



WIRELESS
BUSINESS UNIT

2.4GHz Bluetooth Antenna
for hp MQS/MQS-R PDA

WPANTPIFA013A

Product Specification

For hp MQS/MQS-R

2.4GHz

Board-Mount Bluetooth Antenna

Customer Approval Signature: _____
Customer Name: LG Electronic

Date Approved: _____

Engineering Approval: ____ NJS____

Date Approved: __01/02/06__

WP Wireless

<http://www.wp-wireless.com>

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WPI CONFIDENTIAL

Date 01/02/06

REV ID 1.0a



Explanation of Part Number

WPANT PIFA 013 A
(1) (2) (3) (4)

- 1- WPI Antenna
- 2- Product Series – Metal PIFA
- 3- Serial number
- 4- Revision



Electrical Properties

Item	Specification
Frequency Range	2.4GHz ~ 2.5GHz
Impedance	50Ω (Typ.)
VSWR (Max)	< 2.5:1
Peak Gain (2.45GHz)	-0.8 dB (Typ.; Hi/Mid SKU)
Average Gain	-4.8 dB (Typ., Hi SKU) -6.7 dB (Typ., Mid SKU)
Efficiency	32.7% (Typ.; Hi SKU) 21.0% (Typ.; Mid SKU)
Polarization	Linear

Application

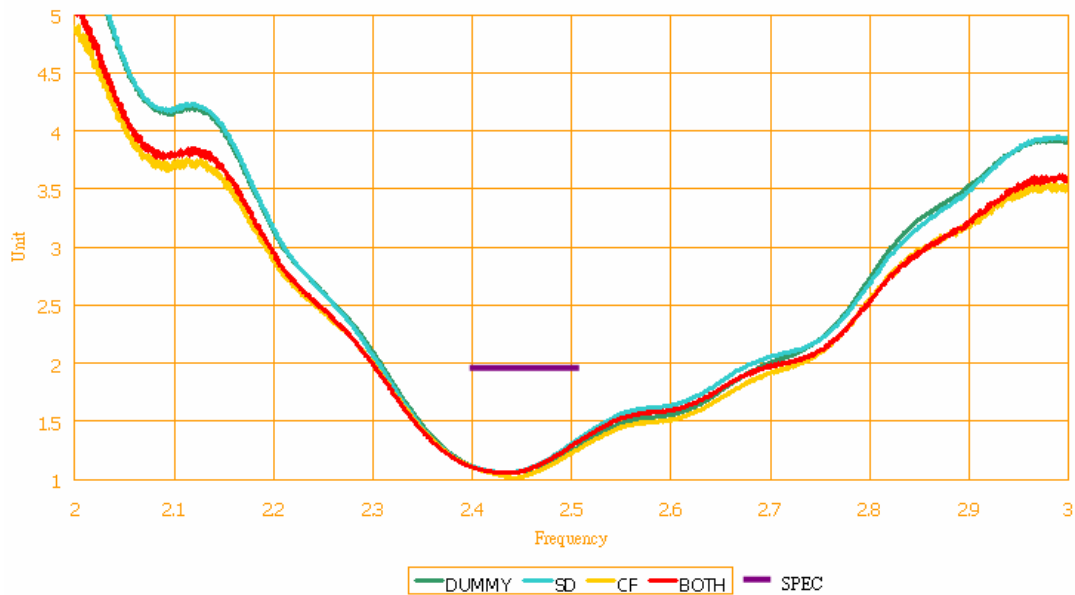
This antenna is specific designed for hp MQS/MQS-R PDA.



