



# PRODUCT SPECIFICATION

SPEC. No: \_\_\_\_\_

Attn: \_\_\_\_\_

DATE: **June.25.2012**

CUSTOMER PRODUCT NAME:
TDK PRODUCT NAME: <b>WR-444050-17M2-5T-G</b>
THIS SPECIFICATION IS:

## TDK-EPC Corporation

### Head Office Address:

1-13-1, Nihonbashi, Chuo-ku, Tokyo  
103-0027, Japan

### SALES

MANAGER	SALES

### ENGINEERING

APPROVED	CHECKED	ISSUED

Sales Office \_\_\_\_\_

Sales Tel. \_\_\_\_\_

PRODUCT CLASSIFICATION CODE	
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## REVISED HISTORY

CUSTOMER PRODUCT NAME: \_\_\_\_\_

TDK PRODUCT NAME:

**WR-444050-17M2-5T-G**

NO.	REV.	REVISED CONTENT	REVISED REASON	DATE
1	0	To establish specification		2012.06.25
2				
3				

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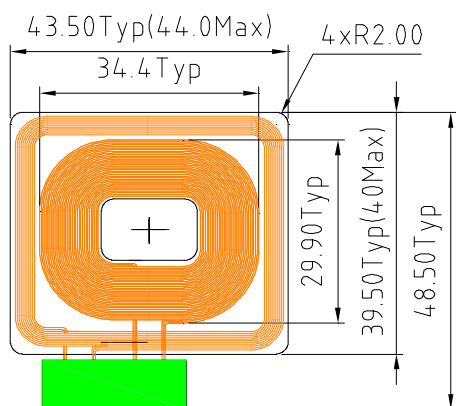
SPEC. NO.

CUSTOMER PRODUCT NAME:

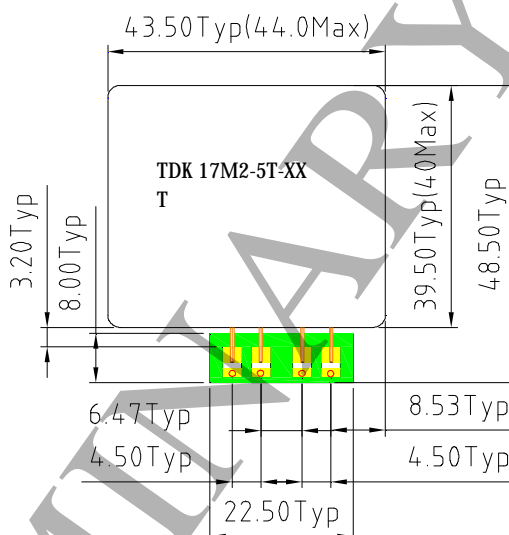
(1) Appearance & Dimensions (Unit: mm)

Weight: 6.2g (Typ.)

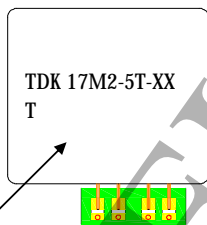
TOP VIEW



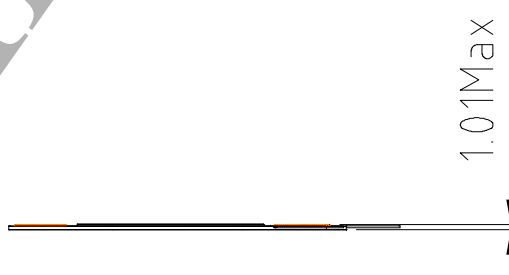
FPC position



TOP VIEW



SIDE VIEW



[ Remarks ]

1. Lead Wire Pitch is the end of wire position, not Output terminal.

2. Marking Content:

a. T: Manufacturing Centers

b. Lot No.: \_\_\_\_\_

(1) (2) (3)

(1) Year: A.D. end number in double

(2) Month: Jan.(01) , Feb.(02)...Dec.(12)

(3) Day: 01,02,03,...31.



# PRODUCT SPECIFICATION

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**WR-444050-17M2-5T-G**

SPEC. NO.

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## (2) WLC Air coil specification

Wire Diameter:  $\phi 0.25 \times 2$  ( Bifilar Winding Coil)

Coil Turns: 17Ts

## (3) WLC electrical Characteristics

No.	Parameter	Specification	Test Instrument
1	Inductance	11.1 $\mu\text{H} \pm$ (TBD)	HP 4284A DIGITAL LCR METER or EQUIVALENT (@ 100kHz 1.0 Vrms)
2	DC Resistance	0.27 $\Omega$ TBD Max (At 25 )	CHEN HWA 502A METER or EQUIVALENT

## (4) Temperature Characteristics

No.	Parameter	Specification
1	Operating Temperature	-30~70
2	Storage Temperature	-40~85

## (5) Application

1. Reflow and dip-flow soldering can not used for this product.
2. The product fit in with RoHS rule.
3. The product fit in with Halogen-Free.

