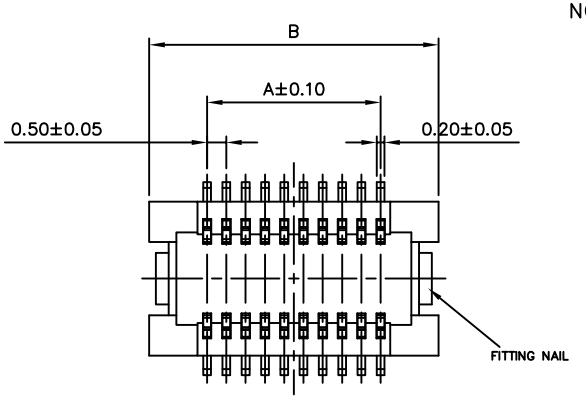
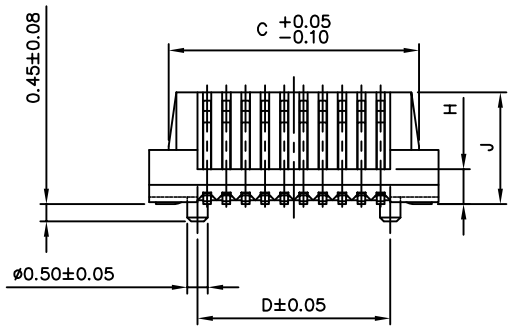
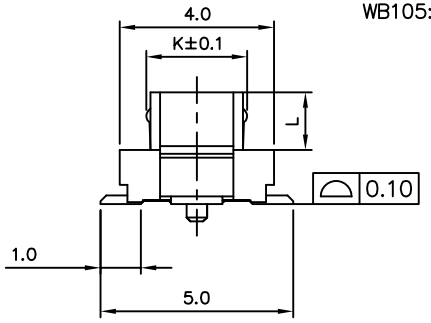
NOTES: 1.INSULATOR: HIGH-TEMP THERMOPLASTIC, UL94V-0
COLOR: BLACK
2.CONTACT: COPPER ALLOY
PLATING: CONTACT AREA GOLD FLASH AND SOLDER AREA TIN OR GOLD FLASH OVERALL NICKEL UNDER PLATED
3.Rated Voltage : 50V AC/DC, Rated Current : 0.5A AC/DC

ORDER INFORMATION: WB105-X XX X-01~07 X

- PACKING: E: TUBE, R: PLASTIC REEL, L: PAPER REEL
- TYPE
- E: POST AND FITTING NAIL, L: POST, F: FITTING NAIL, N: NO POST AND FITTING NAIL
- PIN
- PLATING: E: TIN, F: GOLD FLASH
- WB105: 0.5 BOARD TO BOARD SMT V/T TYPE MALE (HALOGEN FREE)

