Specification of Electret Condenser Microphone

(RoHS Compliance)

Customer name: 德 信

Item name :

IEA Model : B4015AS483-25

I E A		CUSTOMER APPROVAL
DESIGN	Worden Mar 23 2006	
CHKD	Bart Mar 23 2006	
STANDARD	Merry Mar 23 2006	
APVD	Herbert Mar 23 2006	

ISO14001:2004 ISO9001:2000

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Restricted

1 Security warning

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2 Publication history

Version	Description	Date	Author	Approved
1.0	New Design	2006.03.23	Worden	Herbert

3 Modification Mark column

Modified Mark	Modified QTY	Modified p/o No.	Modified position	Modifier/Date

Contents

PRODUCT SPECIFICATIONS

Type: Electret Condenser Microphone
Number: B4015AS483-25

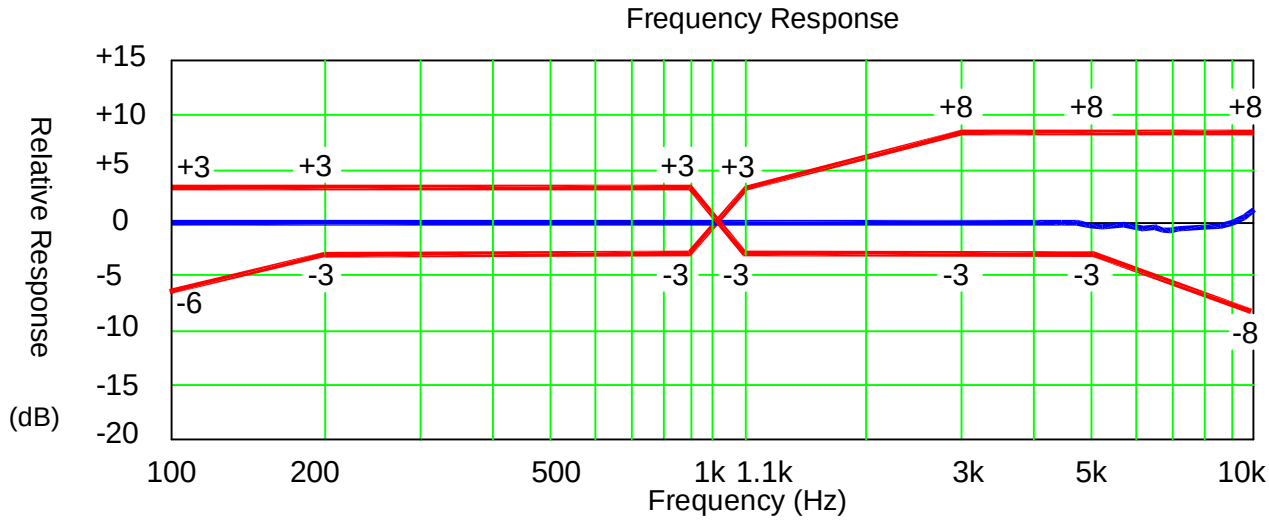
1 Test Condition (Vs=2.0V , RL=2.2kΩ, B&K 50 cm)

StandardConditions (As IEC 60268-4)	Temperature	Humidity	Air pressure
Environment Conditions	+15℃～+35℃	45％RH～75%RH	86kPa～106kPa
Basic Test Conditions	+20±2℃	60％RH～70%RH	86kPa～106kPa

