

## FEATURES



- Designed to meet WPC Qi Standard, power transmitter design A11 compliant
- Operating temperature -40°C to +125°C
- Assembled with ferrite plate which is built with WPC listed ferrite material, high Q for maximum power transmission

## APPLICATIONS

- Wireless charger for general electronic device or aftermarket accessories
- Wireless charger for office, residential or public area application
- Wireless charger for power tools or any other devices that need contactless power
- Wireless charging embedded solution for automobile central console, arm rest...etc

## ELECTRICAL SPECIFICATIONS

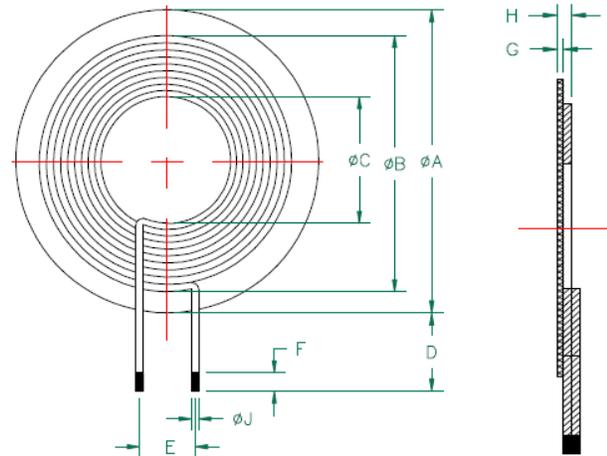
PART NUMBER	INDUCTANCE ( $\mu\text{H} \pm 10\%$ )			DCR Max (m $\Omega$ )	Q @ 100 KHz/1V (MIN)
	MIN	NOM	MAX		
RWC5050AK060-500	5.85	6.50	7.15	50	70

1. Inductance tested at 100KHz,1V
2. Operating temperature range: -40°C ~ +125°C (Including self-heating)
3. Storage temperature range (packaging conditions): -10°C ~ +40°C and RH 70%(MAX)

## SHAPES AND DIMENSIONS

Unit:mm

A	B	C
50.00 $\pm$ 0.50	44.00 $\pm$ 1.50	20.50 $\pm$ 0.50
D	E	F
17.00 Min.	10.00 Ref.	5.00 $\pm$ 2.00
G	H	J
1.00 $\pm$ 0.10	3.00 Max.	1.20 Ref.



## PART NUMBER SYSTEM EXAMPLE

<u>RWC</u>	<u>5050</u>	<u>AK</u>	<u>060</u>	-	<u>500</u>
Coil Type	Part Size Code	Height Code	Inductance Code		Catalog or Custom Information

USA: +1.423.308.1690  
 Europe: +42.0.4885.7511.1  
 Asia: +86.757.2563.8860

MCP-DS-WPC A11 REV1.0 1213

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# Wireless Charging Transmitter Coil Assembly for Wearables and Small Electronic Device



## FEATURES



- Assembled with 3D-shaped ferrite shielding and Litz coil
- For low power application (up to 1.5A or 5W)
- Compatible with tightly coupled charging standard (e.g., WPC)
- Wide operating temperature -40°C to +85°C

## APPLICATIONS

- Wireless power transmitter for wearables, electronic gadgets, smart car keys (FOB), small medical devices that requires contactless charging for convenience, hygiene or water proof
- General low power wireless charging applications requires contoured ferrite for better efficiency in limited space

## ELECTRICAL SPECIFICATIONS

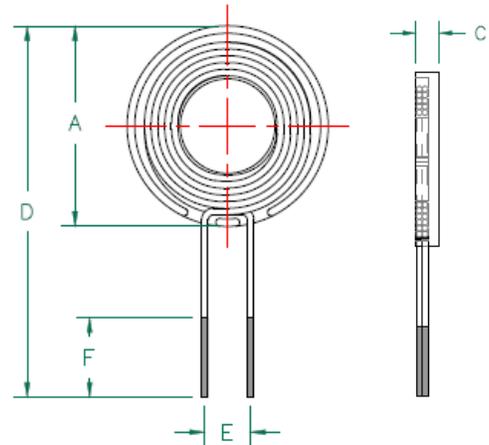
PART NUMBER	INDUCTANCE (μH)			DCR Max (mΩ)
	MIN	NOM	MAX	
RWC2727AH070-300	5.00	5.50	6.00	48.3