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TDK PRODUCT NAME: <b>WR-444050-17M2-5T-G</b>	SPEC. NO.	CUSTOMER PRODUCT NAME:
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(6) NFC electrical performance characteristics

6-1. Impedance

This data is central value at 13.56 MHz

Composition	Impedance
Only NFC Antenna	32 + j51(ohm)

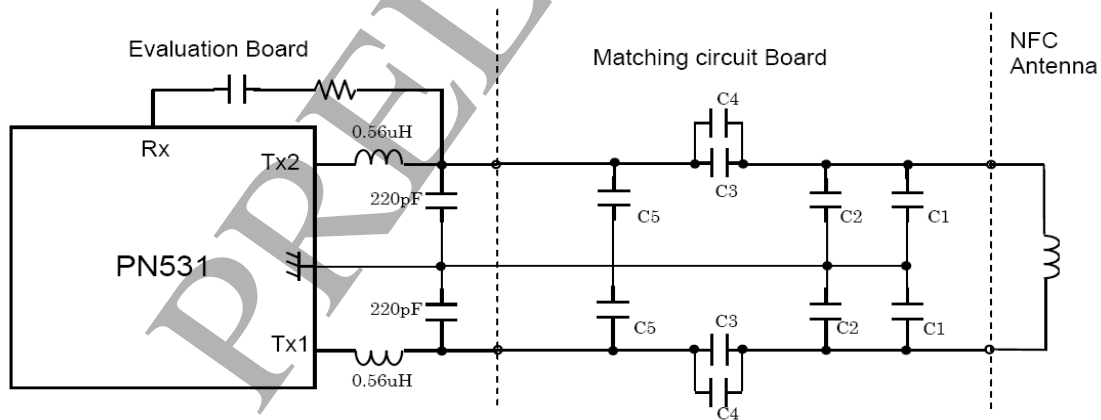
6-2. NFC communication distance

Mode	Composition	Target model
Mifare	Only NFC Antenna	43
Vivo	Only NFC Antenna	49

6-3. NFC Evaluation method

Evaluation board

PN544 evaluation board and operation software is NXP'S design.



	C1	C2	C3	C4	C5
Only NFC Antenna	7	10	47	7	43

# PRODUCT SPECIFICATION

TDK PRODUCT NAME: <b>WR-444050-17M2-5T-G</b>	SPEC. NO.	CUSTOMER PRODUCT NAME:
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## (7) Reliability Conditions

No.	Parameter	Conditions
1	Low Temperature (Storage)	(1) Temperature : -40±2 (2) Time : 240Hrs
2	High Temperature (Storage)	(1) Temperature : +85±2 (2) Time : 240Hrs
3	Thermal Shock (Storage)	(1) Temperature : - 40±5 / 30min ~ + 85±5 / 30min (2) Ambient Time : 5min (3) Times : 100cycles
4	Vibration	Unpacked: (1)frequency:10~500Hz sweep octave wave(1 oct/ min) (2)Amplitude:10G or 1.5mm P-P (3)Testing time : XYZ 2h/axis, total 6h
5	Shock Test	Fixed within the jig (1) Acceleration : 1000m / s <sup>2</sup> (2) Pulse width : 6 msec (3) Direction : ±X , ±Y , ±Z (4) Frequency of shock : 3 times each (Total 18 times)  Half-sine shock (1) 200G, 3ms(Gravity) (2) One shock per face (3) Total 6 shocks
6	Temperature / Humidity (Storage)	(1) Temperature : +60±2 (2) Humidity: 90% RH. (3) Time: 240Hrs
7	Drop Test	(1) Height : 160cm to the concrete floor (fixture weight : 160g ) (2) Direction : 6 directions (3) Times : 3 times / direction
8	Package Drop	(1) Drop the sample package in a carton box. (2) Height : 100 cm (3) Direction : 1corner,3 edges, 6 faces (4) Drop time : 16 times

