT	4.5	3.2	2.8	80	 800	0.05 ~ 0.24	1000 ~ 3000	18 ~ 19
	GTHW4532PTL	4.5	3.2	2.8	600	 5800	0.6 ~ 2.0	300 ~ 360	20

<b>Product Series :</b> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

## GTHW2012PE-SERIES

Dimension [ mm ] :



TYPE	A	B	C	D	E	F	G
2012	2.0+/-0.2	1.2+/-0.2	1.2+/-0.2	0.4+/-0.2	0.4+/-0.2	0.4+/-0.2	0.4+/-0.2

Electrical Characteristics :

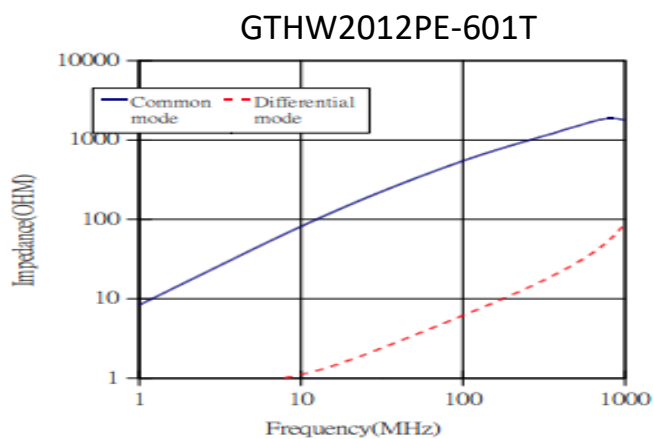
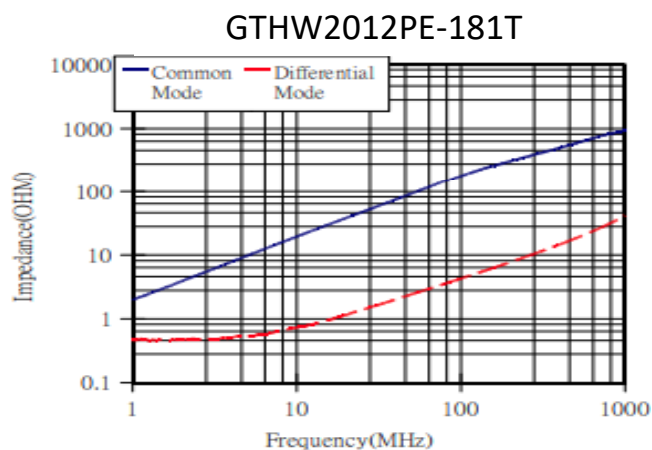
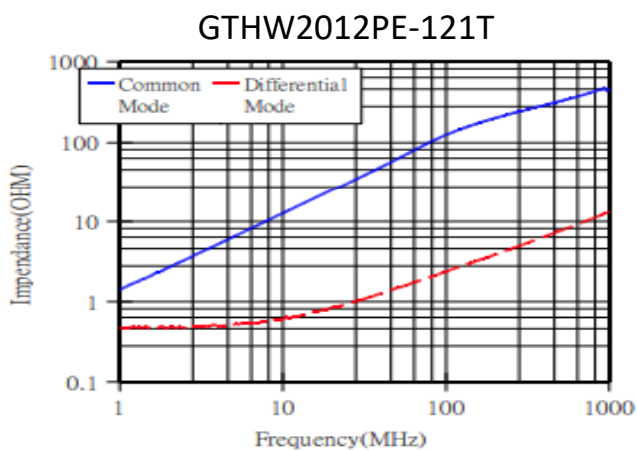
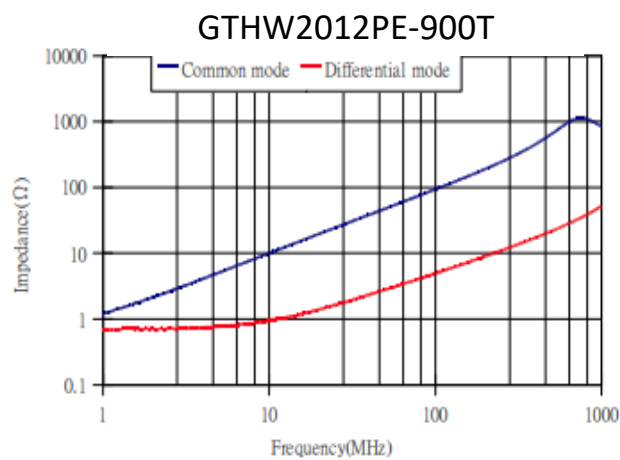
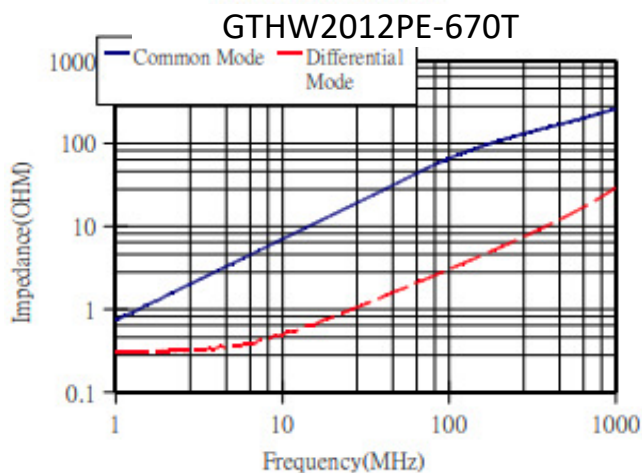
Part No.	Common Mode(Min.) Impedance(Ohm) @100MHz	Common Mode(Typ.) Impedance(Ohm) @100MHz	Rated Voltage / Withstanding Voltage V(DC)	DCR (Ohm) (Max.)	Rated Current (mA) (Max.)	Insulation Res. Min. (M Ohm)
GTHW2012PE-670T	30	67	50/125	0.25	400	10
GTHW2012PE-900T	60	90	50/125	0.30	400	10
GTHW2012PE-121T	95	120	50/125	0.30	370	10
GTHW2012PE-161T	115	160	50/125	0.35	330	10
GTHW2012PE-181T	135	180	50/125	0.35	330	10
GTHW2012PE-221T	145	220	50/125	0.35	330	10
GTHW2012PE-361T	200	360	50/125	0.40	280	10
GTHW2012PE-401T	320	400	50/125	0.40	280	10
GTHW2012PE-601T	450	600	50/125	0.375	250	10
GTHW2012PE-102T	750	1000	50/125	0.80	100	10

\* Rated Current based on increasing product temperature : Current when temperature of the product reaches +40 deg.C .

<b>Product Series :</b> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GTHW2012P-SERIES

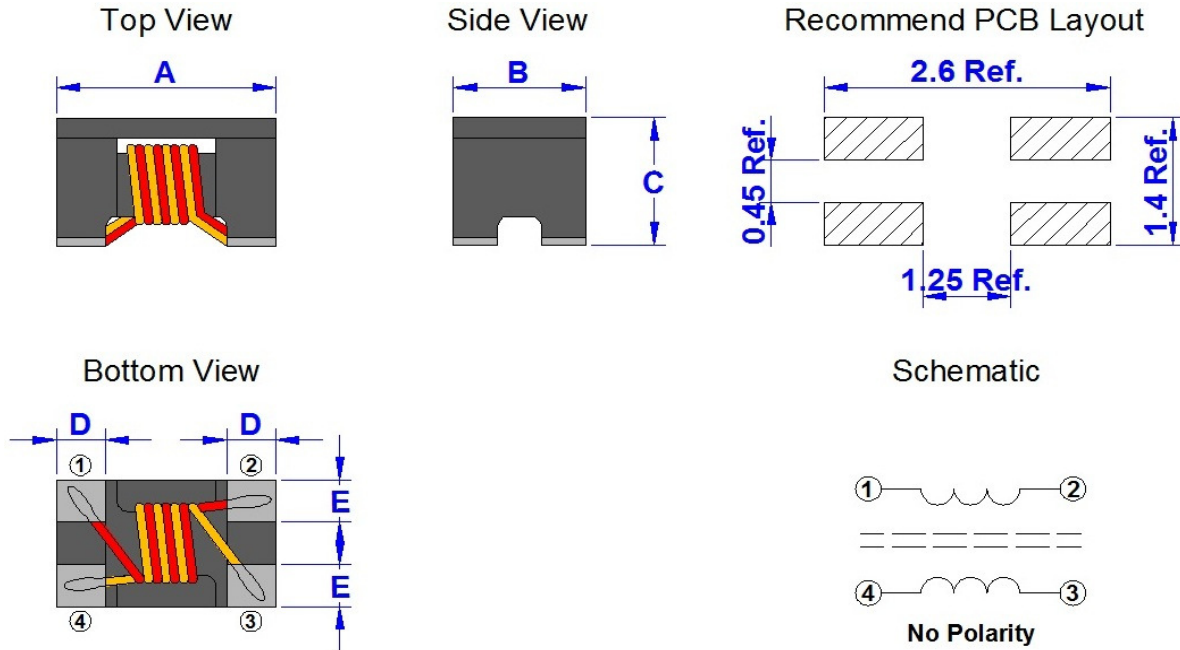
#### Typical Performance Curves :



<b>Product Series :</b> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GTHW2012PC-SERIES

Dimension [ mm ] :



TYPE	A (+/-0.2)	B (+/-0.2)	C (+/-0.2)	D (+/-0.1)	E (+/-0.1)
2012	2.00	1.20	1.20	0.50	0.51

Electrical Characteristics :

Part No.	Common Mode Impedance(Ohm) @100MHz	DCR (Ohm) (Max.)	Rated Current(mA) (Max.)	Rated Voltage ( Vdc )	Withstand Volt. ( Vdc )	Insulation Resistance (M Ohm)
GTHW2012PC-670T	67 +/-25%	0.25	400	50 Max.	125 Max.	10 Min.
GTHW2012PC-900T	90 +/-25%	0.30	400	50 Max.	125 Max.	10 Min.
GTHW2012PC-121T	120 +/-25%	0.30	400	50 Max.	125 Max.	10 Min.
GTHW2012PC-161T	160 +/-25%	0.35	350	50 Max.	125 Max.	10 Min.
GTHW2012PC-181T	180 +/-25%	0.35	350	50 Max.	125 Max.	10 Min.
GTHW2012PC-201T	200 +/-25%	0.40	300	50 Max.	125 Max.	10 Min.
GTHW2012PC-221T	220 +/-25%	0.40	300	50 Max.	125 Max.	10 Min.
GTHW2012PC-261T	260 +/-25%	0.40	300	50 Max.	125 Max.	10 Min.
GTHW2012PC-361T	360 +/-25%	0.50	300	50 Max.	125 Max.	10 Min.