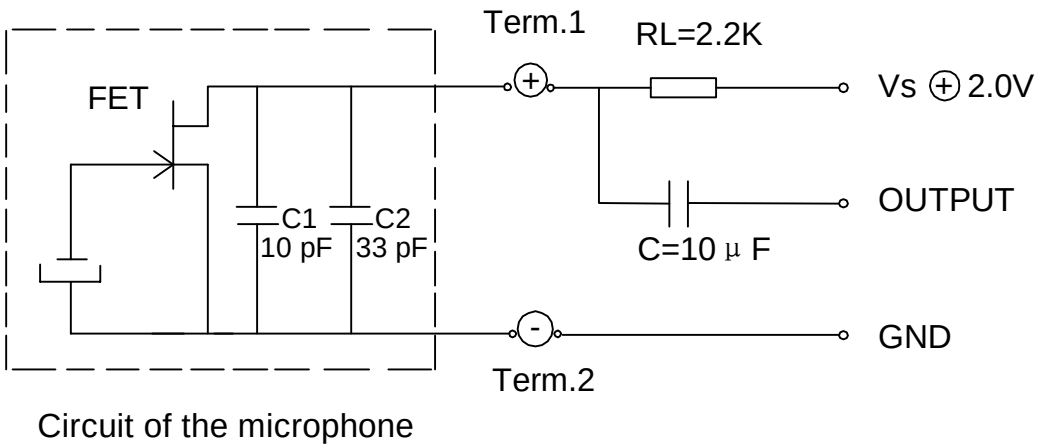
2 Electrical Characteristics

Item	Symbol	Test Conditions	Min	Standard	Max	Unit
Sensitivity	S	f=1kHz, Pin=1Pa	-51	-48	-45	dB 0dB=1V/Pa
Output Impedance	Zout	f=1kHz, Pin=1Pa			2.2k	Ω
Directivity	D(θ)	Omnidirectional				dB
Current Consumption	I				500	μA
S/N Ratio	S/N(A)	f=1kHz, Pin=1Pa A-Weighted Curve	52			dB
Decreasing Voltage Characteristic	ΔS	f=1kHz, Pin=1Pa Vs=2.0-- 1.5V			-3	dB
Operating Voltage Range	Vs		1.1		10	V
Distortion	THD	f=1kHz, Pin=110dB			3	%