1. Inductance tested at 200KHz, 1V
2. Operating temperature range: -40°C ~ +85°C (Including self-heating)
3. Storage temperature range (packaging conditions): -10°C ~ +40°C and RH 70%(MAX)

## SHAPES AND DIMENSIONS

Unit:mm

A	C	D
27.00±0.40	4.20 Max.	49.36±3.00
E	F	
7.00 Typ.	10.00±2.00	



## PART NUMBER SYSTEM EXAMPLE

<u>RWC</u>	<u>2727</u>	<u>AH</u>	<u>070</u>	-	<u>300</u>
Coil Type	Part Size Code	Height Code	Inductance Code		Catalog or Custom Information

USA: +1.423.308.1690  
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Asia: +86.757.2563.8860

MCP-DS-WPC TX COIL ASSEMBLY MODULE 102816

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## FEATURES



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## APPLICATIONS

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- Wireless charger for office, residential or public area application
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## ELECTRICAL SPECIFICATIONS

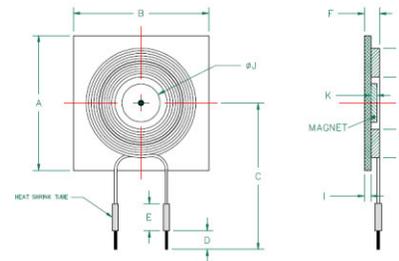
PART NUMBER	INDUCTANCE ( $\mu\text{H} \pm 10\%$ )			DCR Max (m $\Omega$ )	Q @ 100 KHz/1V (MIN)	SATURATION CURRENT (A) MAX	RMS CURRENT (A) MAX
	MIN	NOM	MAX				
RWC5353EJ240-500	21.6	24.0	26.4	75	90	10.0	5.5
RWC5353EJ240-501	21.6	24.0	26.4	75	90	10.0	5.5

- Inductance tested at 100KHz,1V
- Operating temperature range: -40°C ~ +125°C (Including self-heating)
- Storage temperature range (packaging conditions): -10°C ~ +40°C and RH 70%(MAX)
- Unless otherwise specified, the standard atmospheric conditions for measurement/test as:
  - A. Ambient temperature: 20°C±15°C
  - B. Relative humidity: 65%±20%
- Definition of saturation current (ISAT): DC current at which the inductance drops  $\leq 10\%$  from its value without current.
- Definition of temperature rise current (IRMS): DC current that causes the temperature rise ( $\Delta T \leq 40\%$ ) from 20°C ambient.

## SHAPES AND DIMENSIONS

Unit:mm

PART NUMBER	A	B	C
RWC5353EJ240-500	53.00±0.50	53.00±0.50	57.5 Typ.
RWC5353EJ240-501			
PART NUMBER	D	E	F
RWC5353EJ240-500	10.00±2.00	10.0 Typ.	6.7 Max
RWC5353EJ240-501			
PART NUMBER	G	H	I
RWC5353EJ240-500	43.00±1.00	20.50±1.00	2.50±0.40
RWC5353EJ240-501			
PART NUMBER	J	K	
RWC5353EJ240-500	15.00±0.50	2.50±0.50	
RWC5353EJ240-501	/	/	



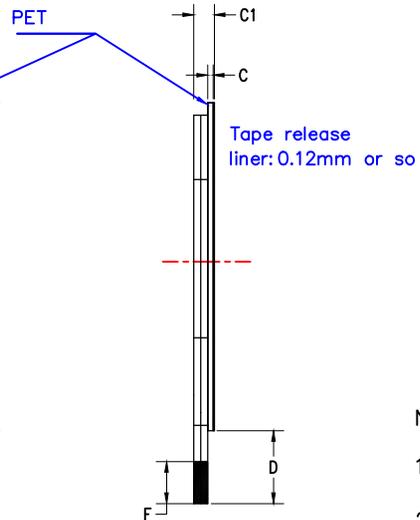
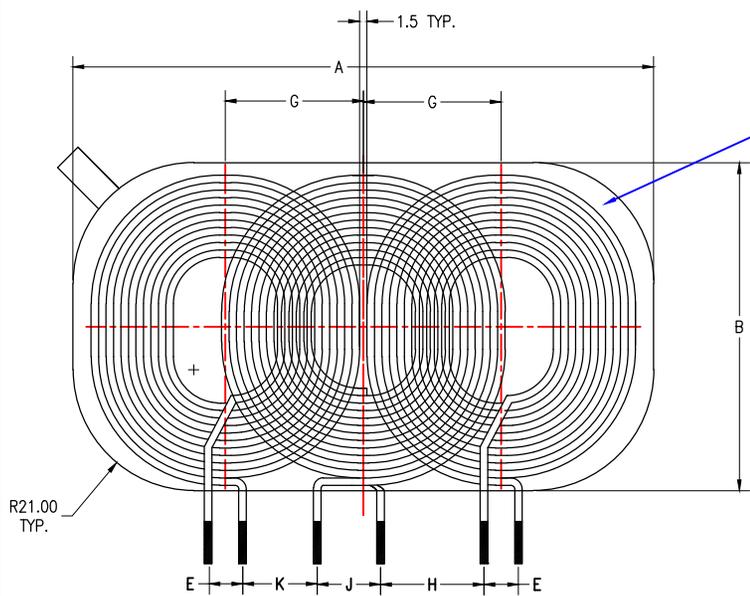
## PART NUMBER SYSTEM EXAMPLE