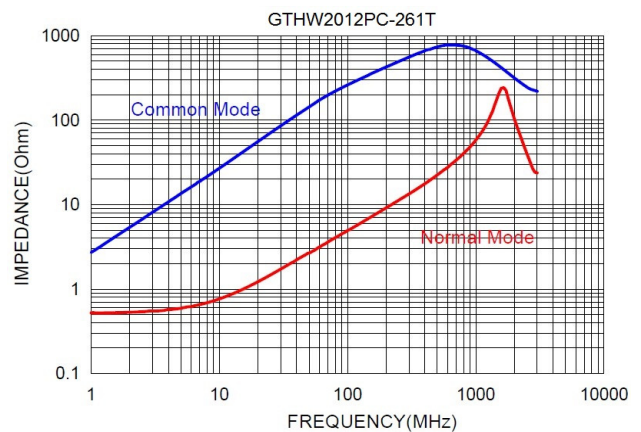
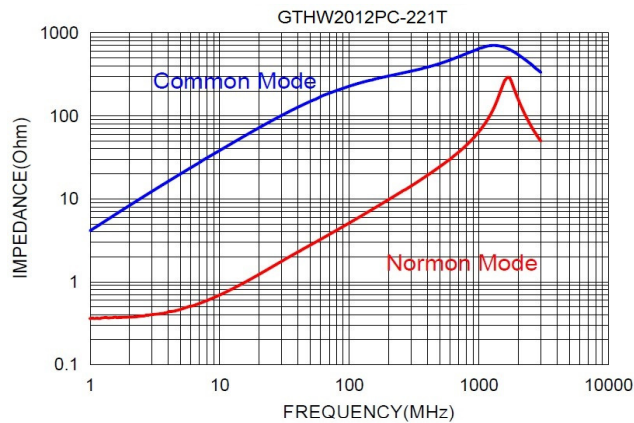
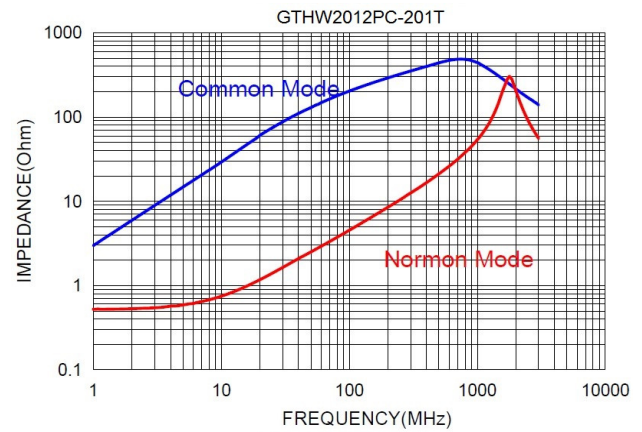
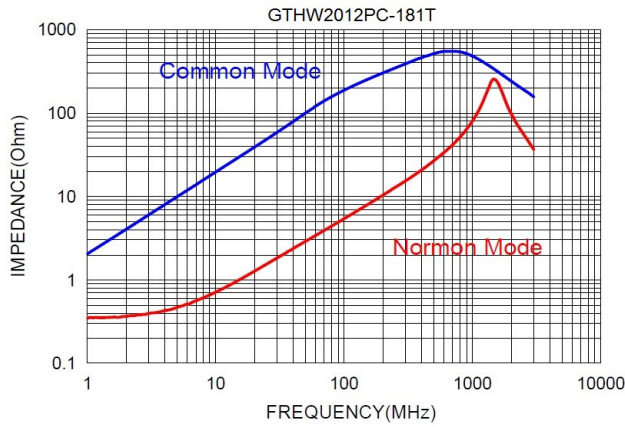
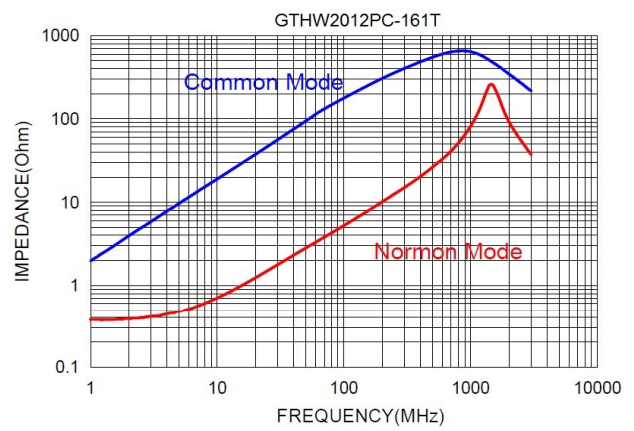
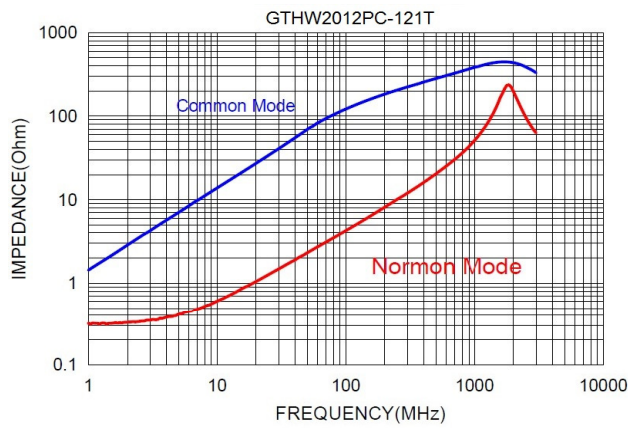
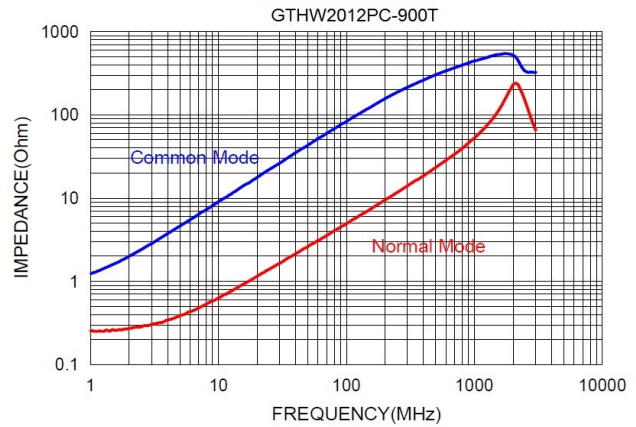
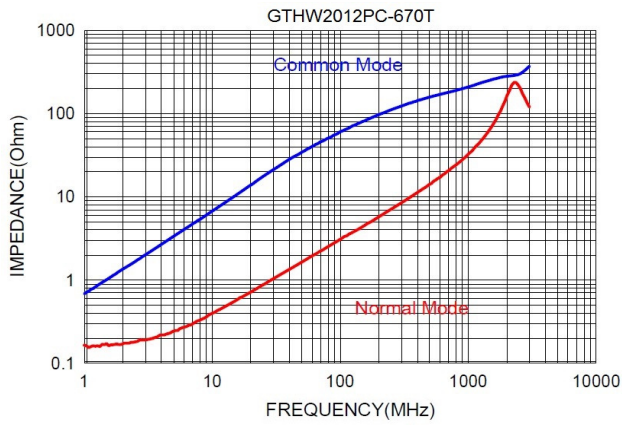
\* Rated Current based on increasing product temperature : Current when temperature of the product reaches +40 deg.C .



<b>Product Series :</b>	<b>GTHW</b>
<b>File Version :</b>	<b>GTHW-SERIES-V4R3</b>
<b>Established Date :</b>	<b>2009.02.24</b>
<b>Latest Edit Date :</b>	<b>2023.12.04</b>

<b>Brand :</b>	<b>GOTREND</b>
<b>Editor :</b>	<b>Zhenhao Wu</b>
<b>Description :</b>	<b>Common Mode Filter</b>
<b>Product Type :</b>	<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

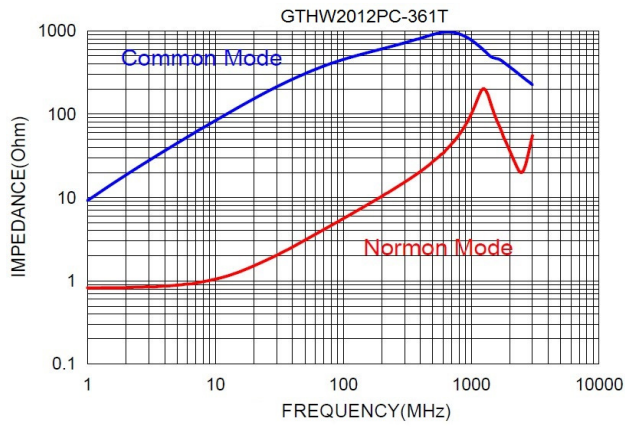
**Typical Performance Curves :**





<b>Product Series :</b> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

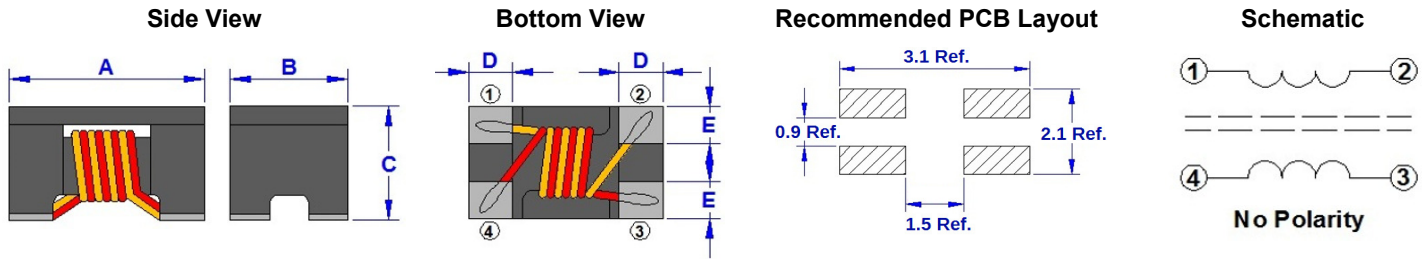
**Typical Performance Curves :**



<b>Product Series :</b> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GTHW2520PT-SERIES

Dimension [ mm ] :



TYPE	A	B	C	D	E		
2520	2.5+/-0.2	2.0+/-0.2	1.2+/-0.2	0.35+/-0.1	0.5+/-0.1		

### Electrical Characteristics :

Part No.	Common Mode(Min.) Impedance(Ohm) @100MHz	Common Mode(Typ.) Impedance(Ohm) @100MHz	Rated Voltage / Withstanding Voltage V(DC)	DCR (Ohm) (Max.)	Rated Current (mA) (Max.)	Insulation Res. Min. (M Ohm)
GTHW2520PT-301T	225	300	20/125	0.35	400	10
GTHW2520PT-451T	330	450	20/125	0.4	350	10
GTHW2520PT-601T	450	600	20/125	0.45	300	10
GTHW2520PT-102T	750	1000	20/125	0.9	200	10

\* **Rated Current** : Rated Current Loading when temperature rise approximately 40°C

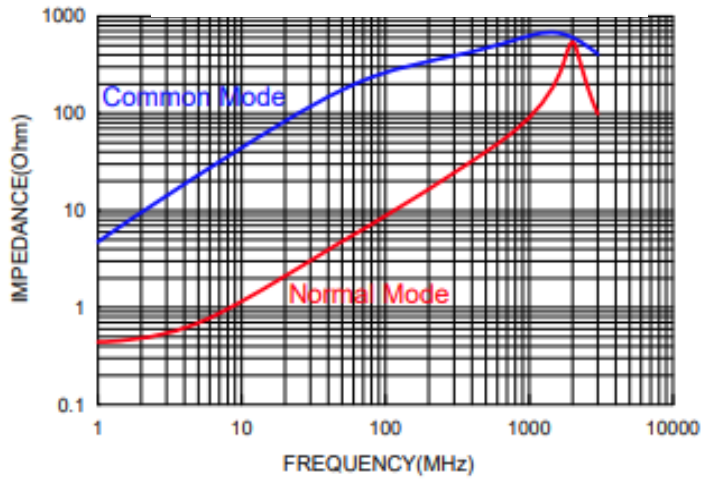
\* **Rated voltage 20V DC** : The application of voltage depends on many factors, Over voltage may cause components failure, high temperature, and burn-out, User needs to verify for appropriate usage.