3 Frequency in Cycles Per Second &Microphone Response Tolerance Window

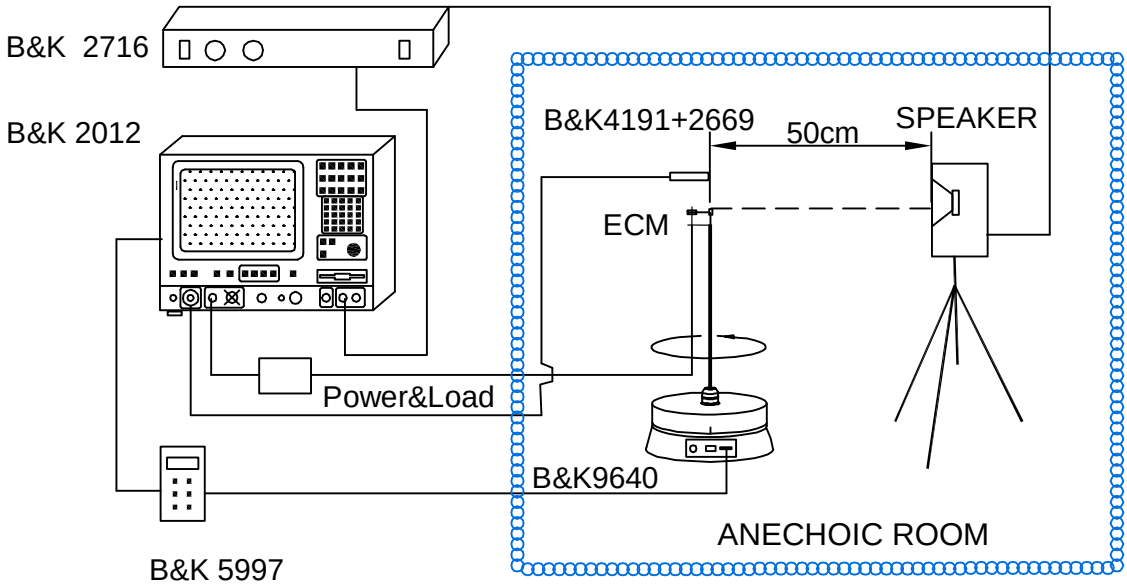


4 Measurement Circuit



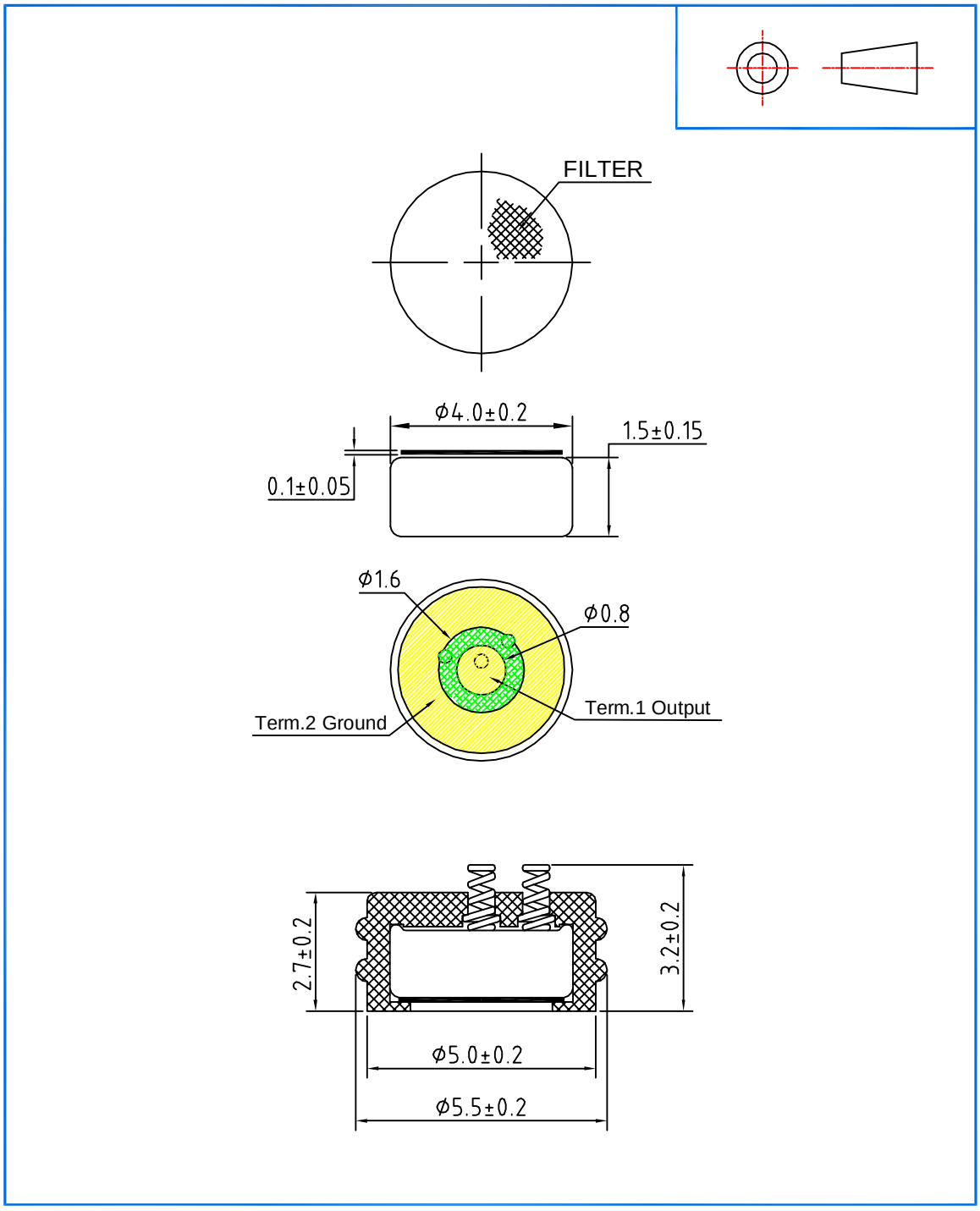
Circuit of the microphone

5 Test setup Drawing



6 Mechanical Characteristics

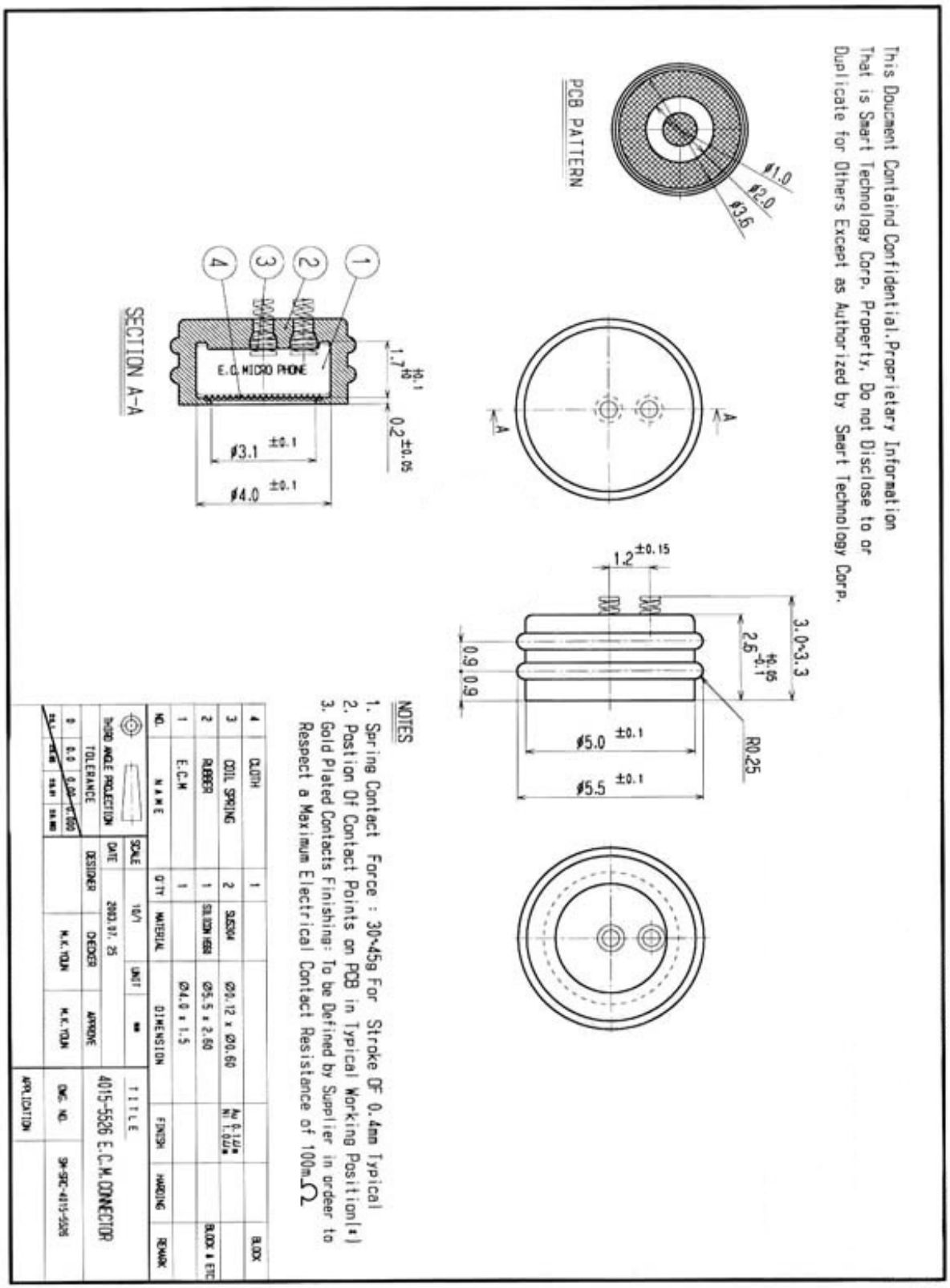
6.1 Appearance Drawing (Unit: mm)



6.2 Weight

Less than 0.2g

7 Connector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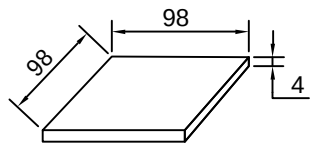
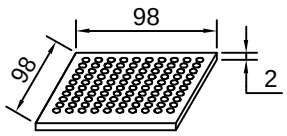
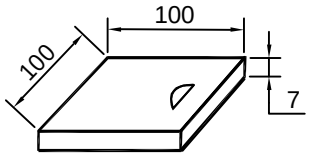
