Product Series :	GW	Brand :	GOTREND
File Version :	GW05843PT-09A11RTC-V1R0	Editor :	HaiFeng Liang
Established Date :	2023.04.20	Description :	Wireless Charging Coils
Latest Edit Date :	2023.08.23	Product Type :	□ Standard     ☑ Customize

## **Version Information:**

SN	Date	Version Code	Modify Description	Editior	Choke
01	2023.04.20	V0R9	Original build	HaiFeng Liang	Toby Zhang
02	2023.08.23	V1R0	Add Q specification definition 40.0 Min.	HaiFeng Liang	接大风

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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
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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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- ♦ 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 °C ±5 °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:

- \* High permeability shielding for wireless charging coils
- \* Blocks charging flux from sensitive components or batteries
- \* High saturation powered iron not affected by permanent locating magnets
- \* Durable construction

#### Part No. Example:

PN	:	GW	05843	Р	Т.	09	A11	R	Т	С		
											Basic Informa	tion :
ID	:	1	2	3	4	5	6	7	8	9		
1	:	Product 0	Code : GW	'							Made in	China
2	:	Size Cod	e: 05843	= 58.0	x 4.3	mm					Pin Foot	DIP
3	:	P = Pb Fi	ree < 1000	) ppm							Shielding	Yes
4	: Product Code : GW : Size Code : 05843 = 58.0 x 4.3 mm		J-STD-020	MSL Level 1								
5	:	Wire Size	e: 09 = 1F	x 0.9	mm (	( 0.08 m	nm x 65P)				RoHS	Compliant
6	:	Coil Cour	nt and Turi	ns : A	11 = 1	Coil by	/ 11.0 Turr	าร			REACH	Compliant
7	:	Wire Typ	e : R = Sill	c Cov	ered L	itz Wire	)				Halogen	Free
8	:	T : Mater	ial Code								-	

#### **Operating & Storage Condition:**

C: Carrier

\* Operating Temp -40 ~ +85  $^{\circ}$ C (Including self - temperature rise) 1. -10 ~ +45  $^{\circ}\mathrm{C}$  , 50 ~ 60% RH ( Product with taping ) \* Storage Temp

2.  $-40 \sim +85 \%$  (On board) \* Storage Life Time 6 Month (Less than 40 ℃ and 60% RH)

Attention & Caution:

\* Keep out of Splashing water or salt water

\* Avoid Toxic Gas (Hydrogen sulfide, Sulfurous acid, Chlorine, Ammonia)

Vibrations or shocks which exceed the specified condition

Dew condense Layout near the edge of PCB

Over flexure after SMT mounting & PCBA

- \* Pin foot or SMD pad solderablility: 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, DCR, IDC HP8753D Network analyzer - SRF

\* Standard Atmosphere Conditions:

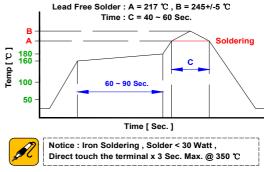
Ambient Temperature 20 ± 15 ℃ Humidity RH 65 ± 20%

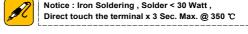
\* If there may be any doubt on the test result,

Measurement shall be made within the following limits:

Ambient Temperature 25 ± 5 °C Humidity RH 75 ± 10%

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

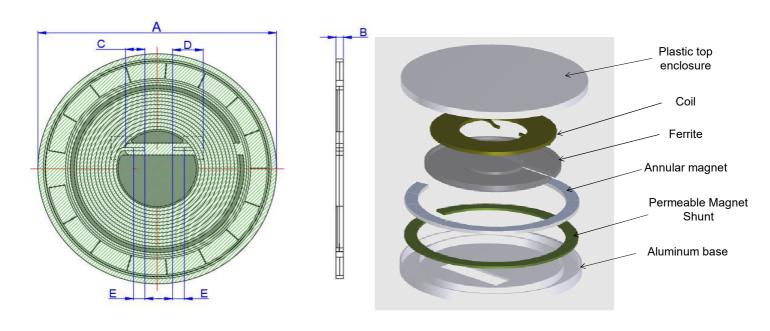




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### GW05843PT-09A11RTC

## Dimension [ mm ] :



This spec. is mainly for Gotrend reserve the right to do design change.

Α	В	С	D	Е	
58.0+/-0.5	4.3+/-0.3	5.7+/-1.5	9.2+/-1.5	3.0+/-1.5	

## **Electrical Characteristics:**

Part No.	Inductance (uH)	DCR (m Ω)	Rs ( m Ω )	Q
GW05843PT-09A11RTC	7.20+/-10%	57.0+/-10%	200.0+/-20%	40.0 Min.

<sup>\*</sup> Inductance  $\,\&\,$  Rs  $\&\,$  Q  $\,$  Test Condition @360KHz , 1.0Vrms , 25  $^{\circ}{\rm C}$  Ambient

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#### Care note:

### Care note for Use :

#### (1) Storage Condition:

Temperature 25 to 35  $^{\circ}\mathrm{C}$  , Humidity 45 to 60% RH

## (2) Use Temperature:

- a. Minimum Temperature: -40 °C Ambient temperature of this product.
- b. Maximum Temperature : +85 ℃ The value of temperature including ambient and temperature rise of this product.
- c. Reliability test temperature range from -40  $\sim$  +85  $^{\circ}$ 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.

ge : 5 / 6 Email : service@gotrend.com.tw

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# Reliability:

SN	Test Item		Test Condition	Specification	
1	Dimension	Actual Size		Meet Spec	
2	Thermal Shock (Temperature Cycle)	Cycle: 100 Cycle	(1 /	Elec. no variation Appearance no deformation	
3	Humidity Resistance	Humidity : 90% ~ Temperature : 60	95% RH ) ± 2 ℃,Test Time : 96 ±	2 Hours	Elec. no variation Appearance no deformation
4	HighTemperature	Temperature : 85 Testing Time : 96			Elec. no variation Appearance no deformation
5	Low Temperature	Temperature : -4 Time : 96 ± 2 Ho		Elec. no variation Appearance no deformation	
6	Temperature and Humidity Cycle	Temperature  25 °C  55 °C  25 °C  Cycle : 20 Cycles	Humidity 90% ~ 95% RH 95% ~ 96% RH 90% ~ 95% RH	3.0 Hr 5.0 Hr 3.0 Hr	Elec. no variation Appearance no deformation
7	Vibration		z ~ 55Hz, Amplitude : 1.5 Z, Time : 2 Hours each		Elec. no variation Appearance no deformation
8	Solderability			Elec. no variation Appearance no deformation	
9	High-Voltage	100 V DC betwee	en core & winding	Elec. no variation Appearance no deformation	
10	Load life	Temperature : 25 Load : Allowed D	$5\pm3~^{\circ}\!$	6 ± 2 Hours	Elec. no variation Appearance no deformation

# **Packaging Information:**