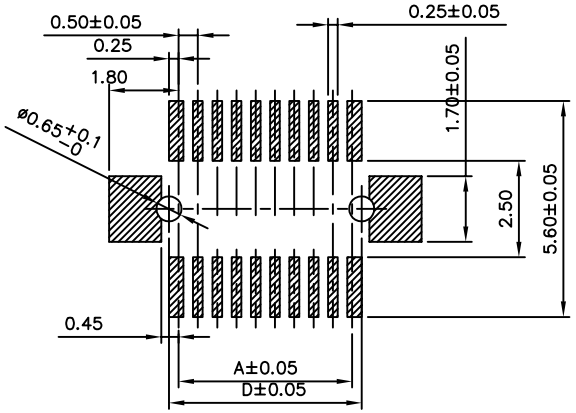




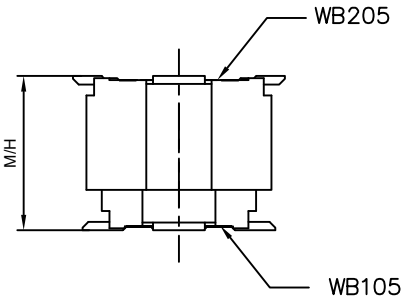


M/H	TYPE	H	J	K	L
2.0	01	0.50	1.6	2.6	0.7
2.5	02,22		2.00		1.0
3.0					
3.5					
4.0					
5.0					
6.0					
7.0	04	1.00	3.00	2.6	1.5
8.0					
9.0					
10.0					
11.0					
4.5					
5.5					
6.5					
7.5	05	1.50	3.50	2.6	1.5
8.5					
9.5					
10.5					
11.5					
12.0					
13.0					
14.0	06	7.00	10.00	2.54	2.6
15.0					
16.0					
17.0					
12.5					
13.5					
14.5	07	7.50	10.50	2.54	2.6
15.5					
16.5					
17.5					

PIN NO.	A	B	C	D
10	2.0	5.0	4.0	2.5
12	2.5	5.5	4.5	3.0
14	3.0	6.0	5.0	3.5
16	3.5	6.5	5.5	4.0
18	4.0	7.0	6.0	4.5
20	4.5	7.5	6.5	5.0
22	5.0	8.0	7.0	5.5
24	5.5	8.5	7.5	6.0
26	6.0	9.0	8.0	6.5
28	6.5	9.5	8.5	7.0
30	7.0	10.0	9.0	7.5
32	7.5	10.5	9.5	8.0
34	8.0	11.0	10.0	8.5
36	8.5	11.5	10.5	9.0
38	9.0	12.0	11.0	9.5
40	9.5	12.5	11.5	10.0
42	10.0	13.0	12.0	10.5
44	10.5	13.5	12.5	11.0
46	11.0	14.0	13.0	11.5
48	11.5	14.5	13.5	12.0
50	12.0	15.0	14.0	12.5
52	12.5	15.5	14.5	13.0
54	13.0	16.0	15.0	13.5
56	13.5	16.5	15.5	14.0
58	14.0	17.0	16.0	14.5
60	14.5	17.5	16.5	15.0
62	15.0	18.0	17.0	15.5
64	15.5	18.5	17.5	16.0
66	16.0	19.0	18.0	16.5
68	16.5	19.5	18.5	17.0
70	17.0	20.0	19.0	17.5
80	19.5	22.5	21.5	20.0



RECOMMENDED PCB LAYOUT



CUSTOMER	东莞市文章济美电子有限公司				
GENERAL TOLERANCE UNLESS OTHERWISE SPECIFIED X.X ±0.25 X.XX ±0.13 X.XXX ANG. ±0°30'	DRAWN Nelly OCT-21-2012 CHECKED APPROVED	PART NO. JME1054-XXXX-01~0X TITLE? 0.5 BOARD TO BOARD SMT V/T TYPE MALE			
	SHEET 1/1	UNIT MM	SCALE 5?1	SIZE A4	REV A

GROUP AND TEST SEQUENCE

Test of Examination		Test Group										
		A	B	C	D	E	F	G	H	I	J	K
1	Examination of Product	1,9	1,6	1,5	1,5	1,5	1,4	1,5	1,3	1,3	1,5	
2	Contact Resistance	2,6	2,5	2,4	2,4	2,4		2,4			2,4	
3	Insulation Resistance	3,7										
4	Dielectric Strength	4,8										
5	Insertion Force And Withdrawal Force		3									
6	Terminal / Housing Retention Force											1
7	Durability		4									
8	Vibration			3								
9	Heat Resistance				3							
10	Cold Resistance					3						
11	Humidity	5										
12	Solder Ability						3		2			
13	Resistance To Soldering Heat									2		
14	Steam Aging						2					
15	Salt Spray							3				
16	Temperature Cycling										3	

PRODUCT SPECIFICATION

1. SCOPE :

This specification covers the 0.5 mm pitch board To board SMT type connector series.