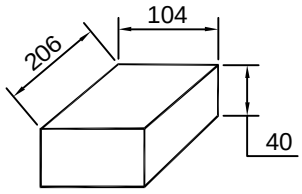
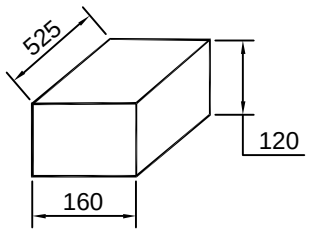
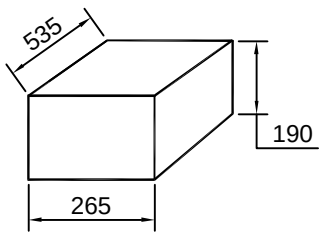
That is Smart Technology Corp. Property, Do not Disclose to or
Duplicate for Others Except as Authorized by Smart Technology Corp.
PCB PATTERN
SECTION A-A
E.C.MICRO PHONE
NOTES
1. Spring Contact Force : 30~45g For Stroke OF 0.4mm Typical
2. Postion Of Contact Points on PCB in Typical Working Position(s)
3. Gold Plated Contacts Finishing: To be Defined by Supplier in ordeer to
Respect a Maximum Electrical Contact Resistance of 100mΩ
4015-5526 E.C.M.CONNECTOR