\* **The part temperature (ambient + temp rise)** : Should not exceed 125°C under worst case operating conditions. Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

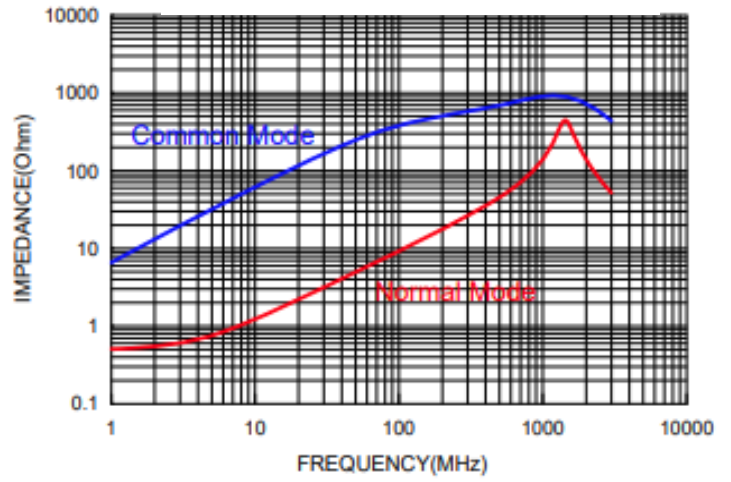
<b>Product Series :</b> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

**Typical Performance Curves :**

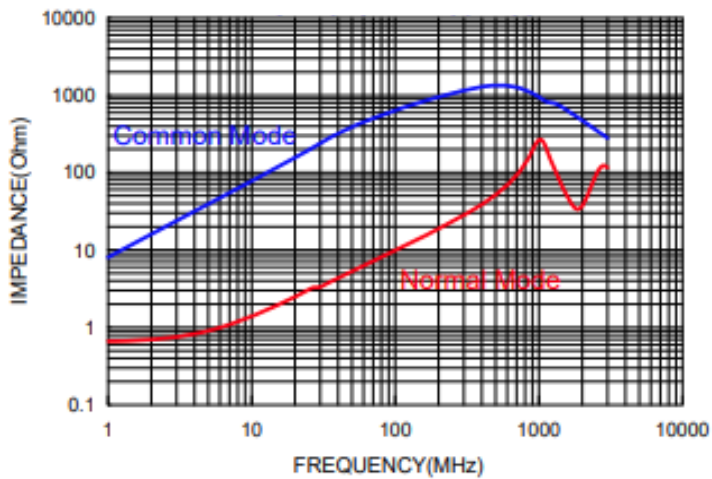
**GTHW2520P-301T**



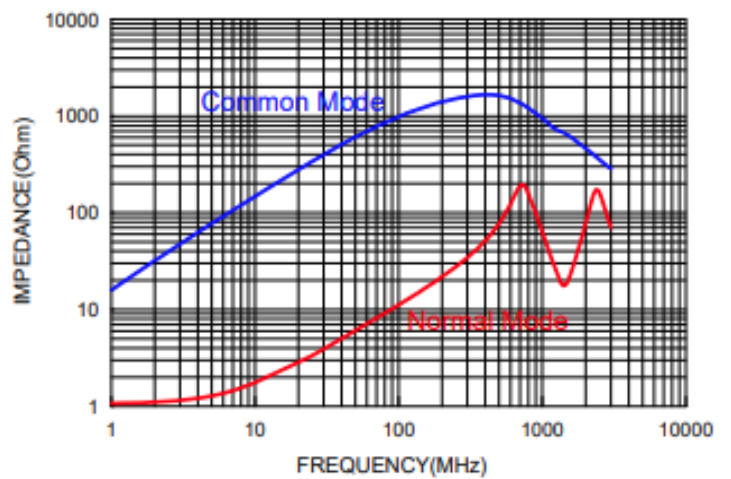
**GTHW2520P-451T**



**GTHW2520P-601T**



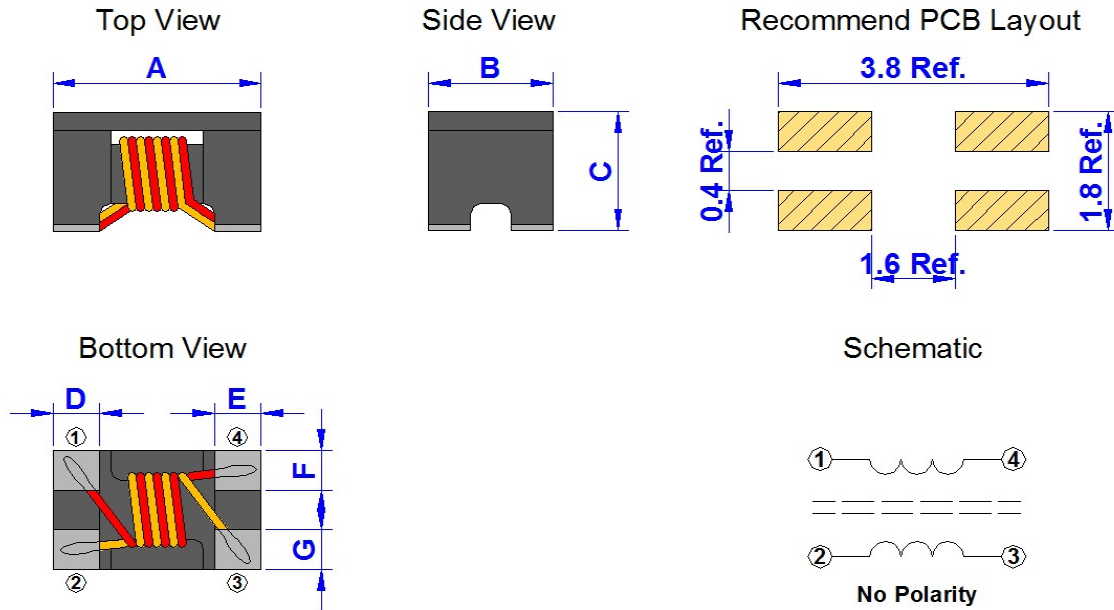
**GTHW2520P-102T**



<b>Product Series :</b> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GTHW3216P-SERIES

Dimension [ mm ] :



TYPE	A	B	C	D	E	F	G
3216	3.2+/-0.2	1.6+/-0.2	2.0+/-0.2	0.6+/-0.2	0.6+/-0.2	0.6+/-0.2	0.6+/-0.2

Electrical Characteristics :

Part No.	Common Mode(Min.) Impedance(Ohm) @100MHz	Common Mode(Typ.) Impedance(Ohm) @100MHz	Rated Voltage / Withstanding Voltage V(DC)	DCR (Ohm) (Max.)	Rated Current (mA) (Max.)	Insulation Res. Min. (M Ohm)
GTHW3216P-900T	60	90	50/125	0.30	370	10
GTHW3216P-121T	90	120	50/125	0.30	370	10
GTHW3216P-161T	115	160	50/125	0.40	340	10
GTHW3216P-221T	145	220	50/125	0.50	310	10
GTHW3216P-601T	425	600	50/125	0.80	260	10
GTHW3216P-102T	700	1000	50/125	1.00	230	10
GTHW3216P-222T	1560	2200	50/125	1.20	200	10

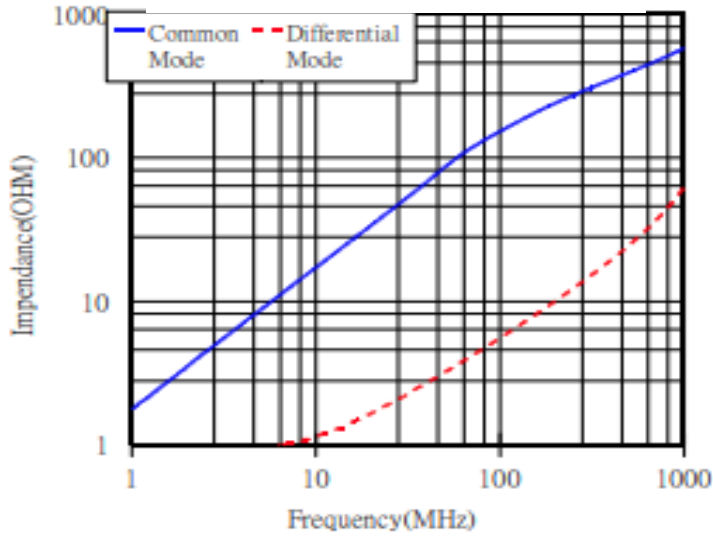
\* Rated Current based on increasing product temperature : Current when temperature of the product reaches +40 deg.C .

<b>Product Series :</b>	<b>GTHW</b>
<b>File Version :</b>	<b>GTHW-SERIES-V4R3</b>
<b>Established Date :</b>	<b>2009.02.24</b>
<b>Latest Edit Date :</b>	<b>2023.12.04</b>

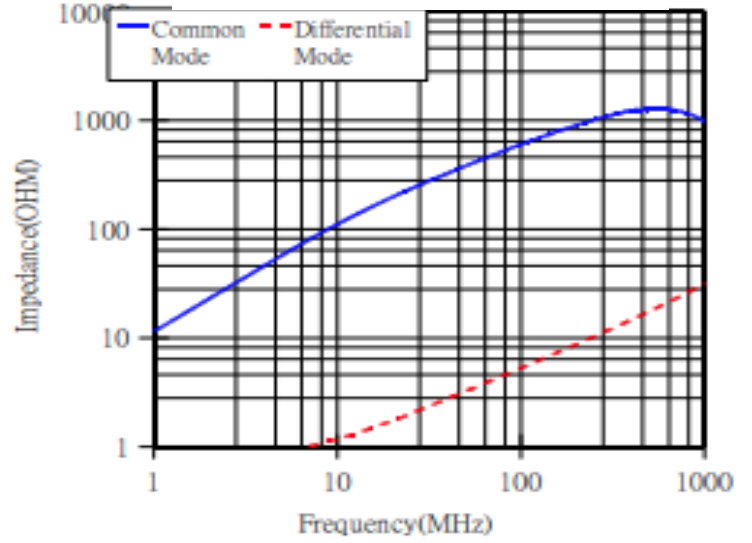
<b>Brand :</b>	<b>GOTREND</b>
<b>Editor :</b>	<b>Zhenhao Wu</b>
<b>Description :</b>	<b>Common Mode Filter</b>
<b>Product Type :</b>	<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