2. PRODUCT NAME AND PART NUMBER :

Product Name	WIT Part Number
0.50mm Board To Board Connector, V/T, SMT Type Male (Lead Free)	WB105-XXXX-XXX

3. RATINGS :

Item	Standard	
Rated Voltage (MAX.)	50 V	AC/DC
Rated Current (MAX.)	0.5A	
Operating and Non-operating Temperature Range	-40^0C ~ $+85^0$C*	
Storage Temperature Range	-10^0C ~ $+50^0$C*	

*Including terminal temperature rise

4.PERFORMANCE :

4- 1 Electrical Performance

Item		Test Condition	Requirement
4-1-1	Contact Resistance	Test Current: 100 mA Max. Test Voltage: 20mV Max Test Method: MIL-STD-202F, Method 303	50 mΩ MAX.
4-1-2	Insulation Resistance	Test Voltage: 100VAC. Test Duration: 1 minutes. Test Method: MIL-STD-202, method 302	Initial: 500 MΩ Min Final: 100 MΩ Min.
4-1-3	Dielectric Strength	Test Voltage: 200V AC. Test Time: 60 sec. Test Method: MIL-STD-202, Method 301.	No Breakdown

4-2 Mechanical Performance

Item		Test Condition	Requirement	
4-2-1	Insertion Force And Withdrawal Force	Test Speed: 25±3 mm/min. Test Method: MIL-STD-1344A, Method 2016.	Insertion Force Max : 0.09kgf X total terminals	
			Withdrawal Force(Min): 0.01kgf X total terminals	
4-2-2	Terminal / Housing Retention Force	Test Speed: 25mm/min.	0.15kgf (Min)	
4-2-3	Durability	The contacts of connector shall be subject to 50 cycles of mating and unmating.	Contact Resistance	
			Initial Value	≦ 50 mΩ
			Final Value	≦ 70 mΩ

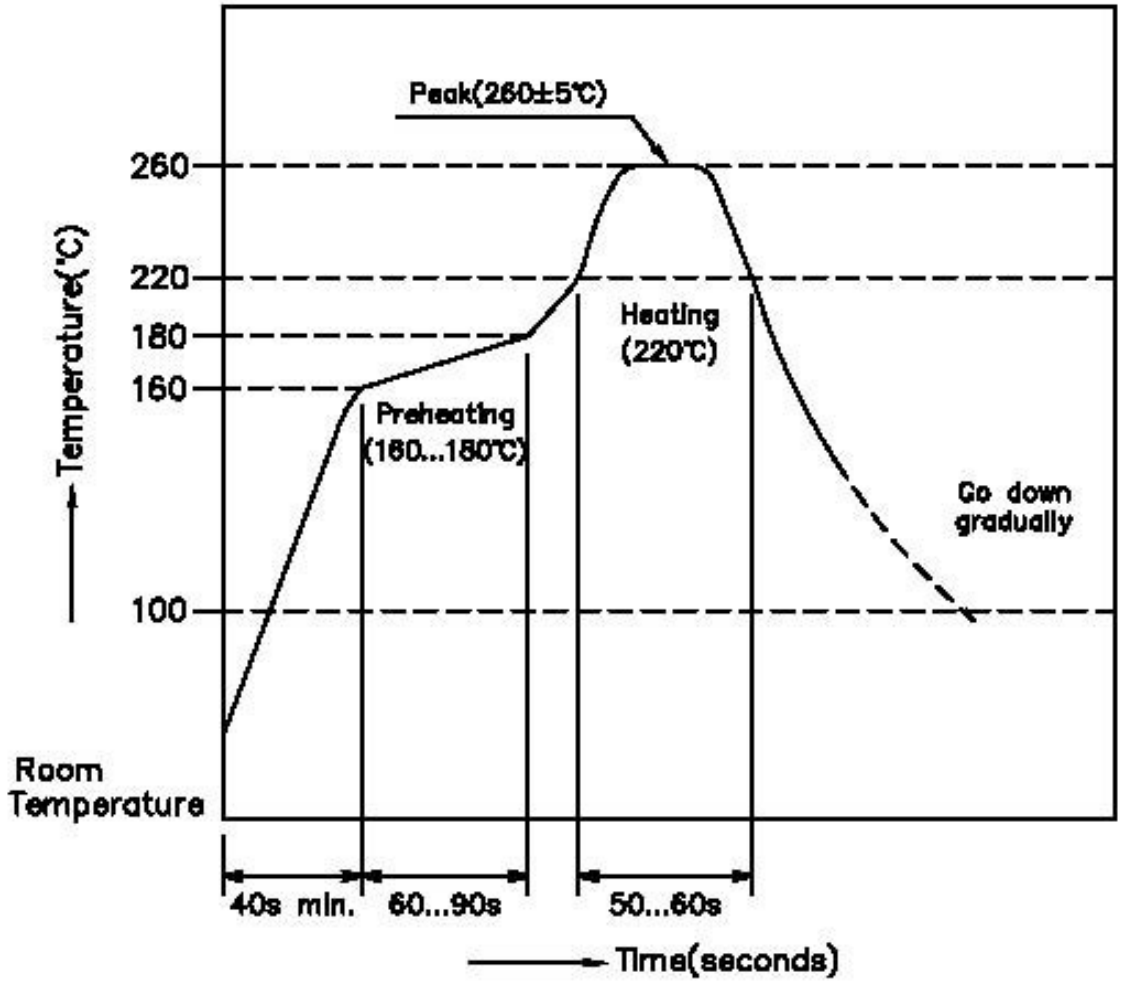
4-3 Environmental Performance and Others

