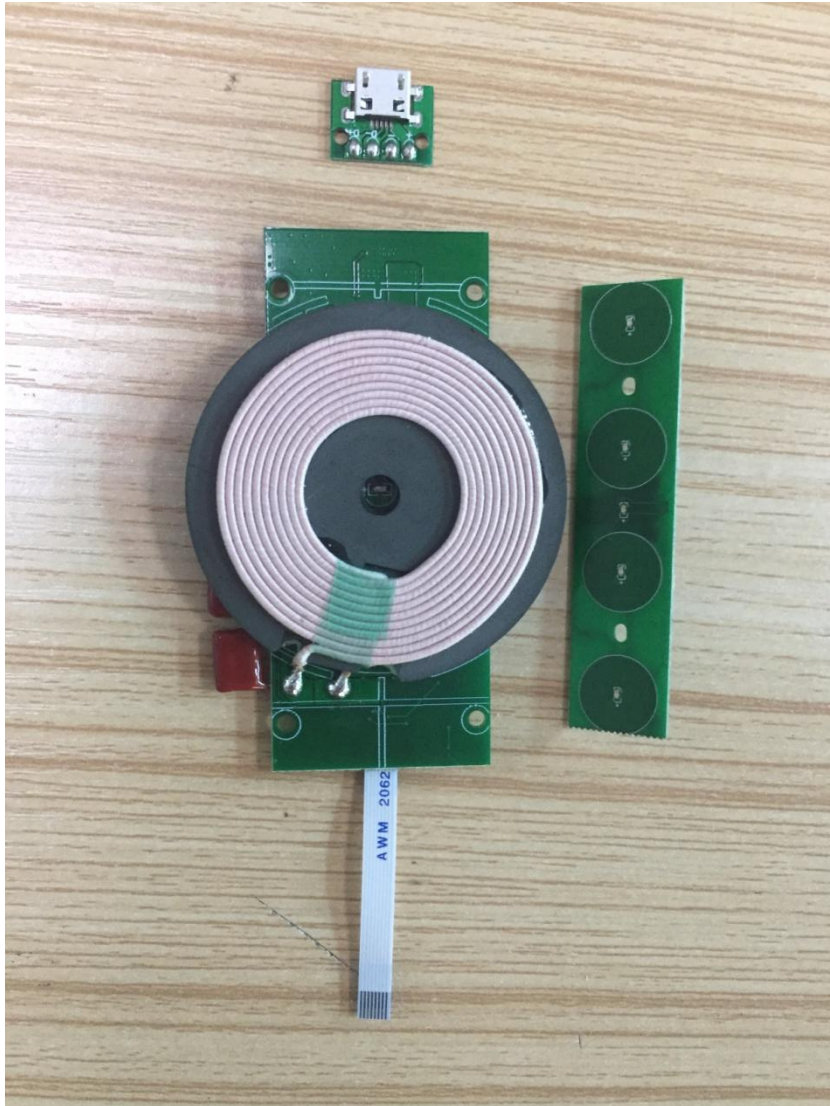

D102W-Z Quick Charge Desk Lamp PCBA Specification



Model: D102W-Z

Version: V2

date: 2019-08-31

1. product description

Using the principle of electromagnetic induction can be used for Samsung's S6Edge\S7\S7Edge\Note5\Note8\S8\S8+\S9\Note9\S10\S20\Note10 Perform fast wireless charging with iPhone8\iphoneX\iPhone11\iPhone12\iPhone13 series, and have good compatibility with 5W wireless charging mobile phones, and can support Qi standard receivers such as Ti, IDT, PANASONIC, etc.

2. Specifications

2.1 maximum rating

parameter	symbol	rated value	unit
Working temperature	Ta	-40~+85	° C
stored temperature	Tstg	-65~+150	° C
storage humidity	Tstr	<95%	RH
supply voltage	Vcc	-0.5~+6.5	V
supply current	Imax	2	A

2.2 Rated parameter

Test conditions: ambient temperature 25° C.