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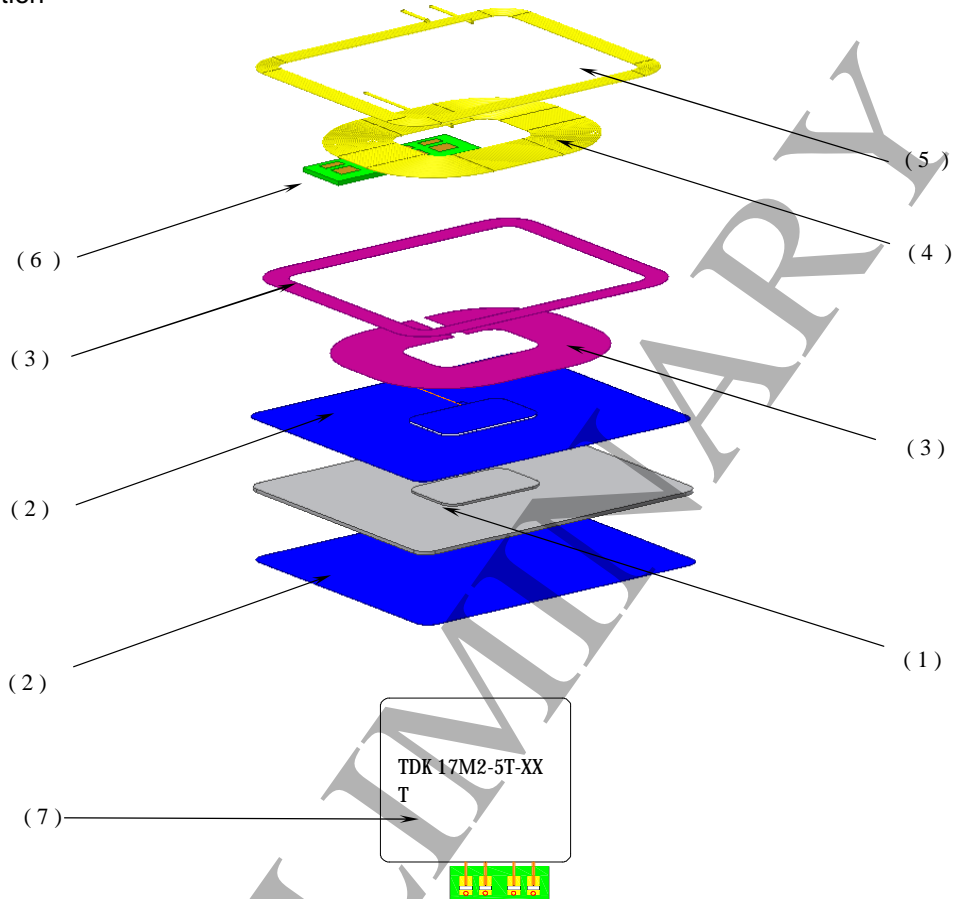
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**WR-444050-17M2-5T-G**

SPEC. NO.

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## (8) Construction



## (9) Material List

No.	Material Name
1	Iron Sheet
2	PET Tape
3	Adhesive Tape
4	WLC Air Coil
5	NFC Air Coil
6	PWB
7	Ink

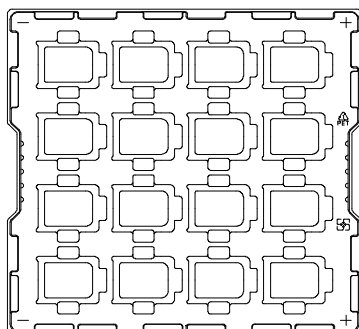
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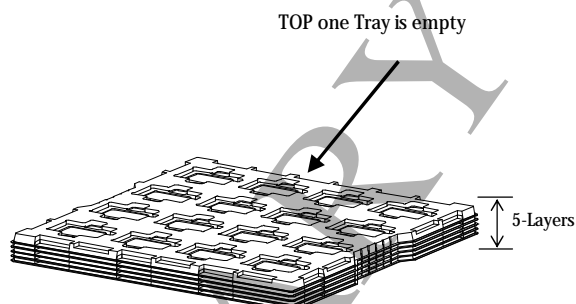
## (9) Packing