Item		Test Condition	Requirement	
4-3-1	Vibration	Amplitude : 1.5 ㎜ Frequency range: 10~55~10 Hz in 1 minute Duration: 2 hours in each X.Y.Z axes Current: 100mA. Test Method: MIL-STD-202F, Method 201	Appearance	No Damage
			Contact Resistance	70 mΩ
			Discontinuity	1μsec
4-3-2	Heat Resistance	Temperature: 85±2℃ Duration: 96 hours Test Method: MIL-STD-202, Method 108.	Appearance	No Damage
			Contact Resistance	70 mΩ
4-3-3	Cold Resistance	Temperature: -40±2℃ Duration: 96 hours Test Method: JIS C60068-2-1	Appearance	No Damage
			Contact Resistance	70 mΩ
4-3-4	Humidity	Temperature: 40±2℃ Relative Humidity: 90~95% Duration: 96 hours Test Method: MIL-STD-202F , Method 103	Appearance	No Damage
			Contact Resistance	70 mΩ
			Insulation Resistance	≧100MΩ
			Dielectric Strength	Must meet 4-1-3

Item		Test Condition	Requirement	
4-3-5	Solder Ability	Soldering Time : 3±0.5 sec Solder Temperature : 245±5℃ Test Method: MIL-STD-202F , Method 208	Solder Wetting	95% Of Immersed Area Must Show No Voids, Pin Holes
4-3-6	Resistance To Soldering Heat	Soldering Time : 10±0.5 sec Solder Temperature : 260±5℃ Test Method: MIL-STD-202F , Method 210A	Appearance	No Damage
4-3-7	Steam Aging	Steam Aging Temperature : 98±2℃ Duration: 8 hours Solder Temperature : 245±5℃ Soldering Time : 3±0.5 sec Test Method: MIL-STD-202F , Method 208	Appearance	No Damage
			Solder Wetting	95% Of Immersed Area Must Show No Voids, Pin Holes
4-3-8	Salt Spray	Chamber Temperature : 35±2℃ Air Tank Temperature : 47±1℃ Salt Solution：5 ± 0.5% Duration : 48 hours Test Method: MIL-STD-202 , Method 101D	Appearance	No Damage
			Contact Resistance	70 mΩ
4-3-9	Temperature Cycling	5 cycles of : a) - 55 ±3℃ 30 minutes b) +25 ±3℃ 30 minutes c)+ 85 ±2℃ 30 minutes Test Method: JIS C0025	Appearance	No Damage
			Contact Resistance	70 mΩ
4-3-10	Temperature Rise Test	Carrying rated current load. EIA-364-70B	Temperature Rise : 30 ℃ (MAX)	