	Test Conditions	rated value	minimum value	maximum value	unit
normal mode power consumption	V _{cc} =5V	100	80	150	mW
working frequency	Adjust load and distance	/	105	189	KHz
transmission efficiency	bq51013xEVM test	70	50	76	%
Operating Voltage	5W output	5	4.5	5.5	V
Operating Voltage	10W output	9	8.5	10	V
Output Power	fast mode	9.5	9	10	W
working distance	bq51013xEVM test	5	2	8	mm

2.3: Other parameters

PCB board size	72.5*30*1.0 mm
Coil + magnet size	73*49.5*2.3 mm Qi A11 single coil



3. LED status indication

After the power is turned on, the LEDs display in sequence:

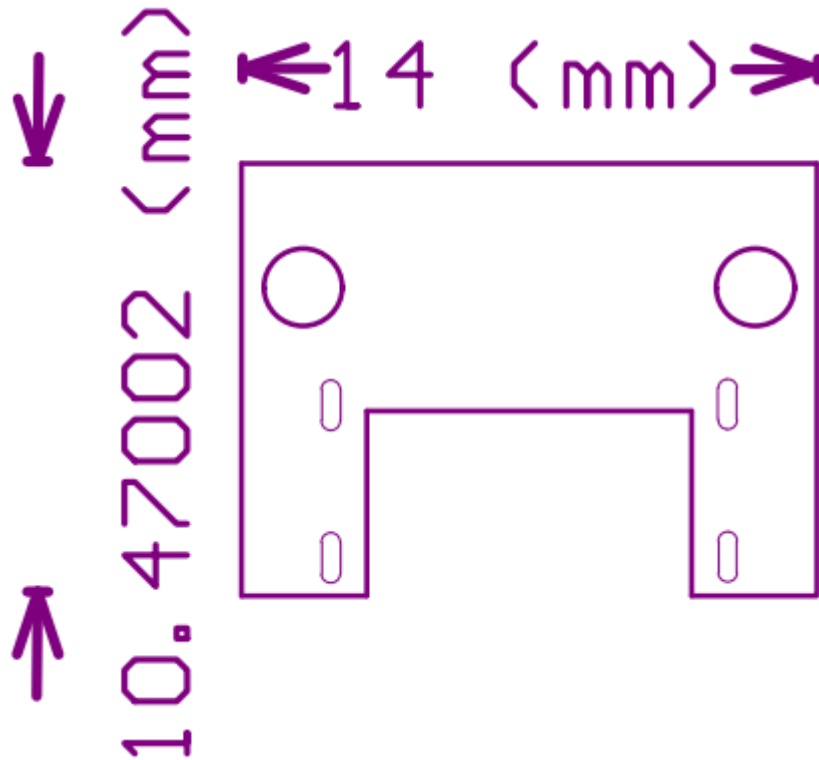
blue, red

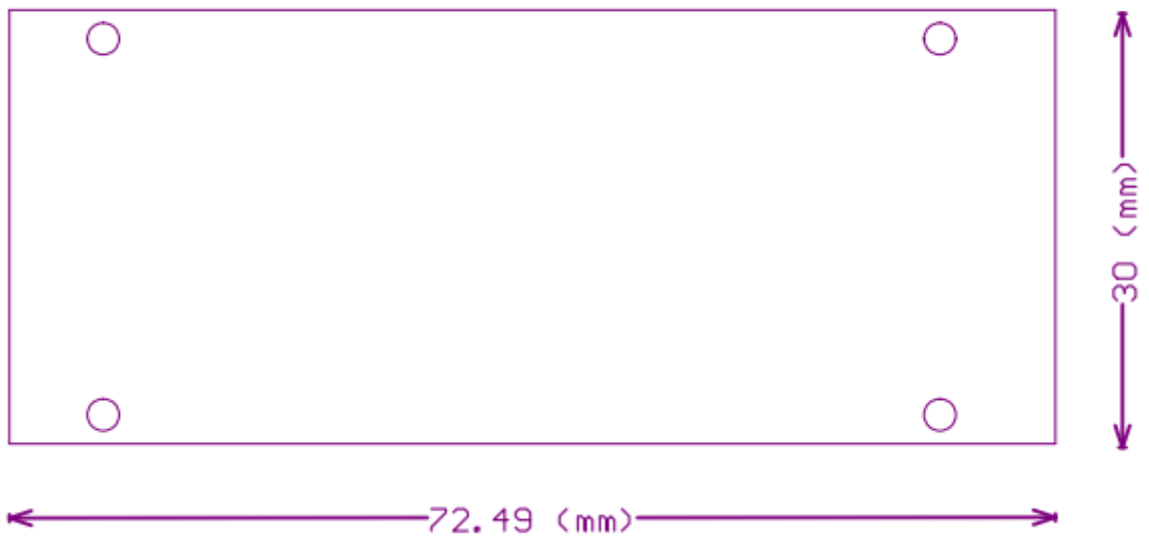
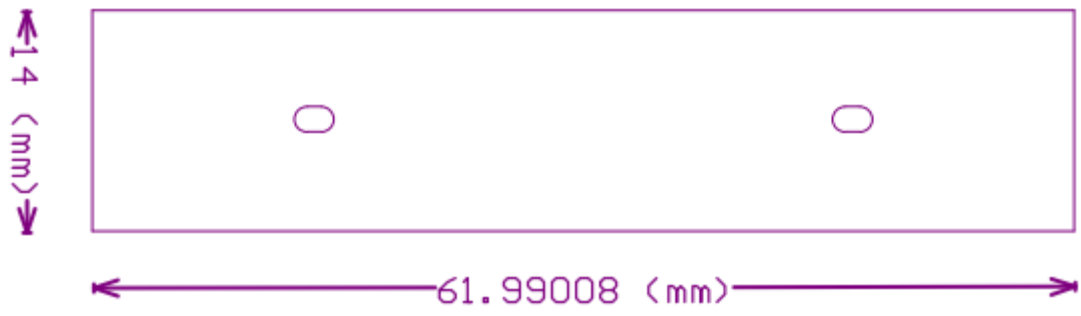
color\status	power on			
	standby	charging	full	wrong
blue	off	always on	off	off