8 Reliability Test

8.1 Vibration Test	To be no interference in operation after vibrations,10Hz to 55 Hz for 1 minute full amplitude 1.52 mm,for 2 hours at three axises in state of standard packing,sensitivity to be within ± 3dB from initial sensitivity. (The measurement to be done after 2 hours of conditioning at +15℃～+35℃, R.H 45%～75%)
8.2 Drop Test	To be no interference in operation after dropped to concrete floor each one time from 1.5 meter height at three directions in state of Outer packing,sensitivity to be within ± 3dB from initial sensitivity. (The measurement to be done after 2 hours of conditioning at +15 ℃～+35℃, R.H 45%～75%)
8.3 Temperature Test	a) After exposure at +85° C for 200 hours,sensitivity to be within ±3dB from initial sensitivity. (The measurement to be done after 2 hours of conditioning at +15 ℃～+35℃, R.H 45%～75%) b) After exposure at -40° C for 200 hours,sensitivity to be within ±3dB from initial sensitivity. (The measurement to be done after 2 hours of conditioning at +15 ℃～+35℃, R.H 45%～75%)
8.4 Humidity Test	After exposure at +40℃ and 90%~95% relative humidity for 200 hours,sensitivity to be within ± 3dB from initial sensitivity. (The measurement to be done after 2 hours of conditioning at +15 ℃～+35℃, R.H 45%～75%)
8.5 Temperature Cycle Test	After exposure at -40℃ for 30 minutes, at 20℃ for 10 minutes, at+85℃ for 30 minutes,at 20℃ for 10 minutes,5 cycles,sensitivity to be within ± 3dB from initial sensitivity. (The measurement to be done after 2 hours of conditioning at +15 ℃～+35℃, R.H 45%～75%)
8.6 Temperature Shock Test	After exposure at -40℃ for 30 minutes, at+85℃ for 30 minutes(change time 20 seconds), 200 cycles,sensitivity to be within ± 3dB from initial sensitivity. (The measurement to be done after 2 hours of conditioning at +15 ℃～+35℃, R.H 45%～75%)

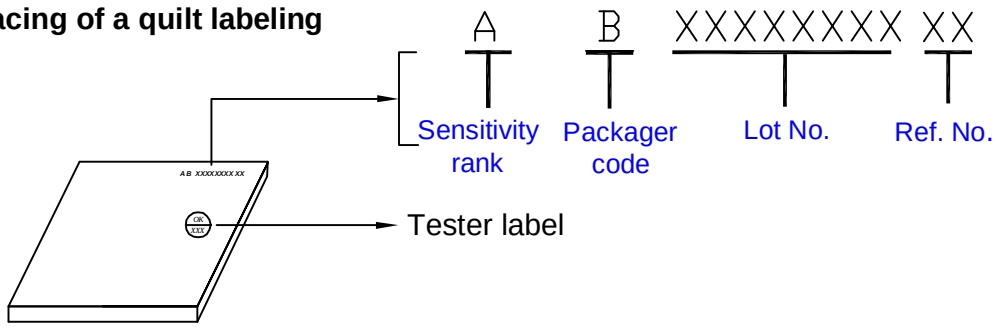
9 Packing

9.1 Packing Specification

	Drawing(Unit: mm)	Qty(pcs.)	Material	Marking
Packing		100	XPE froth sponge	
		100	XPE froth sponge	
		100	Paper	Particular for 9.2.1 9.2.2
Middle Box		10×100	Paper	Particular for Customer's P.O
Inner Box		6×1000	Paper	
Outer Box		2×6000	Paper	Particular for Customer's P.O

9.2 Packing Explain

9.2.1 The facing of a quilt labeling



9.2.2 The obverse labeling

10 Stock and Transportation

10.1 Keep ECM in warehouse with less than 75 % humidity and without sudden temperature change, acid air, any other harmful air or strong magnetic field.

10.2 The ECM with normal pack can be transported by ordinary conveyances.Please protect products against moist, shock, sunburn and pressure during transportation.

10.3 Storage Temperature Range： -40℃～+85℃

10.4 Operating Temperature Range： -30℃～+70℃

11 Output Inspection standard

Output inspection standard is excuted according to 《JIS-Z9015》.