



PRODUCT SPECIFICATION

SPEC. No: _____

Attn: _____

DATE: **June.25.2012**

CUSTOMER PRODUCT NAME:
TDK PRODUCT NAME: WR-444050-17M2-5T-G
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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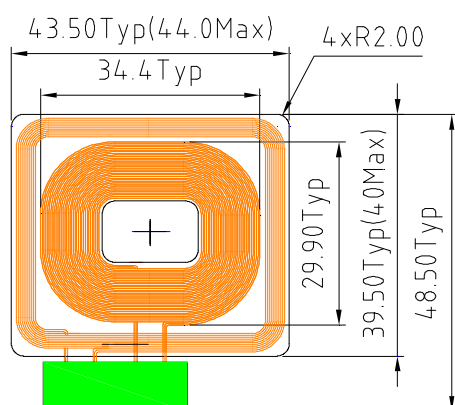
SPEC. NO.

CUSTOMER PRODUCT NAME:

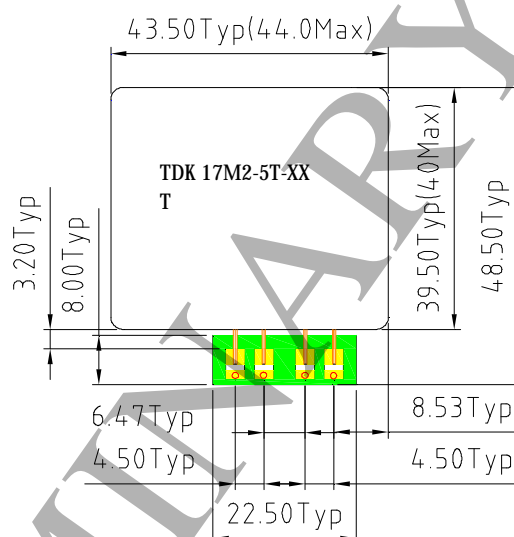
(1) Appearance & Dimensions (Unit: mm)

Weight: 6.2g (Typ.)

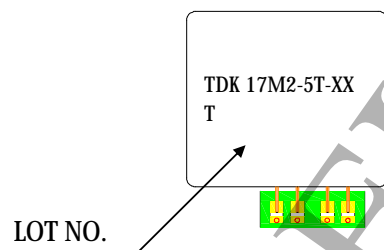
TOP VIEW



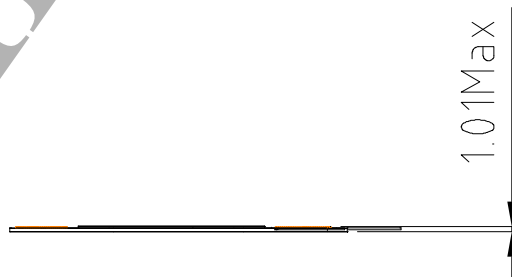
FPC position



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.

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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 Ω 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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(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)