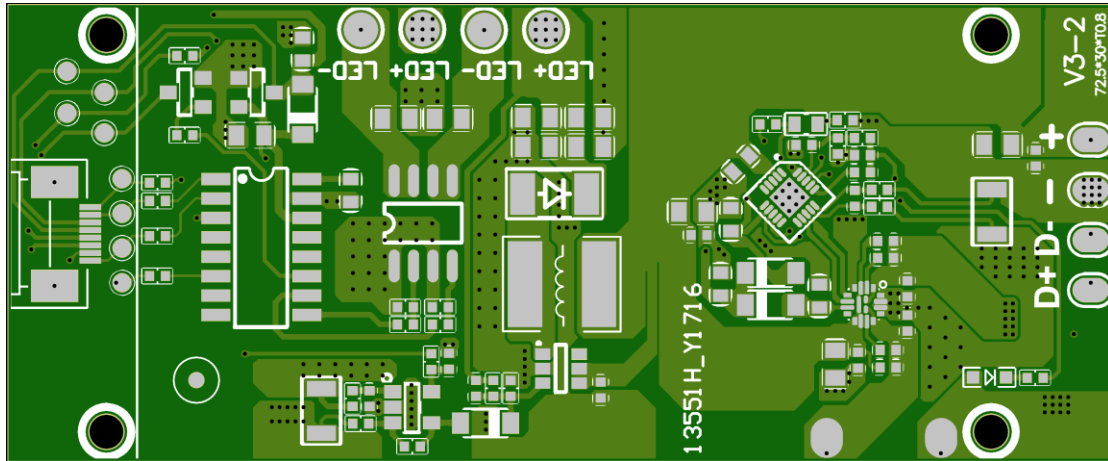
			always	
red	always on	off	on	flash

Error description: There are two situations for errors: one is power-on error: this is an error in the module's own inspection, which may be due to excessive power supply voltage, abnormal temperature check, or coil error. The other is a working process error: mainly to detect foreign objects or excessive temperature.