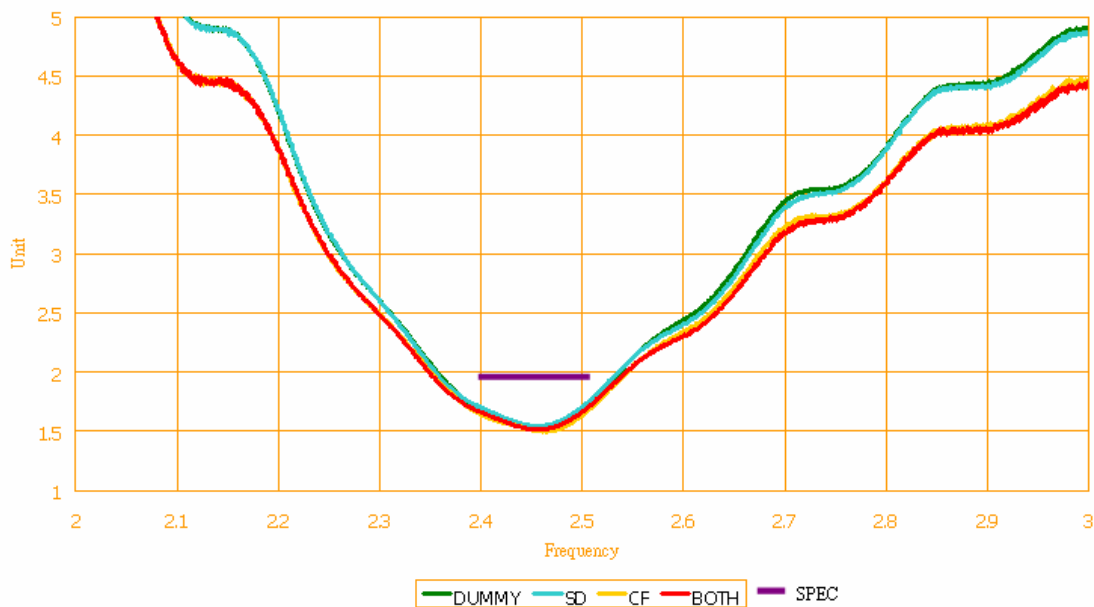
VSWR (typical data)

Four user mode: Dummy cards, CF card, SD card, both CF/SD card loaded.

Hi SKU



Mid SKU

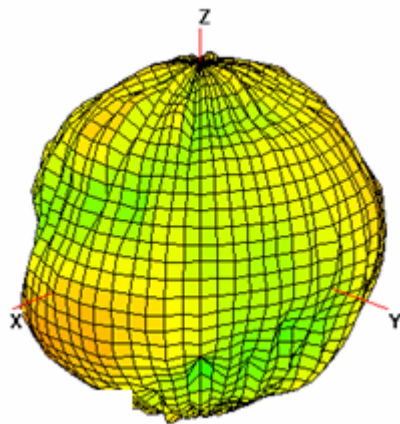




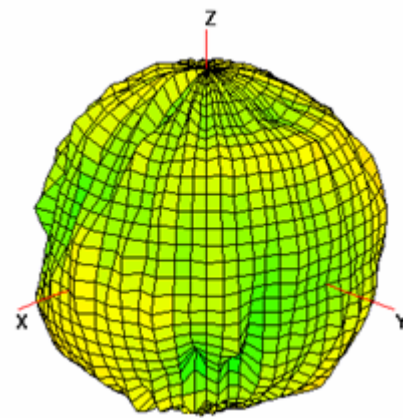
Typical Gain Patterns



Fig. 1



Hi SKU



Mid SKU

	Hi SKU	Mid SKU
Peak Gain	-0.8135dB	-0.8440dB
Average Gain	-4.8477dB	-6.7646dB
Efficiency	32.75%	21.06%