**Typical Performance Curves :**

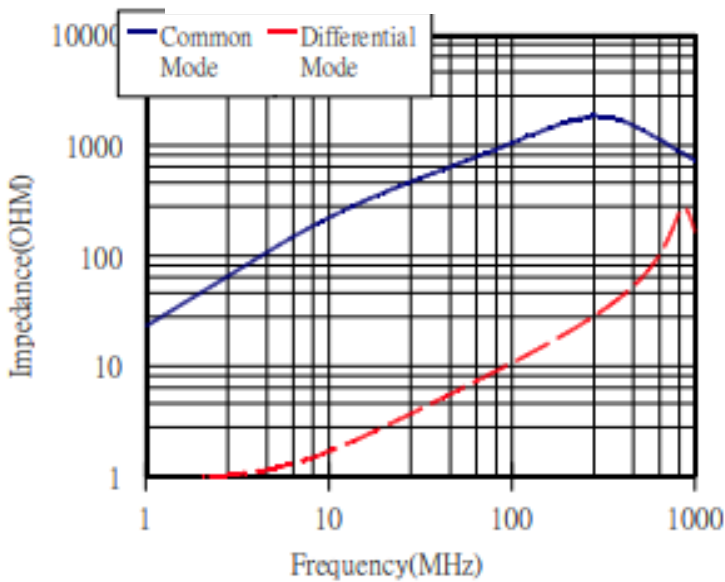
**GTHW3216P-900T**



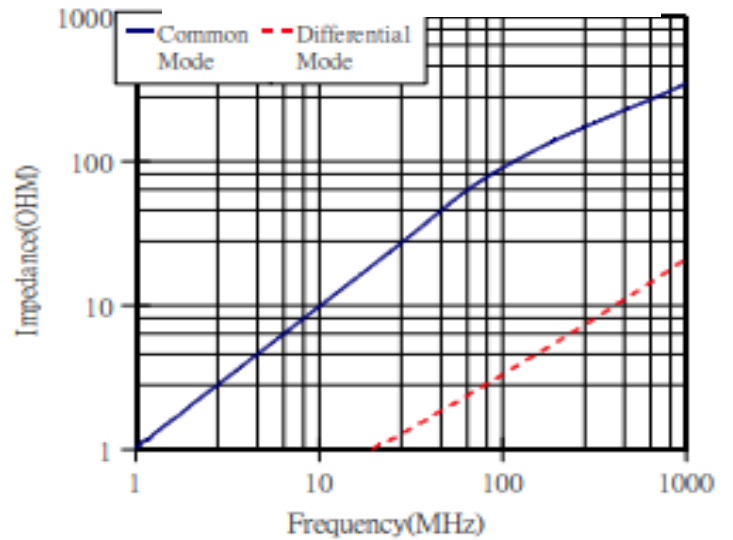
**GTHW3216P-161T**



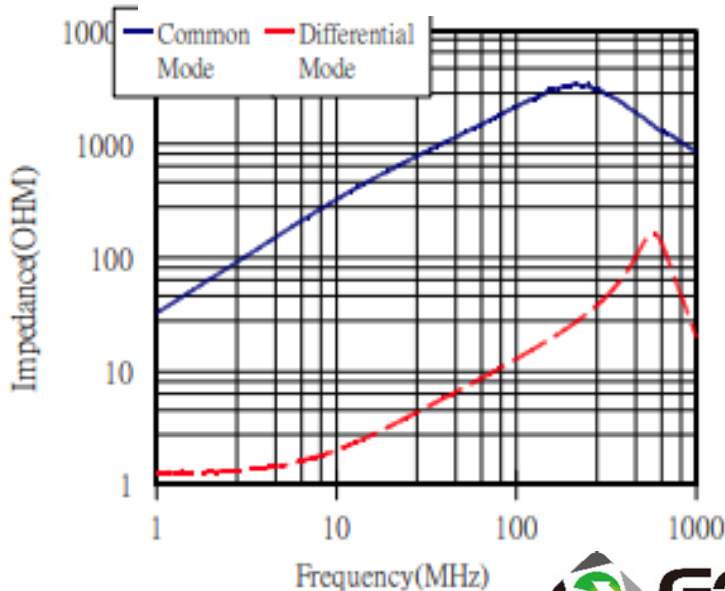
**GTHW3216P-601T**



**GTHW3216P-102T**



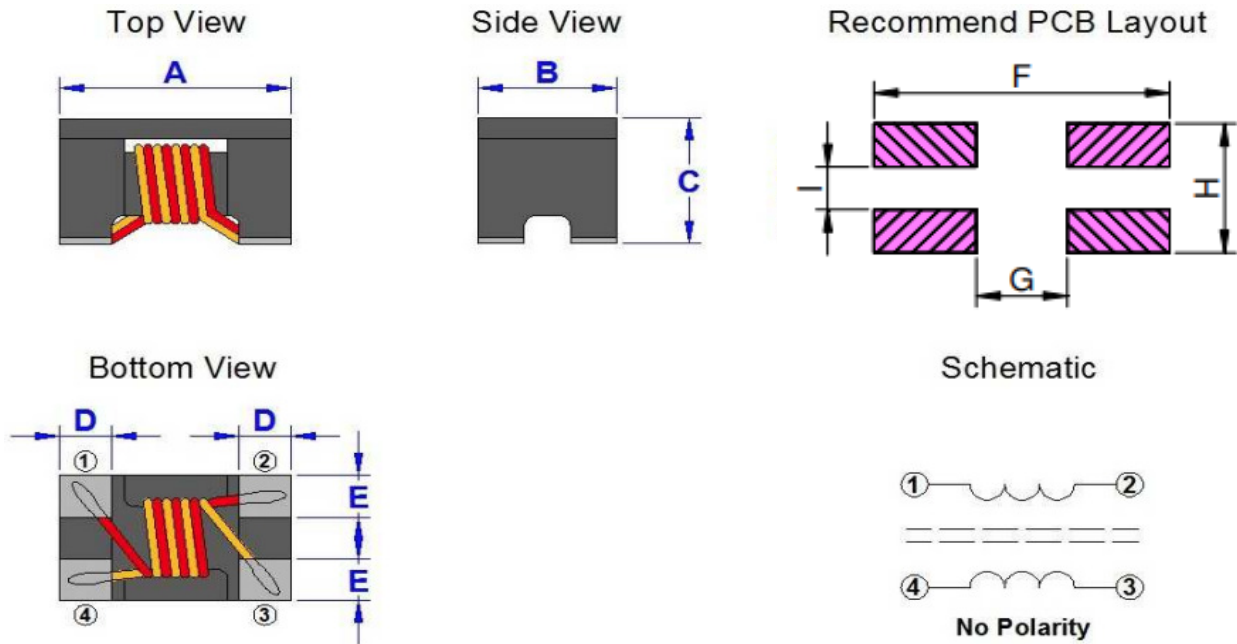
**GTHW3216P-222T**



<b>Product Series :</b> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GTHW3225PA-SERIES

Dimension [ mm ] :



TYPE	A	B	C	D	E	F	G	H	I
3225	3.2+/-0.2	2.5+/-0.2	2.2+/-0.2	0.80 Typ	0.90 Typ	4.4Typ.	1.6Typ.	3.5Typ.	0.6Typ.

Electrical Characteristics :

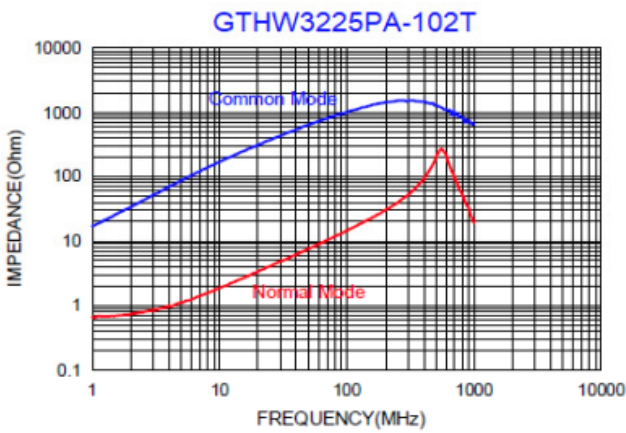
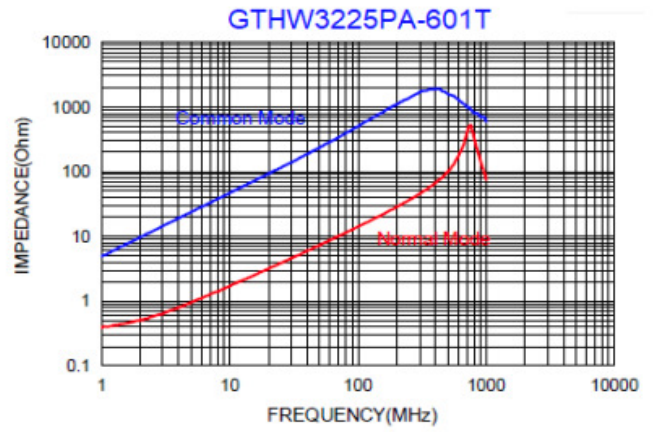
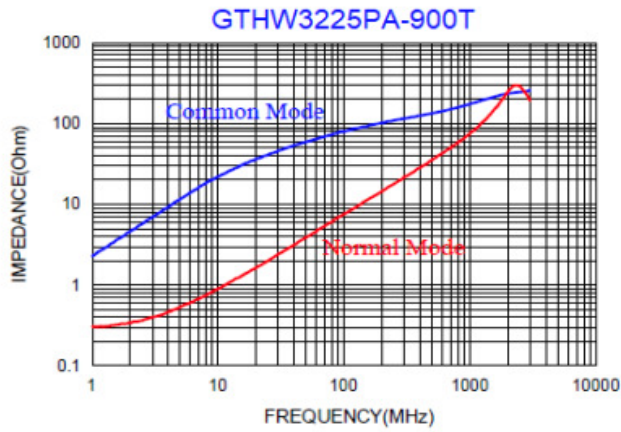
Part No.	Common Mode Impedance ( Ohm ) @100MHz	DCR ( Ohm )	Rated Current ( mA )	Rated Volt. ( Vdc )	Withstand Volt. ( Vdc )	Insulation Resistance ( M Ohm )
GTHW3225PA-900T	90+/-25%	0.05 Max.	1000 Max.	50 Max.	125 Max.	10 Min.
GTHW3225PA-601T	600+/-25%	0.2 Max.	1000 Max.	50 Max.	125 Max.	10 Min.
GTHW3225PA-102T	1000+/-25%	0.3 Max.	400 Max.	50 Max.	125 Max.	10 Min.

\* **Rated Current** : Typical Heat Rating DC Current would cause an approximately  $\Delta T$  of 40°C



<b>Product Series :</b> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

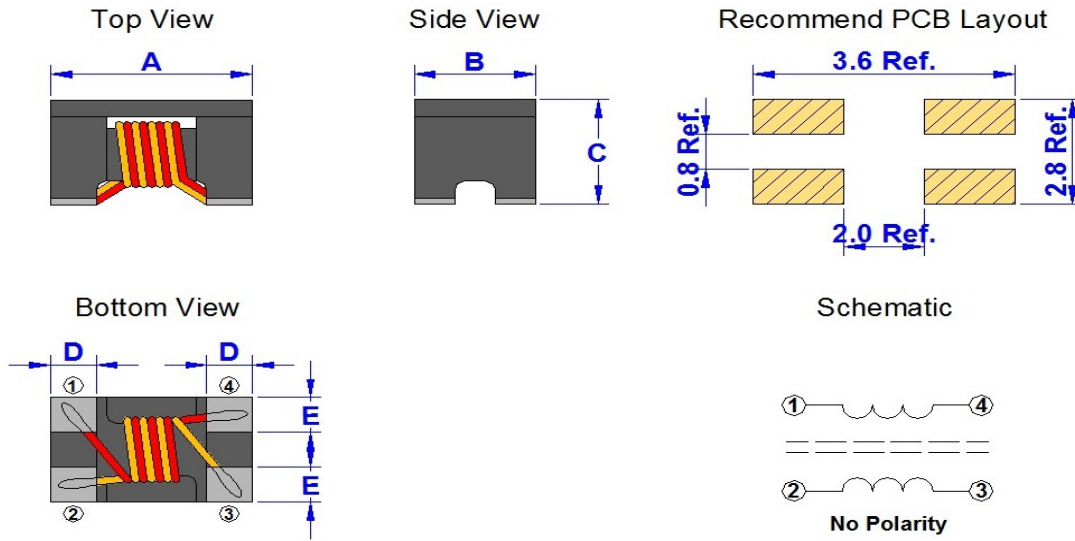
**Typical Performance Curves :**



<b>Product Series :</b> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GTHW3225PM-SERIES

Dimension [ mm ] :



TYPE	A (+/-0.2)	B (+/-0.2)	C (Max.)	D (Typ.)	E (Typ.)
3225	3.20	2.50	2.50	0.70	0.90