4. Dimensions

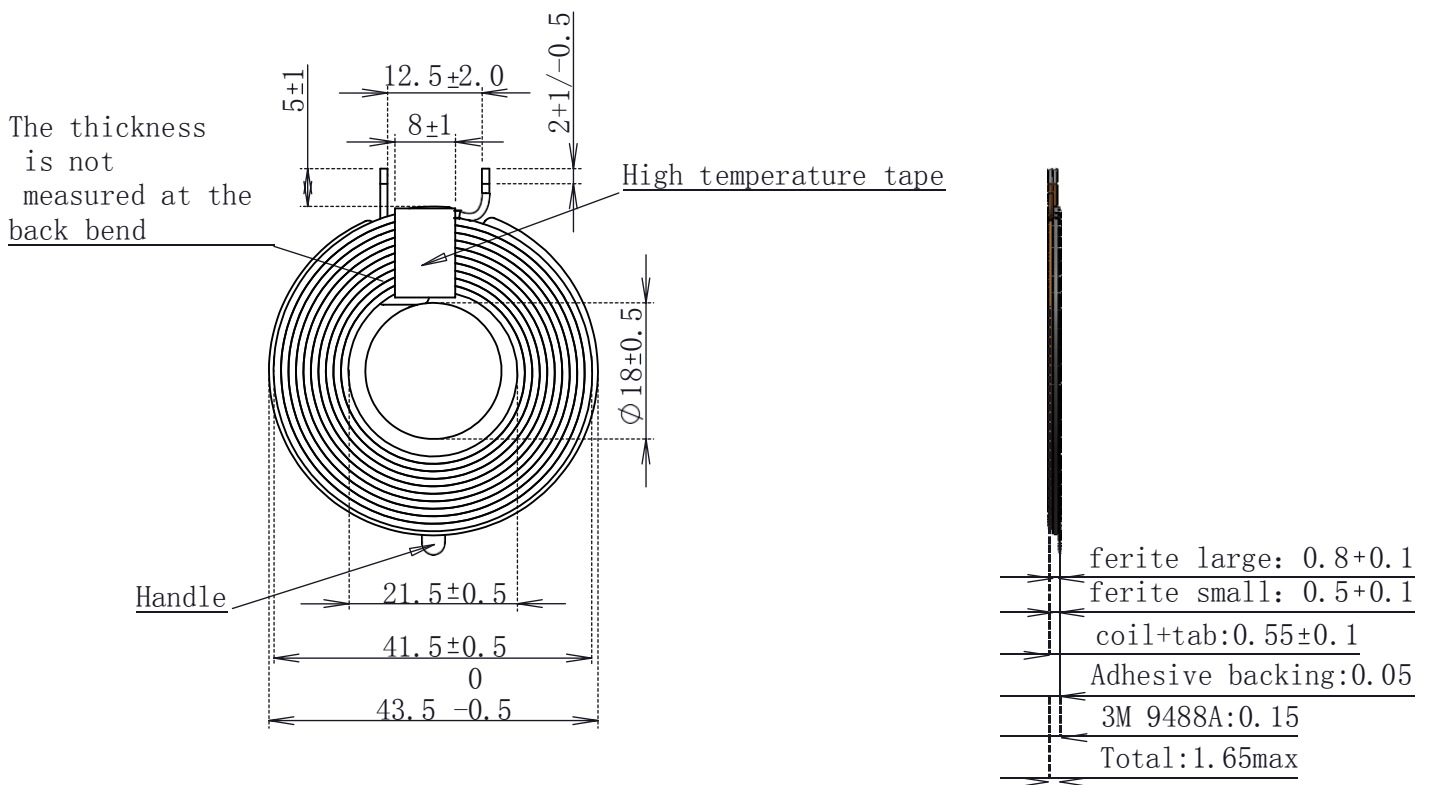






5: lamp part

5.1: Product features: Beautiful and stylish • The light source adopts secondary optical technology • The light is soft and uniform without dark spots and ghosting • Advanced constant current technology, no flicker, protecting eyesight • Built-in Qi standard wireless charger • 4 color temperatures, stepless Dimming • Height can be adjusted freely within 40 cm range • Lamp head can be up and down 120 degrees



Ferrite technical requirements:

1. Use manganese zinc BP40
2. The parts are smooth and clean, and no convex dents shall appear
3. Products must be environmentally friendly

Coil technical requirements:

1. Wire specification: $0.08\text{mm} \times 45\text{P}$ enameled copper wire
2. Coil specifications: COIL, $\text{ID}21.5 \times 21.5 \times 0.08 \times 45\text{P} \times 1\text{P} \times 10\text{TS} \times 0.55 (\text{max})$
3. Cable length $5 \pm 1\text{mm}$; Lead immersion length $2+1/-0.5\text{mm}$.
4. Neat winding, do not damage the surface enamel layer; Appearance requirements: Class 2.
5. Unnoted size according to the drawing file.
6. Unmarked tolerance: wire 0.2mm , R angle 0.5mm .
7. The product meets the requirements of halogen-free and meets the salt spray test 48H.
8. Do not replace materials and surface treatment without permission.
9. The symbol ball on the drawing is the key control dimensioning

Size 10.7 CPK > 0.7

Finished electrical specifications: (@1V 100KHZ)

Finished product (coil + ferrite) LS: $7.0\mu\text{H} \pm 5\%$

DCR: $100\text{m} \Omega (\text{max})$

Q : > TBD