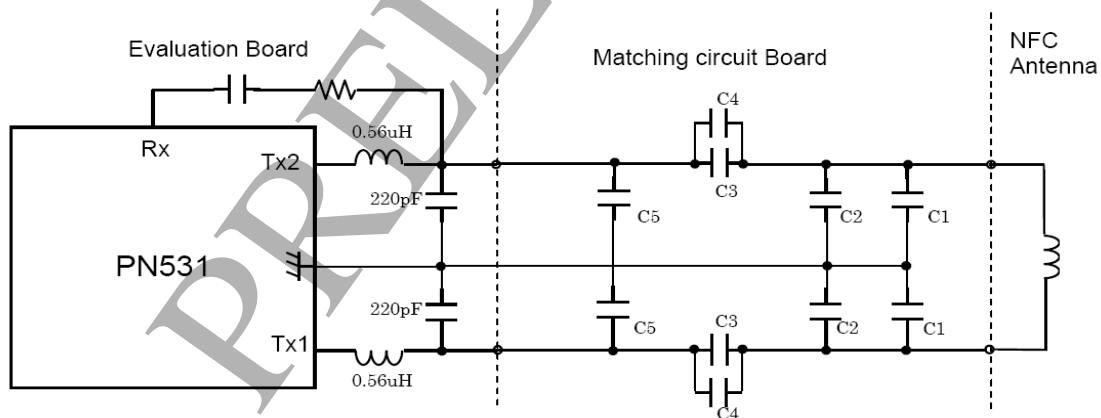
6-2. NFC communication distance

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

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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 ² (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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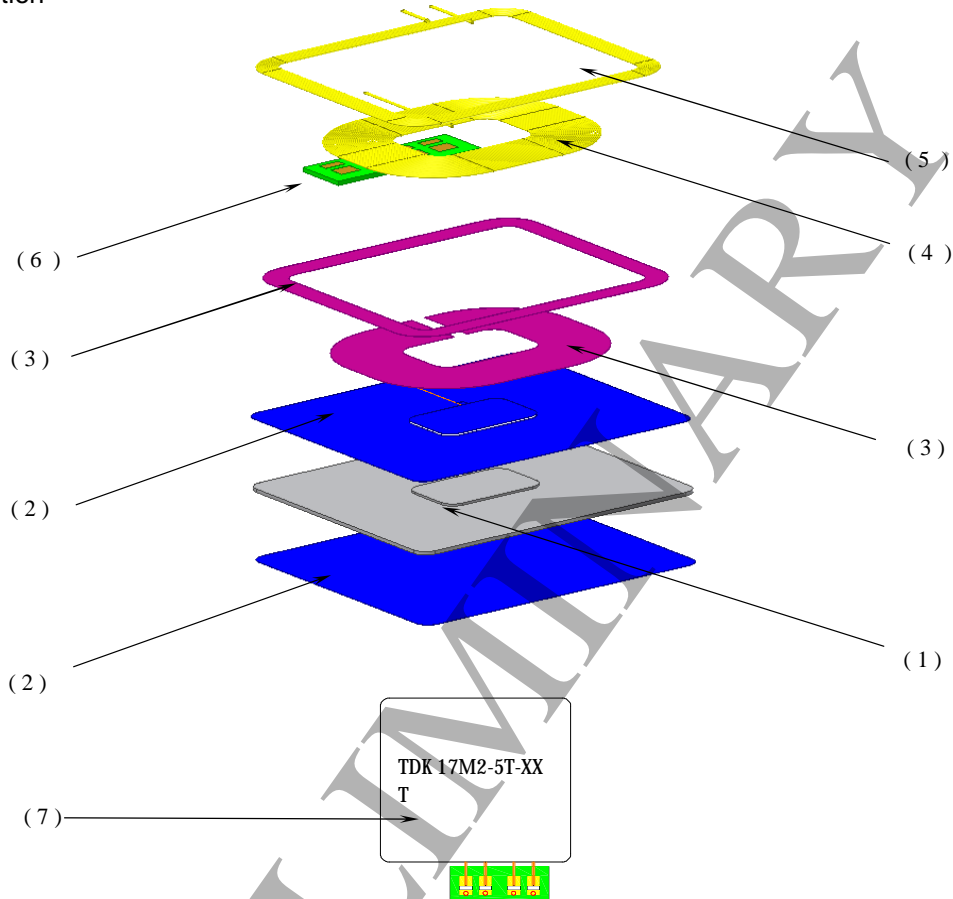
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(8) Construction



(9) Material List

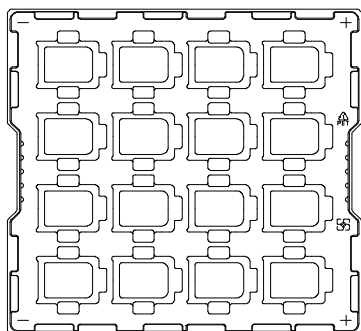
No.	Material Name
1	Iron Sheet
2	PET Tape
3	Adhesive Tape
4	WLC Air Coil
5	NFC Air Coil
6	PWB
7	Ink

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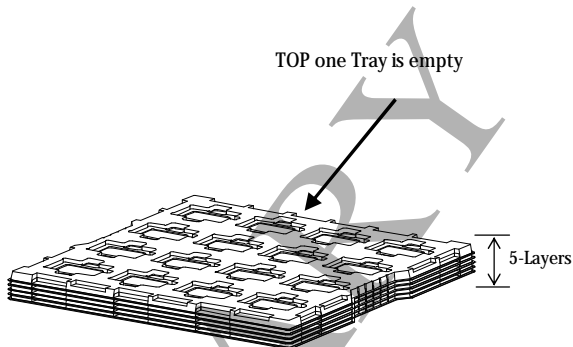
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(9) Packing

- To stack the the Trays onto 5 Layers. :
 - PET tray dimension: 326*329*9.5mm (REF.)
 - 16 Pcs / per PET tray