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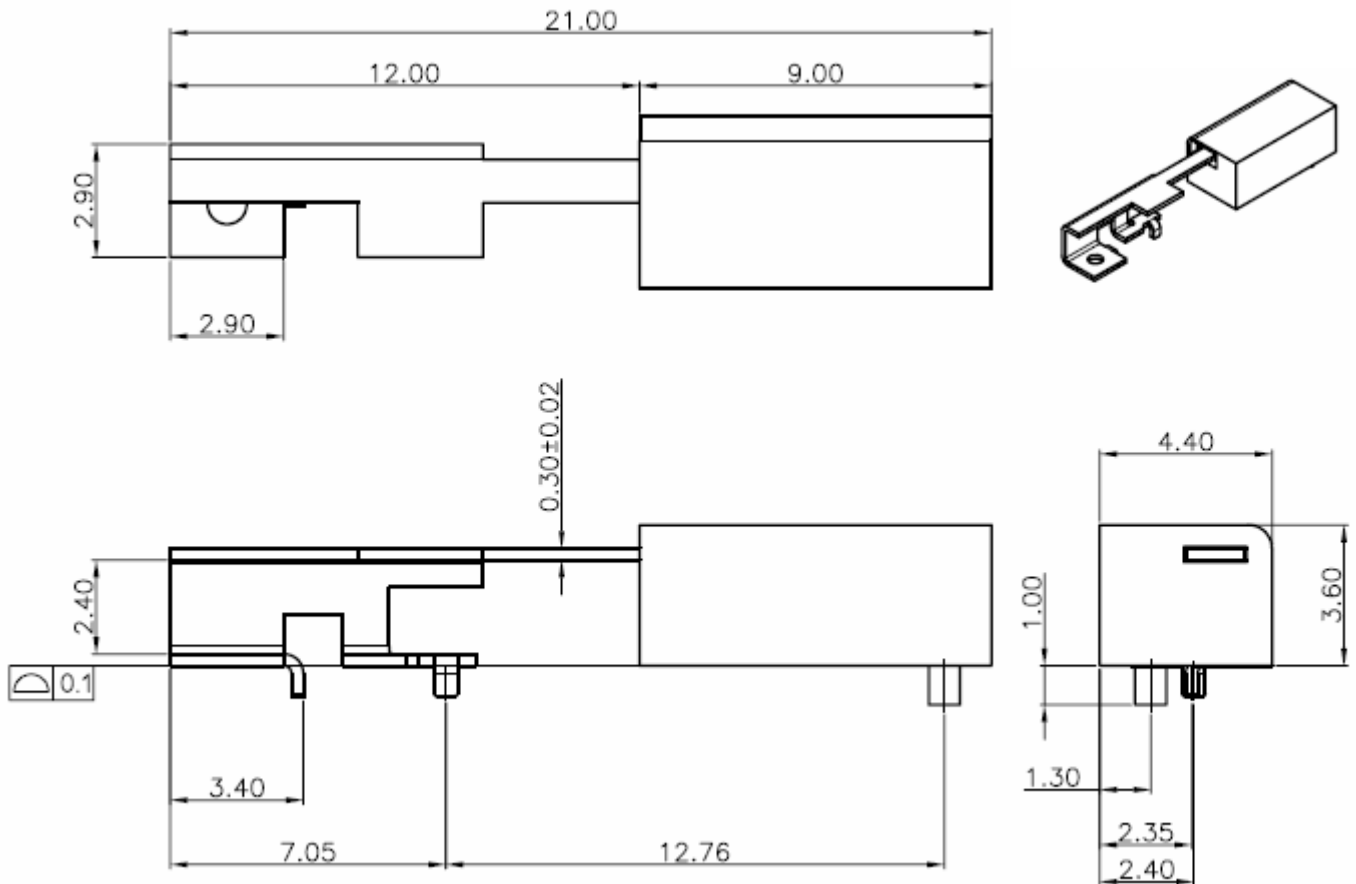
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Mechanical Properties