### Electrical Characteristics :

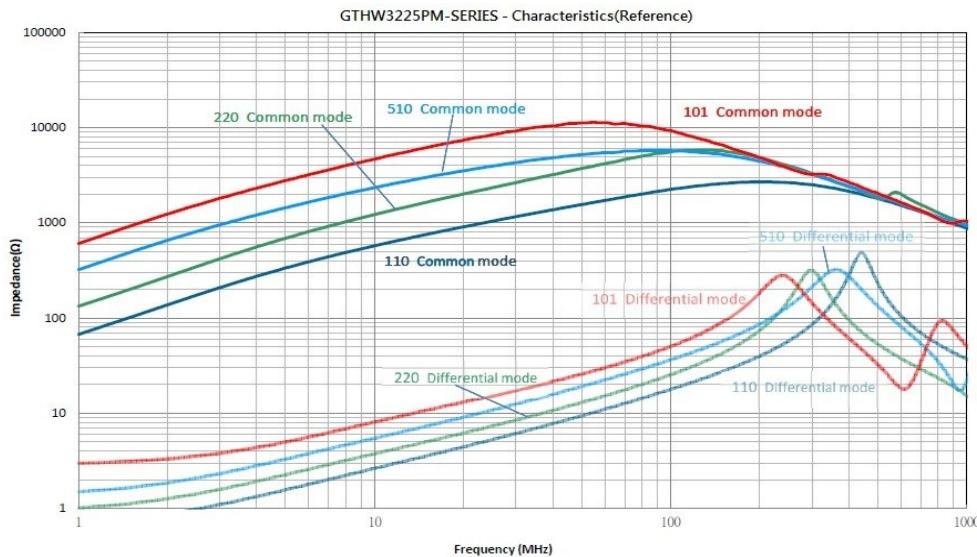
Part No.	Common Mode Impedance (Ohm) @10MHz		Common Mode Inductance (uH) @100KHz	Rated Voltage Vdc (V) Typ.	DCR (Ohm) (Max.)	Rated Current (mA) (Max.)	Insulation Resistance (M Ohm)
	Min.	Typ.	+50% / -30%				
GTHW3225PM-110T	300	500	11.0	80	0.4	300	10 Min.
GTHW3225PM-220T	500	1000	22.0	80	0.5	250	10 Min.
GTHW3225PM-510T	1000	2600	51.0	80	0.7	200	10 Min.
GTHW3225PM-101T	2200	5100	100.0	80	1.5	150	10 Min.

\* All test data is referenced : 25°C Ambient.

\* Rated Current based on increasing product temperature : Current when temperature of the product reaches +40°C .

\* The part temperature (ambient + temp rise): should not exceed 125°C under worst case operating conditions. Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

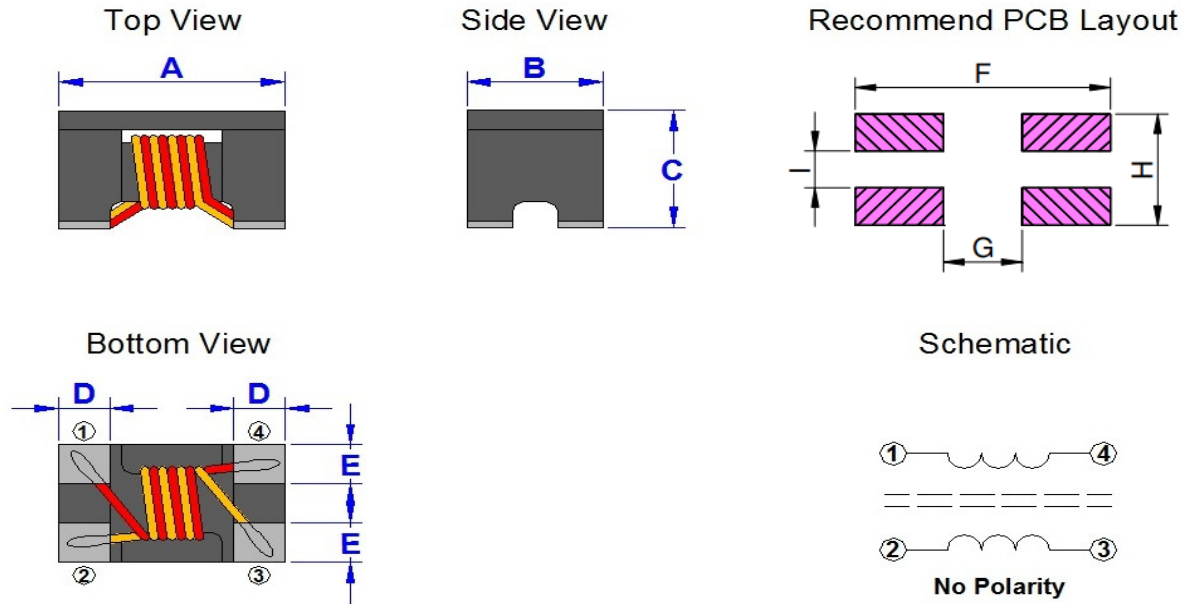
### Typical Performance Curves :



<b>Product Series :</b> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GTHW3225PT-SERIES

Dimension [ mm ] :



TYPE	A	B	C	D	E	F	G	H	I
3225	3.2+/-0.2	2.5+/-0.2	2.50 Max.	0.55 +/- 0.15	0.75 +/- 0.20	3.7Typ.	2.2Typ.	2.3Typ.	0.6Typ.

### Electrical Characteristics :

Part No.	Common Mode Impedance ( Ohm ) @10MHz	Common Mode Inductance ( uH ) @100KHz / 0.1V	DCR ( Ohm )	Rated Current ( mA )	Insulation Resistance ( M Ohm )	Rated Voltage V ( DC )
GTHW3225PT-110T	300 Min. / 550 Typ.	11 +50/-30%	0.4 Max.	300 Max.	10.0 Min.	80.00
GTHW3225PT-220T	500 Min. / 1100 Typ.	22 +50/-30%	0.5 Max.	250 Max.	10.0 Min.	80.00
GTHW3225PT-510T	1000 Min. / 2600 Typ.	51 +50/-30%	0.7 Max.	200 Max.	10.0 Min.	80.00
GTHW3225PT-101T	2200 Min. / 5100 Typ.	100 +50/-30%	1.5 Max.	150 Max.	10.0 Min.	80.00
GTHW3225PT-201T	7000 Min. / 10000 Typ.	200 +30/-10%	1.5 Max.	70 Max.	10.0 Min.	80.00

\*Test Condition: @10MHz , 25oC Ambient

\* I<sub>rms</sub>: Rated Current Loading when temperature rise approximately 40oC

\* The parts final operating temperature (Ambient+The parts temperature rise): should not exceed 125oC if under worst case of operating conditions.

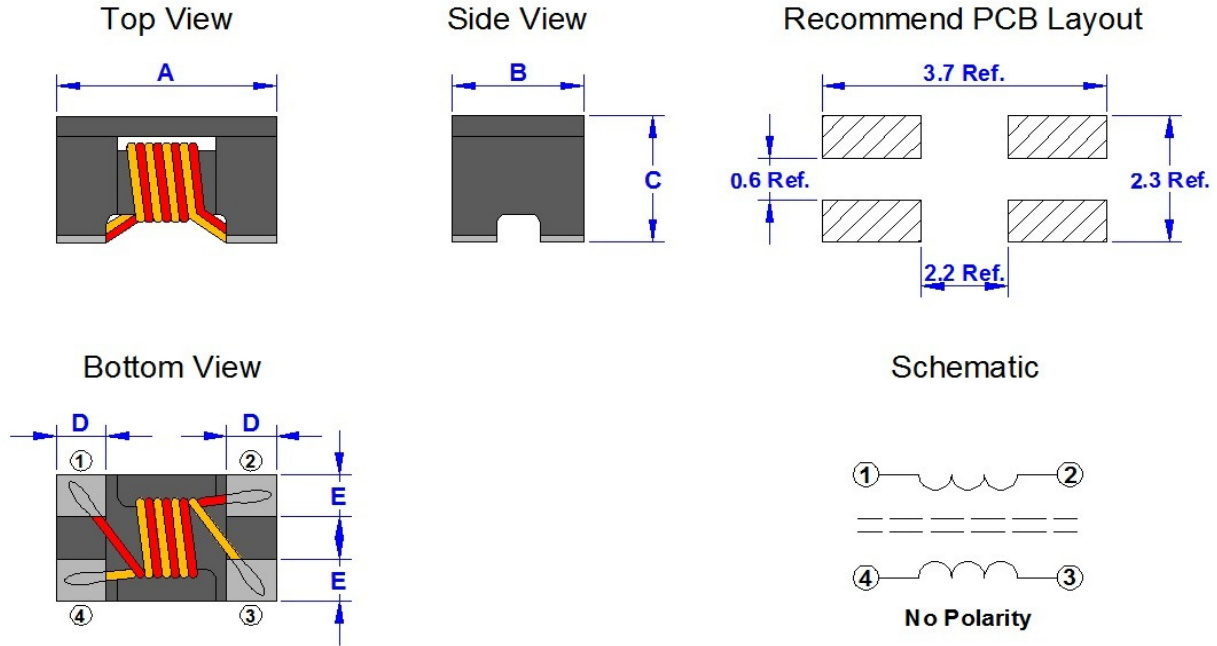
Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provision all affect the part temperature. Part temperature should be verified in the end application.

\* All test data is referenced : 25°C Ambient.

<b>Product Series :</b> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GTHW3225PTL-SERIES

Dimension [ mm ] :