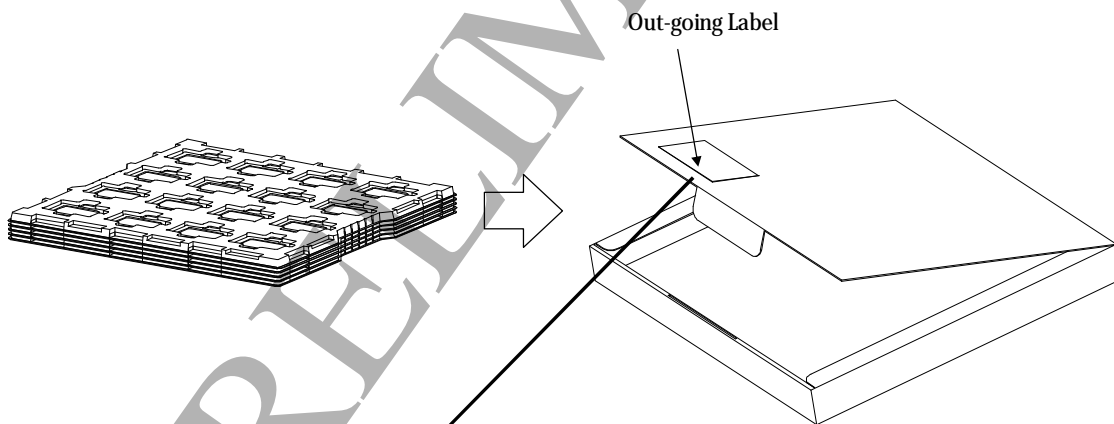
Total : 4x4=16 pcs



Total : 16x4=64 pcs

- 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 **SAMPLE**

ROHS

QTY(Q): 64 **(6P):**TXDF10110TWN050009010

TDK ITEM(1P): WR-443330-14M2-H **VDR(V):**TDK

LOT NO(1T): WL11K06001 + M0001 **DATE CODE(T):** 1143 0001

2012/05/11 MADE IN TAIWAN 001/014 12296A1181

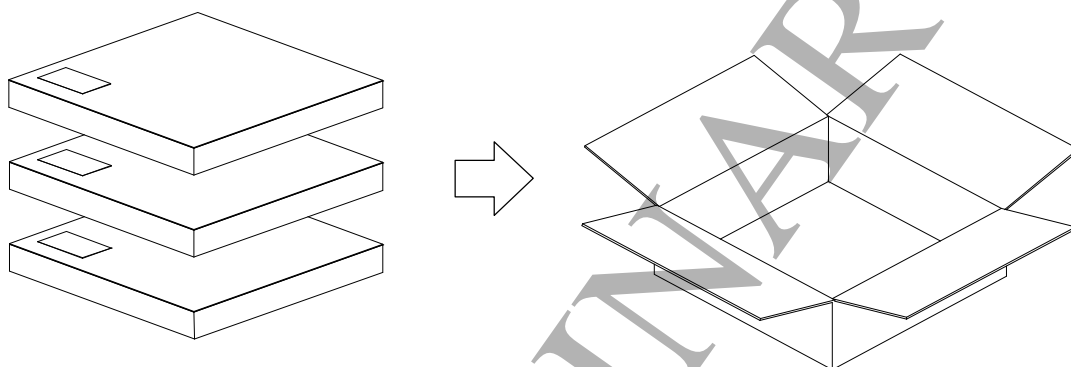
(ITEM:WR - 443330 - 14M2 - H) **(1M)TTXDF10110** **TDK** (S) TDK TAIWAN CORPORATION

Out-going Label

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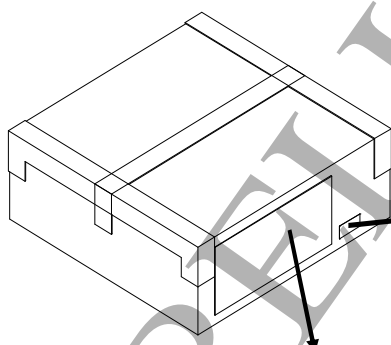
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3. To put 3 small carton into the Carton .
- Outer carton dimension: 347*340*124mm (REF.)
 - 3 small cartons / per outer carton
 - Total quantity : 192 Pcs



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: HTC	
(6S) C/NO:1		CUST. PART NO(P): 54H20323 - 00M	
BOX COUNT 001/014		TDK ITEM CODE(EP): TXDF10110TWN	
SHIPPING MARK ROHS		P/O NO.(K): 929429 - 10	
SAMPLE		LOT NO.(1T): WL11K06002	
HTC		DATE: May.11.2012	
SHANGHAI		QTY(Q): 182	
MADE IN TAIWAN		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	