<u>RWC</u>	<u>5353</u>	<u>EJ</u>	<u>240</u>	-	<u>500</u>
Coil Type	Part Size Code	Height Code	Inductance Code		Catalog or Custom Information

USA: +1.423.308.1690  
 Europe: +42.0.4885.7511.1  
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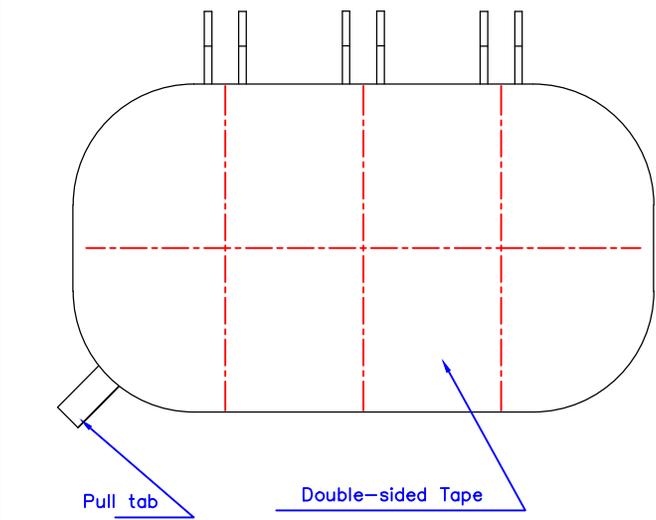


**PHYSICAL DIMENSIONS:**

A	101.00	±	2.00
B	57.00	±	2.00
C	0.90	±	0.10
C1	4.00		Max.
D	8.00	±	2.00
E	6.00		Ref.
F	4.00		Ref.
G	24.40	±	2.00
H	18.40		Ref.
J	11.0		Ref.
K	13.40		Ref.

NOTES: UNLESS OTHERWISE SPECIFIED

1. OPERATING TEMPERATURE RANGE:  
-40°C TO +70°C (INCLUDING SELF-HEATING).
2. STORAGE TEMPERATURE RANGE (PACKAGING CONDITIONS) :  
-10°C TO +40°C AND RH 70% (MAX.)
3. COIL: USTC LITZ WIRE 0.06X200 STRANDS.
4. ▽ NEED CPK>1.33.
5. PET 和 DOUBLE-SIDED TAPE 盖住磁片。
6. 丝包线不能露铜。
7. Tape满足85度要求。



**RoHS**

**ELECTRICAL SPECIFICATION @ 25°C**

	Min	Nom	Max
INDUCTANCE (uH)			
▽ L1,2 & L5,6 100KHz/0.5V (±10%)	8.82	9.80	10.78
INDUCTANCE (uH)			
▽ L3,4 100KHz/0.5V (±10%)	9.18	10.20	11.22
DCR1,2& 5,6 (Ω)			0.060
DCR3,4 (Ω)			0.065

DIMENSIONS ARE IN mm.				This print is the property of Laird Tech. and is loaned in confidence subject to return upon request and with the understanding that no copies shall be made without the written consent of Laird Tech. All rights to design or invention are reserved.			
PROJECT/PART NUMBER: <b>SWC9756AK100-715</b>				REV <b>A</b>	PART TYPE: ---	DRAWN BY: YC	
DATE: 12/17/19				SCALE: 1:1	MATERIAL:		
A	NEW RELEASE	12/17/19	YC	CAD #	---		
REV	DESCRIPTION	DATE	INT	SWC9756AK100-715-A			