TYPE	A (+/-0.2)	B (+/-0.2)	C (Max.)	D (+/-0.15)	E (+/-0.2)
3225	3.30	2.50	2.50	0.55	0.75

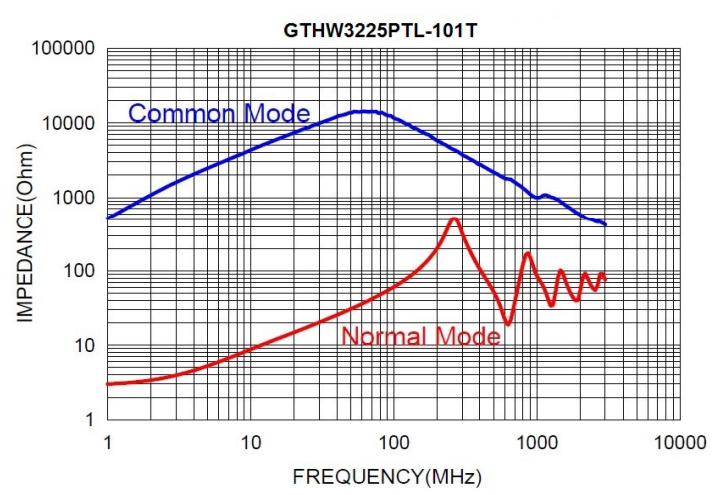
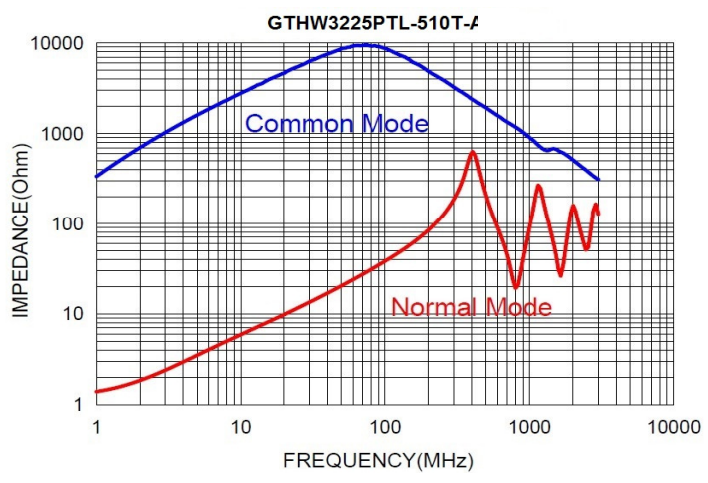
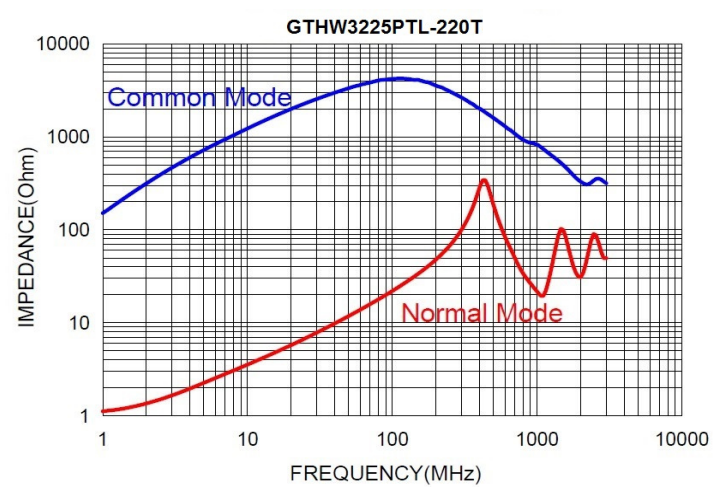
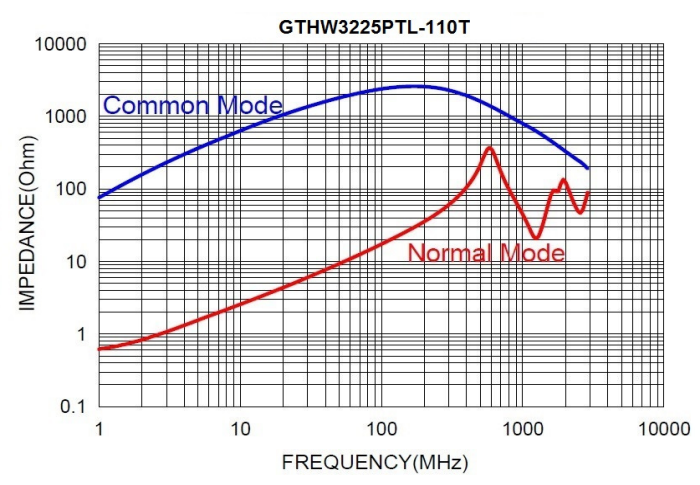
### Electrical Characteristics :

Part No.	Common Mode Impedance (Ohm)@10MHz		Common Mode Inductance(uH) @100KHz	Rated Voltage ( Vdc )	DCR (Ohm) (Max.)	Rated Current(mA) (Max.)	Insulation Resistance (M Ohm)
	Min.	Typ.	+50% / - 30%				
GTHW3225PTL-110T	300	550	11.0	80 Max.	0.4	300	10 Min.
GTHW3225PTL-220T	500	1100	22.0	80 Max.	0.5	250	10 Min.
GTHW3225PTL-510T	1000	2600	51.0	80 Max.	0.7	200	10 Min.
GTHW3225PTL-101T	2200	5100	100.0	80 Max.	1.5	150	10 Min.

\* **Rated Current** : based on increasing product temperature : Current when temperature of the product reaches +40 ℃ .

<b>Product Series :</b> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

**Typical Performance Curves :**

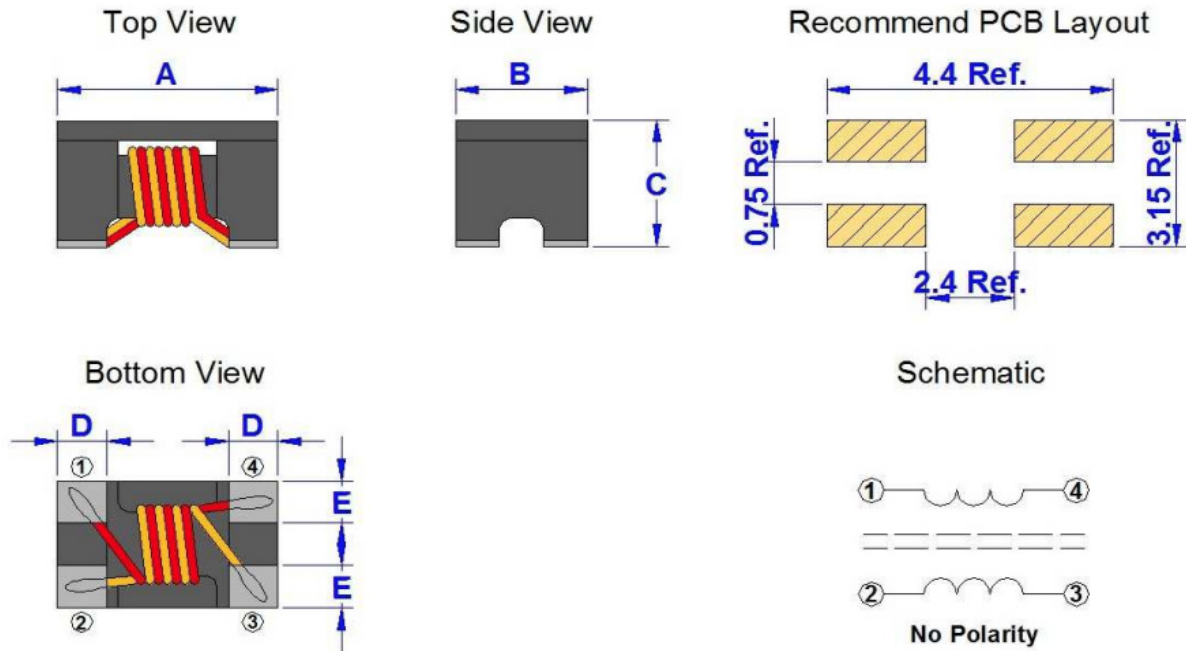




<b>Product Series :</b> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GTHW4532PHL-SERIES

Dimension [ mm ] :



TYPE	A (+/-0.2)	B (+/-0.2)	C (+/-0.2)	D (Typ.)	E (Typ.)
4532	4.50	3.20	2.80	1.00	1.20

#### Electrical Characteristics :

Part No.	Common Mode Impedance(Ohm) @10MHz		Common Mode Inductance(uH) @100KHz	Rated Voltage V( DC )	DCR (Ohm) (Max.)	Rated Current(mA) (Max.)	Insulation Resistance (M Ohm)
	Min.	Typ.	+50% / - 30%				
GTHW4532PHL-110T	300	700	11.0	50 Typ.	0.6	250	10 Min.
GTHW4532PHL-220T	500	1000	22.0	50 Typ.	1.0	200	10 Min.
GTHW4532PHL-510T	1000	2000	51.0	50 Typ.	1.0	200	10 Min.
GTHW4532PHL-101T	2000	5000	100.0	50 Typ.	3.0	150	10 Min.

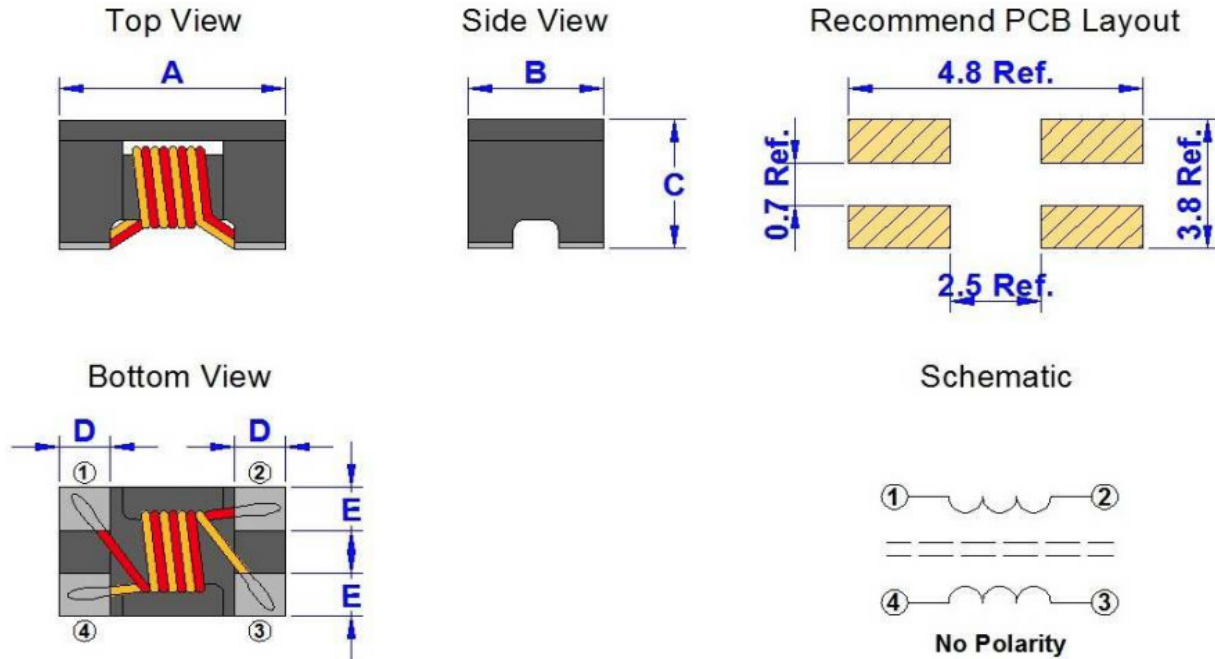
\* **Rated Current based on increasing product temperature :** Current when temperature of the product reaches +40 deg.C .



<b>Product Series :</b> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GTHW4532PT-SERIES

Dimension [ mm ] :



TYPE	A (+/-0.2)	B (+/-0.2)	C (+/-0.2)	D (+/-0.1)	E (+/-0.1)
4532	4.50	3.20	2.80	1.00	1.20

Electrical Characteristics :