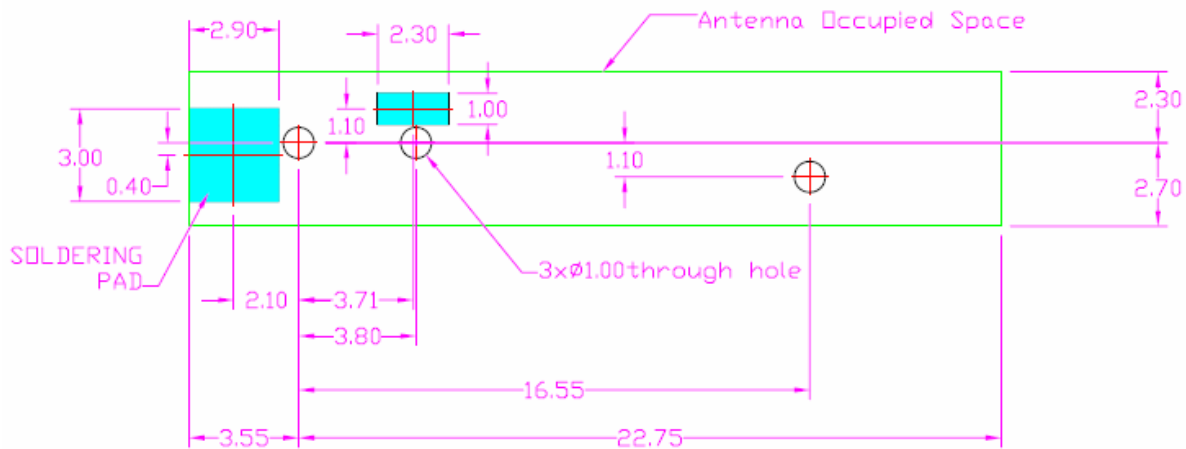
Item	Property
Antenna Body	High Performance Copper Alloy (C7521)
Plastic Holder	LCP UL94V-0; Black
Operation Temperature :	-4 °C to +85 °C
Environmental	RoHS Compliant



Dimensions



Soldering Pad





Performance and Test Description

Product is designed to meet electrical, mechanical and environmental performance requirements specified in below. All tests are performed at ambient environmental conditions per EIA-364 unless otherwise specified.

Test Description	Requirement	Procedure
Examination of Product	Product shall meet requirements of applicable product drawing and specification.	Visual, dimensional and functional per applicable quality inspection plan.
ELECTRIC		
VSWR	2.5:1 max.	Install antenna under test (AUT) in the specified device _(a) . Connect the network analyzer to the AUT. Measure the VSWR parameter over 2.4GHz ~ 2.5GHz. EIA-364-108
Power Gain	Average Gain: -7 dB (typ.) Maximum Gain: +1 dB (max.)	Install AUT in the specified device _(a) . Fix the specified device _(a) in the anechoic chamber _(b) . Measure the average gain at 2.4GHz, 2.45GHz and 2.5GHz. IEEE Std 149-1979
Radiation Efficiency	20% (min.)	Install AUT in the specified device _(a) . Fix the specified device _(a) in the anechoic chamber _(a) . Measure the radiation efficiency at 2.4GHz, 2.45GHz and 2.5GHz. IEEE Std 149-1979
ENVIRONMENTAL		
Solderability	Solderable area shall have minimum of 95% solder coverage	Subject the test area of contacts into flux for 5 to 10 seconds and then into solder bath. Controlled at 260±5°C for 3±0.5 seconds. EIA-364-52
Resistance to Soldering Heat	No physical abnormalities shall be present after the test	Convection reflow condition: Refer to Fig. 2
		Work done by hand: Subject the test area of contacts into flux for 5 to 10 seconds and then into solder bath. Controlled at 350±5°C for 3±0.5 seconds. EIA-364-56

(a) The specified device and install method are show in fig.1

(b) The anechoic chamber must provide less than -40dB reflectivity from 400MHz through 6GHz and a 40cm diameter spherical quite zone. The measurement results are calibrated using standard antenna.