1. To stack the the Trays onto 5 Layers. :

- PET tray dimension: 326\*329\*9.5mm (REF.)
- 16 Pcs / per PET tray



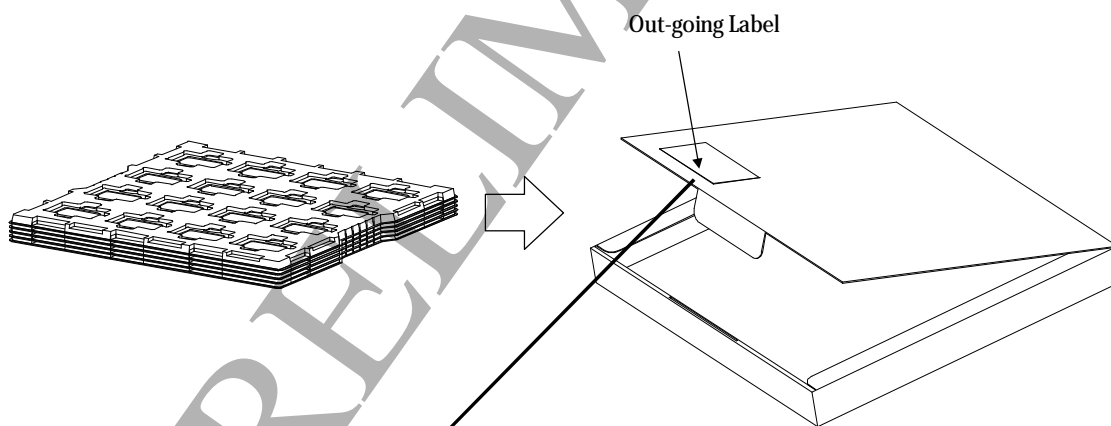
Total : 4x4=16 pcs



Total : 16x4=64 pcs

2. To put 5 Trays of products into the small Carton and affixing the out-going label on the outside .

- Small carton dimension: 331\*337\*33mm (REF.)
- 5 PET Trays / per small carton ( One PET tray of the top side is empty in the small carton)



CUST PROD ID(P): 5 4 H 2 0 3 2 3 - 0 0 M		HTC	<b>SAMPLE</b>
QTY(Q): <b>64</b>		ROHS	
(6P):TXDF10110TWN050009010			
TDK ITEM(1P): WR-443330-14M2-H	VDR(V):TDK		
LOT NO(1T): WL11K06001 + M0001	DATE CODE(T): <b>1143</b>	0001	
2012/05/11	MADE IN TAIWAN	001/014	12296A1181
(ITEM:WR - 443330 - 14M2 - H)	(1M)TTXDF10110	TDK TAIWAN CORPORATION	(S)

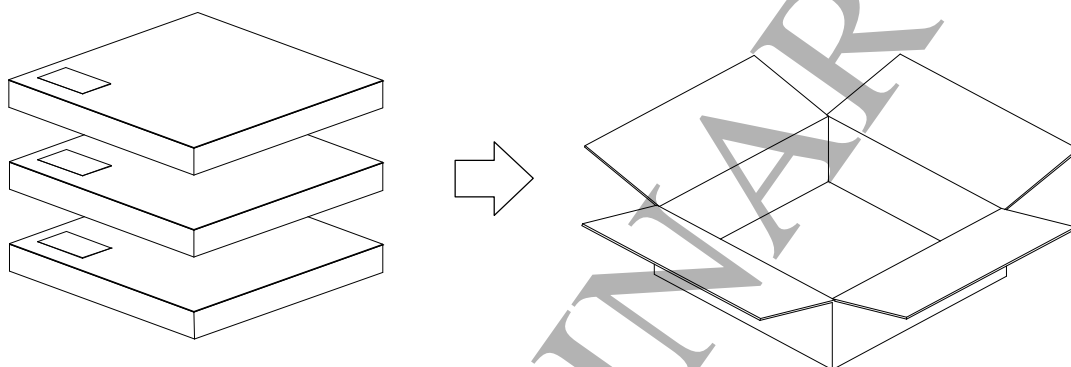
Out-going Label



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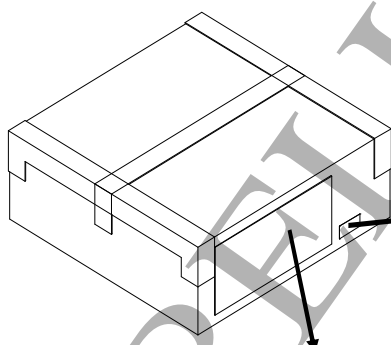
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3. To put 3 small carton into the Carton .
- Outer carton dimension: 347\*340\*124mm (REF.)
  - 3 small cartons / per outer carton
  - Total quantity : 192 Pcs



## 4. Packing.

- To pack the carton by scotch tape and affix out-going label (outside) on it outside.
- The inspection data in the box , there would be a signet mark on it outside.



**INSPECTION DATA  
ENCLOSED**  
檢驗紀錄表在內

(3S) TTTW+WL11K0600200101400000360 		CUSTOMER: <b>HTC</b>	
(6S) C/NO:1		CUST. PART NO(P): 54H20323-00M	
BOX COUNT <b>001/014</b>		TDK ITEM CODE(EP): TXDF10110TWN	
SHIPPING MARK <b>ROHS</b>		P/O NO.(K): 929429 - 10	
<b>SAMPLE</b>		LOT NO.(1T): WL11K06002	
HTC		DATE: May.11.2012	
SHANGHAI		QTY(Q): 182	
<b>MADE IN TAIWAN</b>		TDK ITEM (1P): WR-443330-14M2-H	
WL11K06002		(WR-443330-14M2-H)	
12296A1181		SUB P/O NO.(6K): - 10	
		TDK SPEC.	
C/NO:1	WAREHOUSE NW 3.3	(CT) GW 3.8	TDK TAIWAN CORPORATION YANGMI, TAIWAN
			14  TTXDF10110