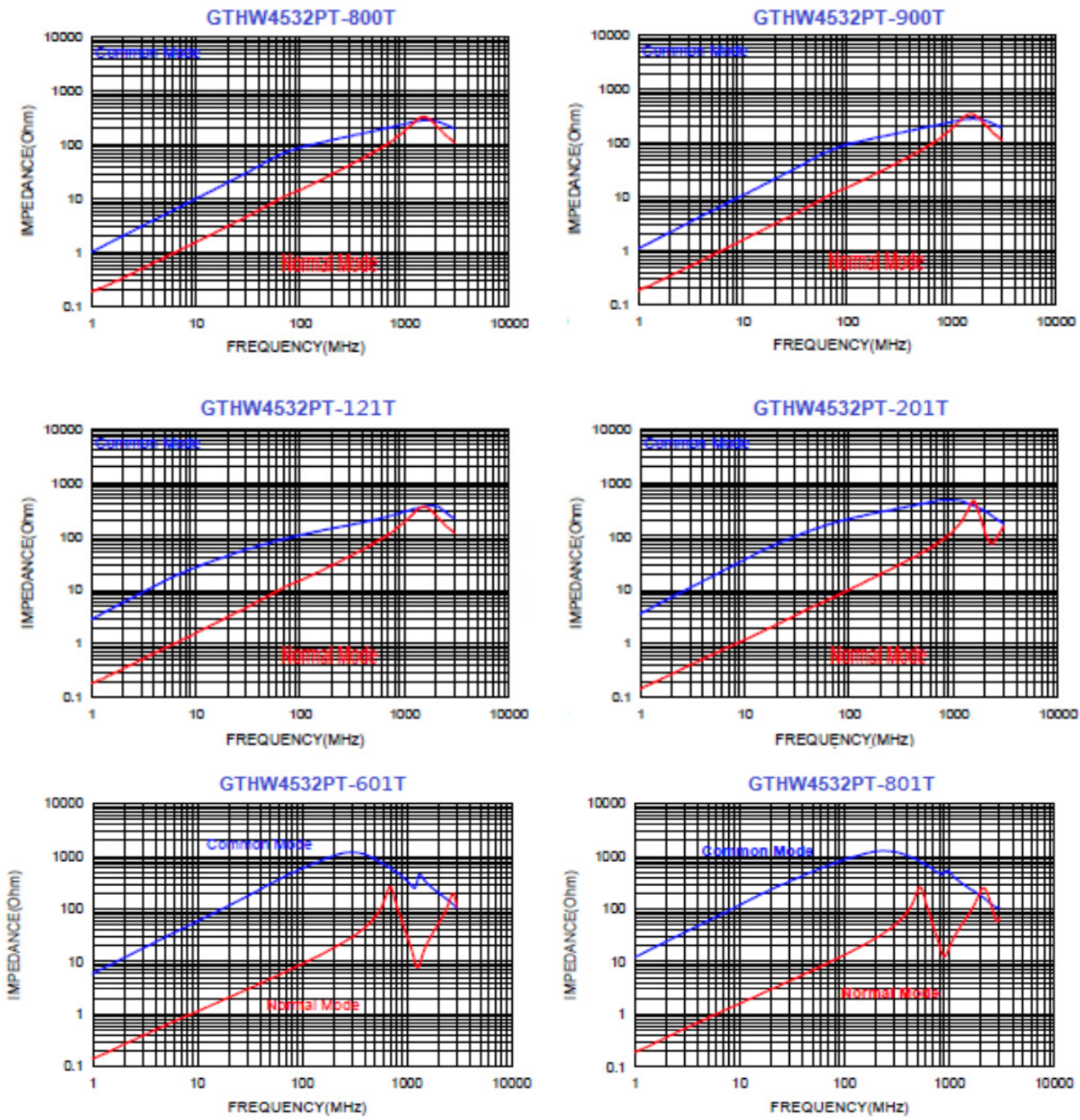
Part No.	Common Mode Impedance(Ohm) @100MHz	Rated Voltage V( DC )	DCR (Ohm) (Max.)	Rated Current(mA) (Max.)	Withstand Volt. (VDC)	Withstand Volt. (VDC)
GTHW4532PT-800T	80 +/-25%	50 Max.	0.05	3000	125 Max.	10 Min.
GTHW4532PT-900T	90 +/-25%	50 Max.	0.05	3000	125 Max.	10 Min.
GTHW4532PT-121T	120 +/-25%	50 Max.	0.05	3000	125 Max.	10 Min.
GTHW4532PT-201T	200 +/-25%	50 Max.	0.10	1500	125 Max.	10 Min.
GTHW4532PT-601T	600 +/-25%	50 Max.	0.24	1500	125 Max.	10 Min.
GTHW4532PT-801T	800 +/-25%	50 Max.	0.24	1000	125 Max.	10 Min.

\* Rated Current based on increasing product temperature : Current when temperature of the product reaches +40 deg.C .

<b>Product Series :</b>	<b>GTHW</b>
<b>File Version :</b>	<b>GTHW-SERIES-V4R3</b>
<b>Established Date :</b>	<b>2009.02.24</b>
<b>Latest Edit Date :</b>	<b>2023.12.04</b>

<b>Brand :</b>	<b>GOTREND</b>
<b>Editor :</b>	<b>Zhenhao Wu</b>
<b>Description :</b>	<b>Common Mode Filter</b>
<b>Product Type :</b>	<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

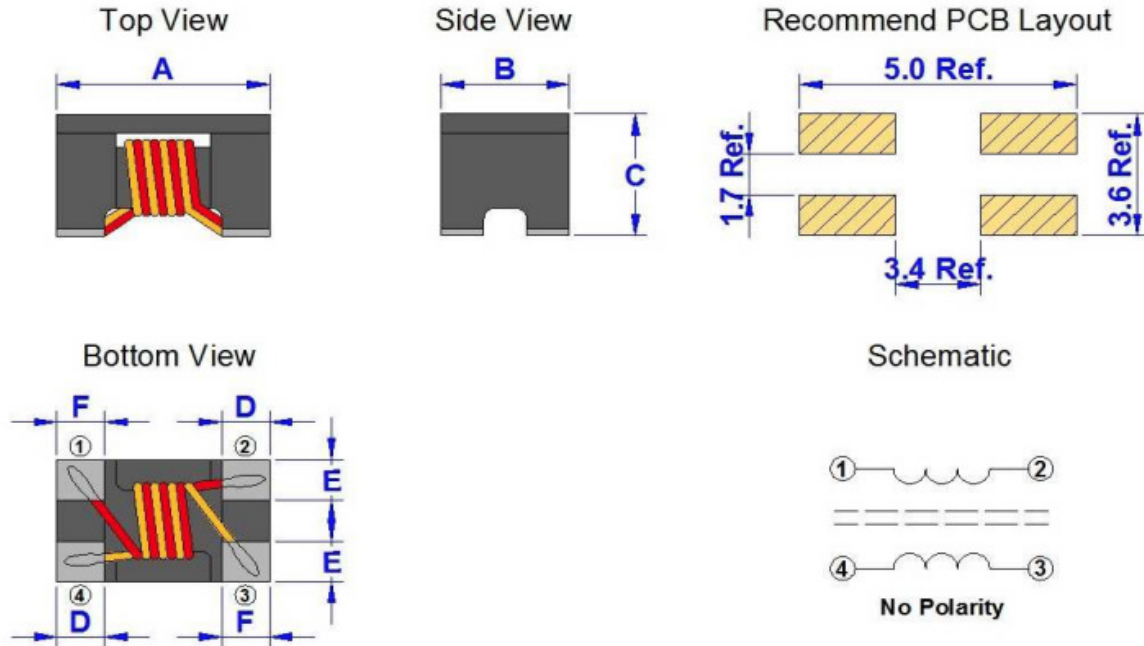
**Typical Performance Curves :**



Product Series : GTHW	Brand : GOTREND
File Version : GTHW-SERIES-V4R3	Editor : Zhenhao Wu
Established Date : 2009.02.24	Description : Common Mode Filter
Latest Edit Date : 2023.12.04	Product Type : <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

### GTHW4532PTL-SERIES

Dimension [ mm ] :



TYPE	A (+/-0.2)	B (+/-0.2)	C (+/-0.2)	D (+/-0.2)	E (+/-0.2)	F (+/-0.2)
4532	4.50	3.20	2.80	0.75	0.85	0.60

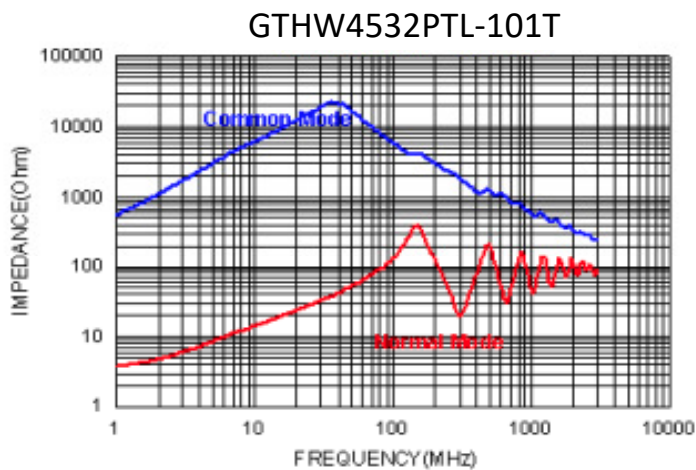
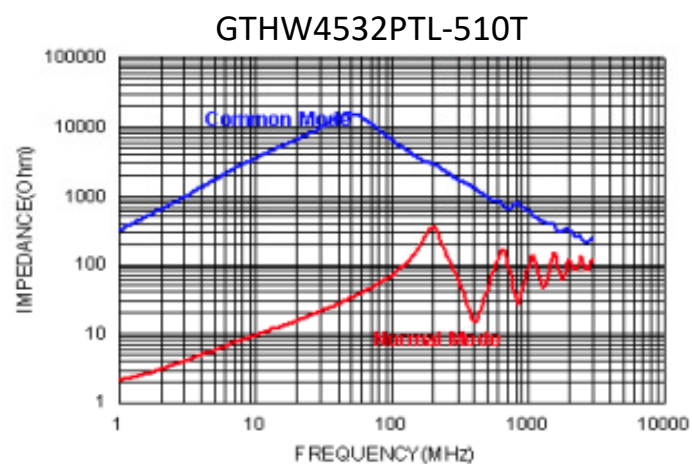
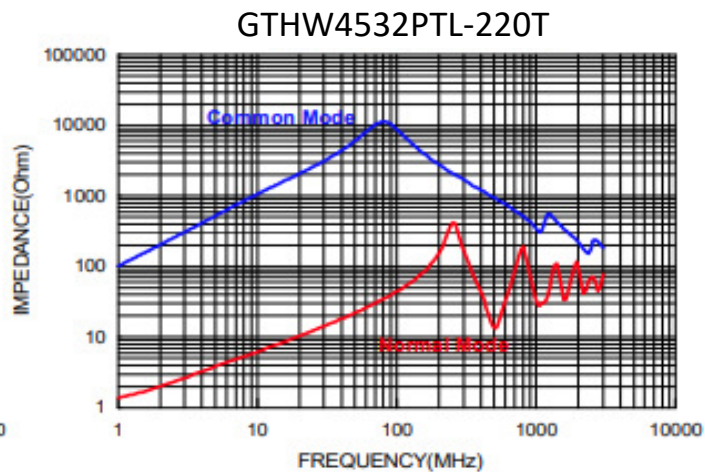
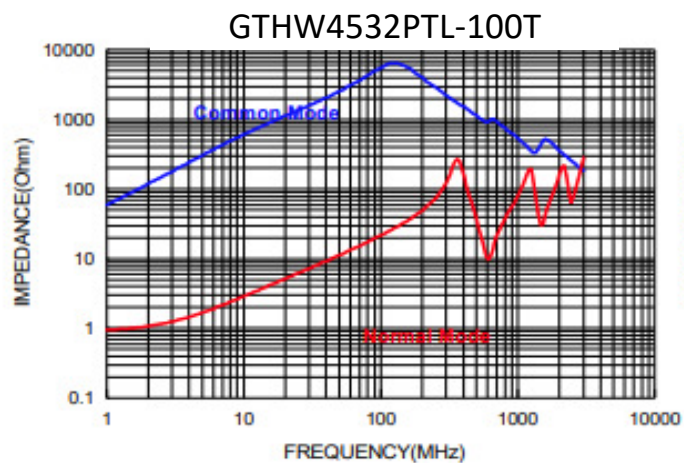
### Electrical Characteristics :

Part No.	Common Mode Impedance(Ohm) @10MHz		Common Mode Inductance(uH) @100KHz	Rated Voltage V( DC )	DCR (Ohm) (Max.)	Rated Current(mA) (Max.)	Insulation Resistance (M Ohm)
	Min.	Typ.	+50% / - 30%				
GTHW4532PTL-110T	300	600	11.0	50 Typ.	0.6	360	10 Min.
GTHW4532PTL-220T	500	1200	22.0	50 Typ.	1.0	310	10 Min.
GTHW4532PTL-510T	1000	2800	51.0	50 Typ.	1.0	230	10 Min.
GTHW4532PTL-101T	2000	5800	100.0	50 Typ.	2.0	200	10 Min.