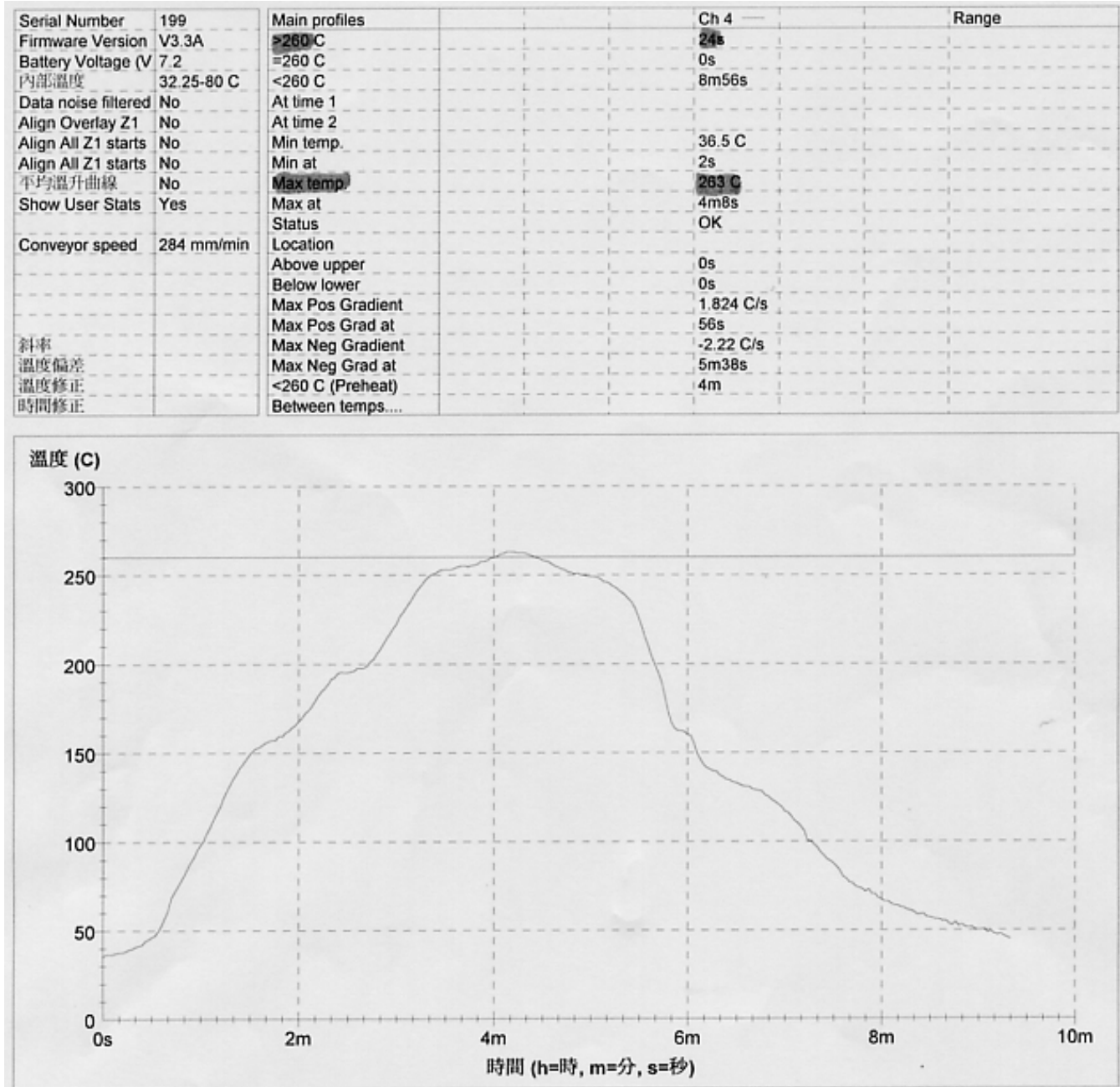
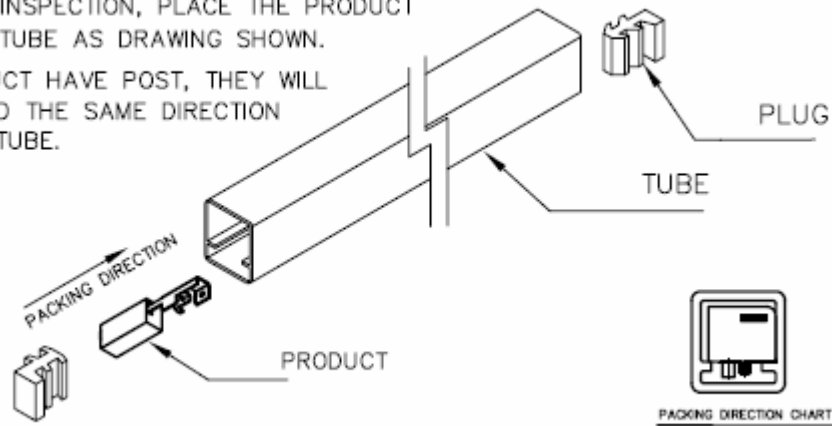