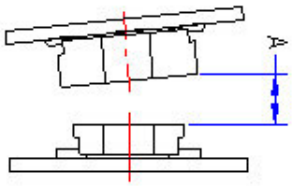
INFRARED REFLOW CONDITION

1) Ascending time to preheating temperature 170℃ shall be 40 seconds minimum.
2) Preheating shall be fixed at 160...180℃ for 60...90 seconds.
3) Heating shall be fixed at 220℃ for 50...60 seconds.
4) At 260±5℃ peak shall be 10 seconds maximum.

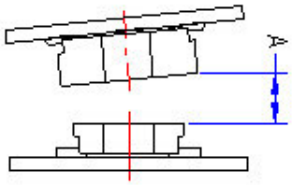


Precaution in the connector handing.

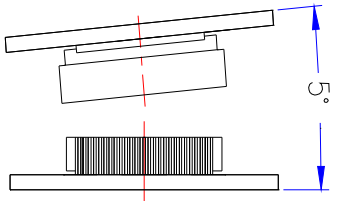
1. Please try that the connector parallel is mated is mated Into or unmated form the counterpart connector in parallel.



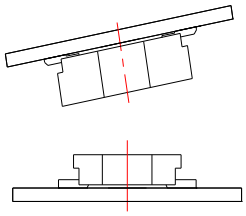
2. Mating (into the counterpart connector)
   At the time of mating please do not continue to mate the connector if there is the gap.
   A to the one side, please mate the connectors when the both guides are guided.



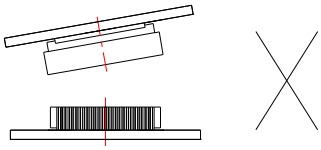
⚠S When mating plug with receptacle obliquely ,please make mating within an angle of 5°.



3. Unmating (from the counterpart connector)
   Please do not extract the one side of the printed circuit board.
   Please extract the printed curcuit board in parallel with the connector.



4. Please do not bend the printed circuit board in the arrow direction.



5. After mating connectors , fix the PCB/PWB in order not for them to disengage.

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Component - Plastics [guide info] **E106764**

POLYPLASTICS CO LTD

18-1 KONAN 2 CHOME, MINATO TOKYO 1088280 JP

E130i(d)(e)(f2)

Liquid Crystal Polymer (LCP), thermotropic aromatic polyester, "VECTRA" or "LAPEROS", furnished as pellets

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
ALL	0.2	V-0	-	-	130	130	130
	0.38	V-0	-	-	130	130	130
	0.75	V-0	2	0	240	220	240
	1.5	V-0	1	0	240	220	240
	3.0	V-0	0	0	240	220	240

Comparative Tracking Index (CTI): 4

Inclined Plane Tracking (IPT): -

Dielectric Strength (kV/mm): 39

Volume Resistivity (10^x ohm-cm): 16

High-Voltage Arc Tracking Rate (HVTR): 0

High Volt, Low Current Arc Resis (D495): 5

Dimensional Stability (%): 0

(d) - Virgin and regrind up to 50% by weight incl., have the same basic material characteristics in NC and BK with a minimum thickness of 0.75mm.

(e) - Regrind from 26-50% by weight inclusive has an Impact RTI of 180C at thicknesses greater than 1.5mm.

(f2) - Subjected to one or more of the following tests: Ultraviolet Light, Water Exposure or Immersion in accordance with UL 746C, where the acceptability for outdoor use is to be determined by UL.