\* Rated Current based on increasing product temperature : Current when temperature of the product reaches +40 deg.C .

<b>Product Series :</b> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

**Typical Performance Curves :**





<b>Product Series :</b> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<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 :

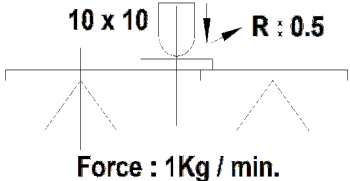
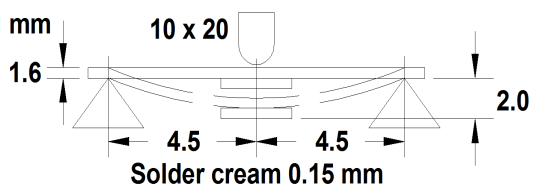
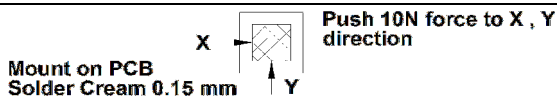
If this product is potted in some compound, coating material of magnet wire might be occasionally damaged. Please ask us if you intend to pot this product.

(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> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

**Reliability :**

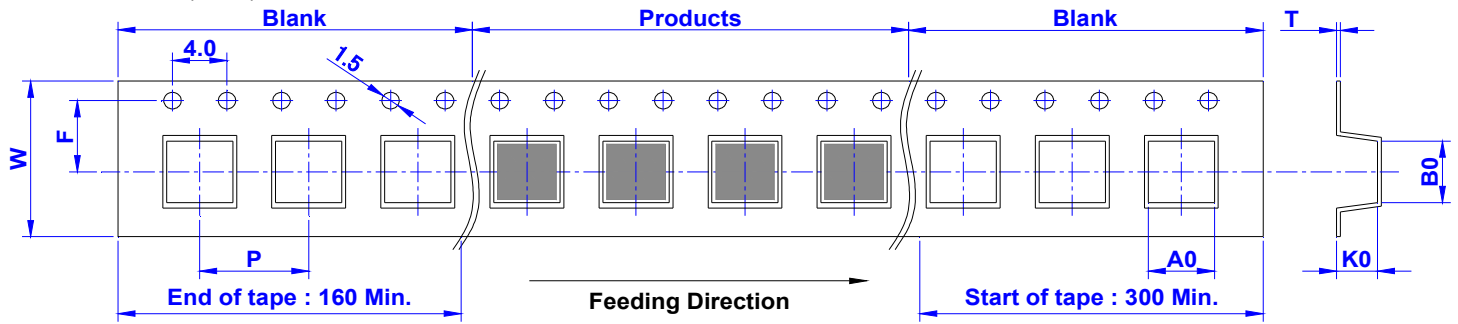
SN	Test Item	Test Condition	Specification		
1	<b>Dimension</b>	Actual Size ...	Meet Spec		
2	<b>Thermal Shock (Temperature Cycle)</b>	Temperature : -40 ~ +125 deg.C kept stabilized for 30 min. each Cycle : 100 Cycles ( power off )	Elec. no variation Appearance no deformation		
3	<b>Humidity Resistance</b>	Humidity : 90% ~ 95% RH Temperature : 60 ± 2 deg.C, Test Time : 96 ± 2 Hours	Elec. no variation Appearance no deformation		
4	<b>High Temperature</b>	Temperature : 125 ± 2 deg.C Testing Time : 96 ± 2 Hours	Elec. no variation Appearance no deformation		
5	<b>Low Temperature</b>	Temperature : -40 ± 2 deg.C Time : 96 ± 2 Hours	Elec. no variation Appearance no deformation		
6	<b>Temperature and Humidity Cycle</b>	Temperature	Humidity	Time	Elec. no variation Appearance no deformation
		25 deg.C	90% ~ 95% RH	3.0 Hr	
		55 deg.C	95% ~ 96% RH	5.0 Hr	
		25 deg.C	90% ~ 95% RH	3.0 Hr	
		Cycle : 20 Cycles			
7	<b>Vibration</b>	Frequency : 10Hz ~ 55Hz, Amplitude : 1.5 mm Direction : X, Y, Z, Time : 2 Hours each	Elec. no variation Appearance no deformation		
8	<b>Solderability</b>	Go through real SMT IR-Reflow ... The profile like our suggest profile. Preheat : 160 ± 10 deg.C ( 90 sec ) Peak : 245 ± 5 deg.C Peak Time : 50 Sec. / up 217 deg.C	Elec. no variation Appearance no deformation		
9	<b>Soldering Heat Resistance</b>	Preheat : 160 ± 10 deg.C ( 90 sec ) Solder : Sn / Ag / Cu ( Pb Free ) Solder Temp. : 260 ± 5 deg.C, Time : 3 ± 1 seconds	Elec. no variation Appearance no deformation		
10	<b>Iron Solder Heat Resistance</b>	Solder Temp. : 350 ± 5 deg.C Flux : Rosin, Time : 3 ± 1 seconds	Elec. no variation Appearance no deformation		
11	<b>Bending Strength</b>	Unit : mm  Force : 1Kg / min.	Elec. no variation Appearance no deformation		
12	<b>Flexure Strength</b>	Unit : mm  Solder cream 0.15 mm	Elec. no variation Appearance no deformation		
13	<b>Terminal Strength</b>	 Mount on PCB Solder Cream 0.15 mm Push 10N force to X, Y direction	Elec. no variation Appearance no deformation		
14	<b>High-Voltage</b>	100 V DC between core & winding	Elec. no variation Appearance no deformation		
15	<b>Load life</b>	Temperature : 25 ± 3 deg.C Load : Allowed DC Current, Test Time : 96 ± 2 Hours	Elec. no variation Appearance no deformation		



<b>Product Series :</b> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

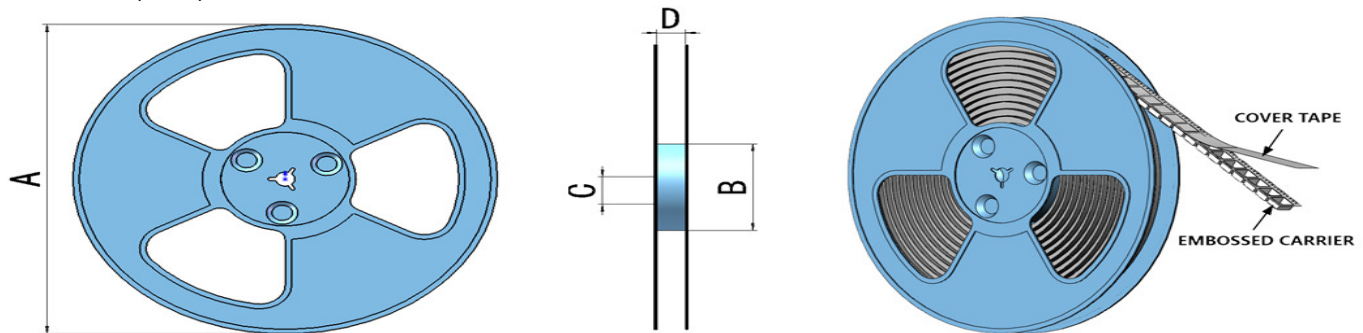
**Packaging Information :**

Tape Dimension ( mm )



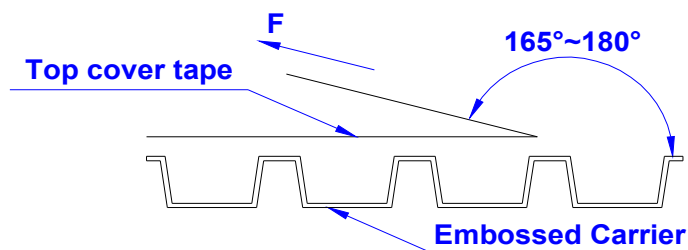
SIZE/mm	W	P	A0	B0	K0	T	F
2012	8.00	4.00	1.54	2.32	1.35	0.23	3.50
2012PC	8.00	4.00	1.50	2.35	1.45	0.28	3.50
2520	8.00	4.00	2.45	3.1	1.4	0.23	3.50
3216	8.00	4.00	1.94	3.54	2.10	0.30	3.50
3225PA	8.00	4.00	2.88	3.65	2.50	0.23	3.50
3225PM	8.00	4.00	2.88	3.72	2.50	0.26	3.50
3225PT	8.00	4.00	2.88	3.65	2.50	0.26	3.50
3225PTL	8.00	4.00	2.88	3.72	2.50	0.26	3.50
4532	12.00	8.00	3.60	4.90	3.00	0.26	5.50

Reel Dimension ( mm )



SIZE/mm	Reel Size	A	B	C	D	QTY / Reel
2012	7" x 8 mm	178	60	13	8.5	2000 PCS
2012PC	7" x 8 mm	178	60	13.5	9	2000 PCS
2520	7" x 8 mm	178	50	13	8.4	2000 PCS
3216	7" x 8 mm	178	60	13	8.5	2000 PCS
3225PA	7" x 8 mm	178	60	13	9	2000 PCS
3225PM	7" x 8 mm	180	60	13	8.4	1000 PCS
3225PT	7" x 8 mm	178	60	13.5	9	2000 PCS
3225PTL	7" x 8 mm	178	60	13.5	9	2000 PCS
4532	7" x 12 mm	178	60	13.5	13.5	500 PCS

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 4.11 standard ).

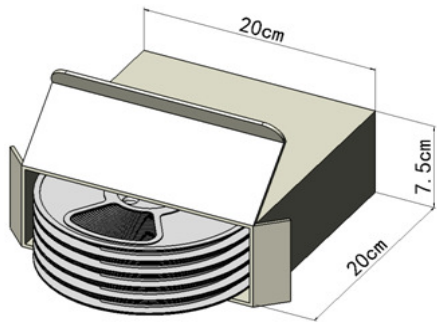
Room Temp. ( °C )	Room Humidity ( % )	Room Atm. ( hPa )	Tearing Speed ( mm / min )
5 ~ 35	45 ~ 85	860 ~ 1060	300

<b>Product Series :</b> GTHW	<b>Brand :</b> GOTREND
<b>File Version :</b> GTHW-SERIES-V4R3	<b>Editor :</b> Zhenhao Wu
<b>Established Date :</b> 2009.02.24	<b>Description :</b> Common Mode Filter
<b>Latest Edit Date :</b> 2023.12.04	<b>Product Type :</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Customize

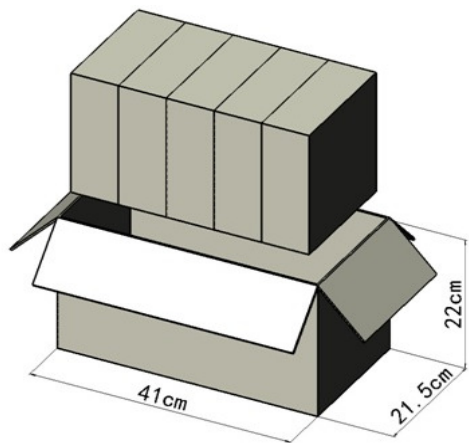
**Packaging Information :**

Box Package

7" Small Box



7" Large Box



SIZE/mm	Reels in Small Box	Small Box in Large Box
2012	5	5
2012PC	5	5
2520	5	5
3216	5	5
3225PA	5	5
3225PM	5	5
3225PT	5	5
3225PTL	5	5
4532	5	5