Fig. 2

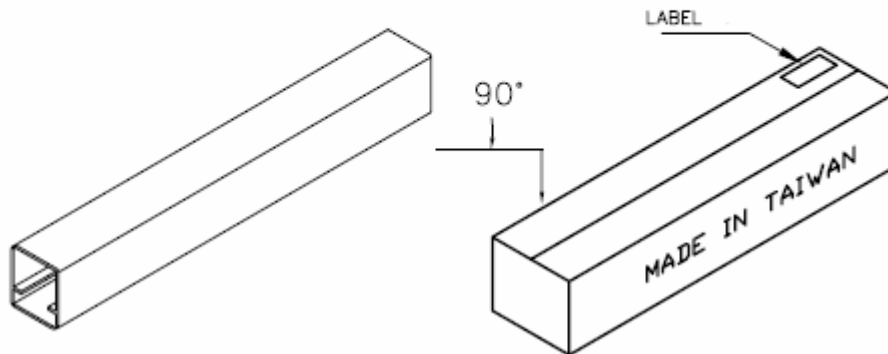


Packing

1. AFTER QC INSPECTION, PLACE THE PRODUCT INTO THE TUBE AS DRAWING SHOWN.
2. THE PRODUCT HAVE POST, THEY WILL BE SELETED THE SAME DIRECTION INTO THE TUBE.

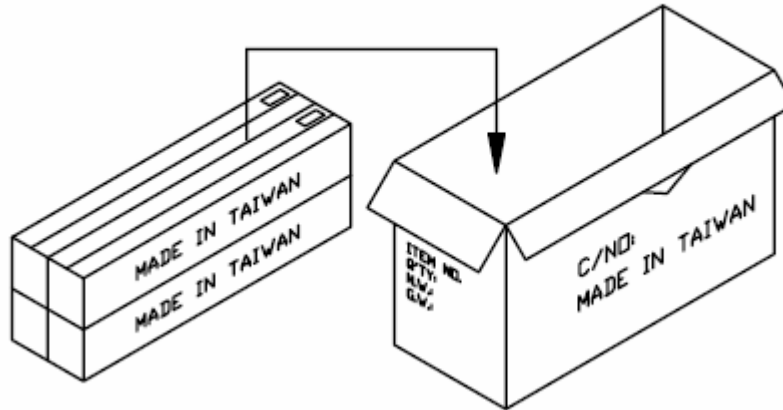


3. PLACE THE TUBES INTO THE BOX, 16 TUBES IN EACH LAYER WITH TOTAL 9 LAYERS.
4. CLOSE BOX WITH TAPE AND STICK AS DRAWING SHOWN.



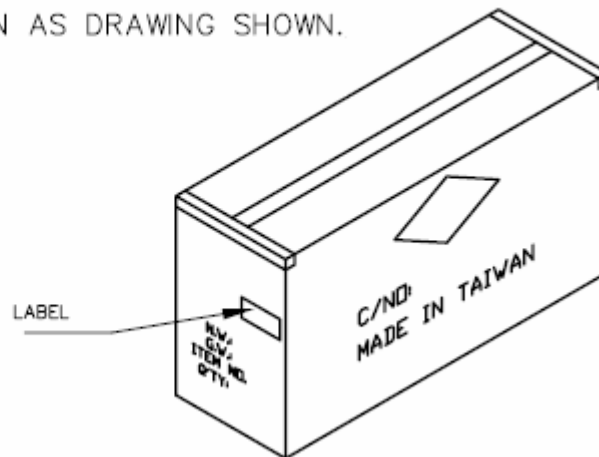


5. PLACE 4 INNER BOXES INTO A CARTON.



6. SEAL CARTON WITH TAPE.

7. STICK LABEL, LOCATION AS DRAWING SHOWN.



	Carton	Box	Tube
Carton			
Box	4		
Tube	576	144	
Piece	16,704	4,176	29



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PACKING M'TL PARTS LIST(FOR 1 CARTON)			
PART NAME	PART NO.	N.W.(KG)	Q'TY
CARTON	AAA@1008-9904		1
BOX	AAA@1007-0004		4
TUBE	AAA@4250-0001		576
LABEL	AAA@7001-0001		5