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 1992-08-19

Last Revised: 2014-08-22

IEC and ISO Test Methods

Test Name	Test Method	Units	Thk (mm)	Value
Flammability	IEC 60695-11-10	Class (color)	0.2	V-0 (ALL)
			0.38	V-0 (ALL)
			0.75	V-0 (ALL)
			1.5	V-0 (ALL)
			3.0	V-0 (ALL)
Glow-Wire Flammability (GWFI)	IEC 60695-2-12	C	0.38	960
			0.75	960
			1.5	960
			3.0	960
Glow-Wire Ignition (GWIT)	IEC 60695-2-13	C	0.38	850
			0.75	850
			1.5	850
			3.0	900
IEC Comparative Tracking Index	IEC 60112	Volts (Max)	-	-
IEC Ball Pressure	IEC 60695-10-2	C	-	-
ISO Heat Deflection (1.80 MPa)	ISO 75-2	C	-	-
ISO Tensile Strength	ISO 527-2	MPa	-	-
ISO Flexural Strength	ISO 178	MPa	-	-
ISO Tensile Impact	ISO 8256	kJ/m^2	-	-
ISO Izod Impact	ISO 180	kJ/m^2	-	-
ISO Charpy Impact	ISO 179-2	kJ/m^2	-	-

COPPER ALLOY SPECIFIC

Article	Standard NO	Dimension & Tempe
C5210	JIS H 3130	0.2mm X 17 mm SH

Chemocal Compositions (%)									
Element	Cu	Sn	P	Zn	Fe	Pb			
Spec.	—	7.0~9.0	0.03~0.35	0.2 ↓	0.1 ↓	0.009 ↓			
Actual	92.11	7.52	0.0927	0.01	0.0089	0.003			

Mechanical Properties.								
Item	Grain Size	Hardness	Tension Strength	Elongation	Electrical Conductivity	Bending Test	Surface Roughness	Camber
Unit	mm	HV	Kgf/mm	%	% IACS	180 °	Ra(μm)	mm/1M
Spec.	—	230~250	75~82	9↑	—	—	0.15 ↓	—
Actual	—	238	76.8	14	13	Good	0.085	—

COPPER ALLOY SPECIFIC

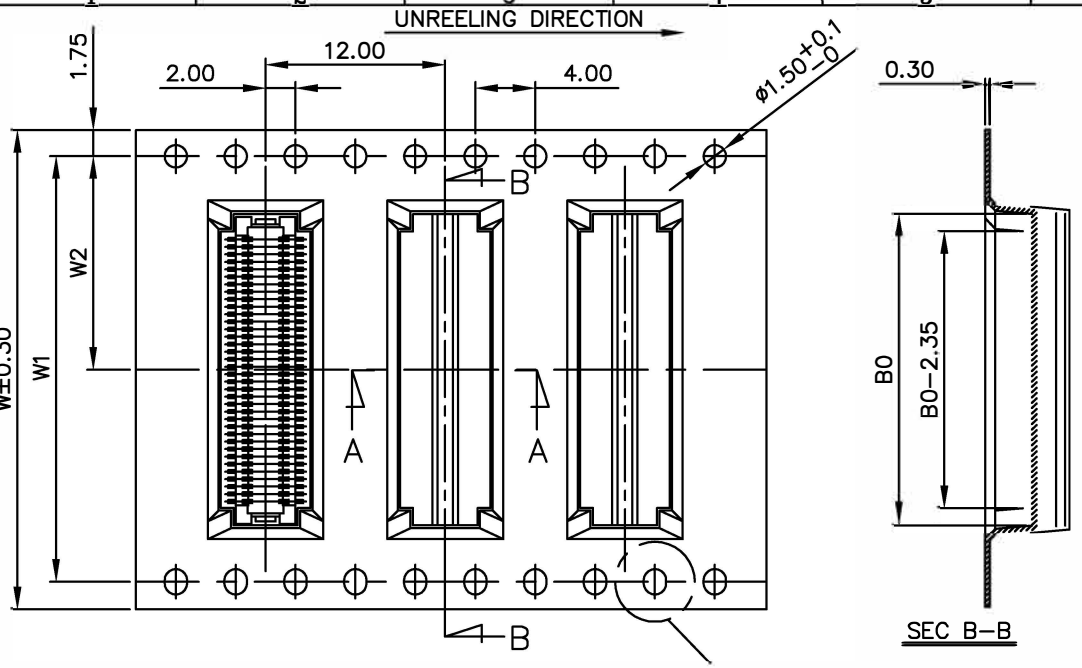
Article	Standard NO	Dimension & Tempe
C2680	JIS H 3100	0.2mm X 12.5mm RH

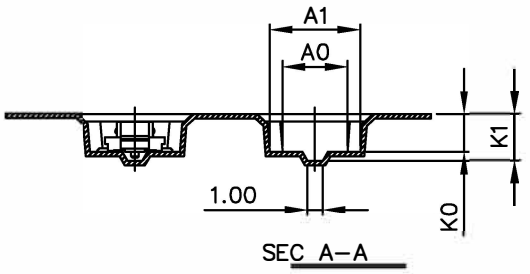
Chemocal Compositions (%)									
Element	Cu	Pb	Fe	Sn	Zn	P	Ni	Mn	Mg
Spec.	64~68	0.0500↓	0.05↓	—	REM	—	—	—	—
Actual	65.21	0.0001	0.01	—	REM	—	—	—	—

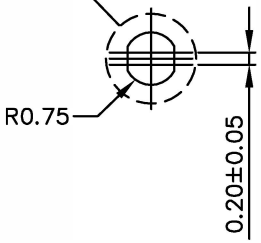
Mechanical Properties.								
Item	Grain Size	Hardness	Tension Strength	Elongation	Electrical Conductivity	Bending Test	Surface Roughness	Camber
Unit	mm	HV	Kgf/mm	%	% IACS	180°	Ra(μm)	mm/1M
Spec.	—	160~175	52~62	8↑	—	—	—	—
Actual	—	164	53.9	16.3	—	—	—	—

RELEASE HISTORY

Rev.	Revisions	Date	Executor	Description
A0	RE201112005	DEC-22-2011	Max	First Release
A1	REN120706	JUL-09-2012	Juno	Add Operating & Storage Temperature
A2	REN150110	JAN-29-2015	Juno	Add Temperature Rise Test
A3	REN150805	AUG-26-2015	Juno	Modify Heat Resistance Temperature Steam Aging







CKT	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
PIN	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
W	016		016		△4 024	016	016		024		024		024		024		024		024	
△4 B0	5.25	5.75	6.25	6.75	7.25	7.75	8.25	8.75	9.25	9.75	10.25	10.75	11.25	11.75	12.25	12.75	13.25	13.75	14.25	14.75
AO	4.30		4.30		4.30		4.30		4.30		4.30		4.30		4.30		4.30		4.30	
A1	6.00		6.00		6.00		6.00		6.00		6.00		6.00		6.00		6.00		6.00	
CKT	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88
PIN	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88
W	024		032		032		032		032		032		044		044		044		044	
△4 B0	15.25	15.75	16.25	16.75	17.25	17.75	18.25	18.75	19.25	19.75	20.25	20.75	21.25	21.75	22.25	22.75	23.25	23.75	24.25	24.75
AO	△4 4.20		4.30		4.30		4.30		4.30		4.30		4.30		4.30		4.30		4.30	
A1	6.00		6.00		6.00		6.00		6.00		6.00		6.00		6.00		6.00		6.00	
CKT	90	92	94	96	98	A0	B0		C0		D0		E0		F0		G0			
PIN	90	92	94	96	98	A0	B0		C0		D0		E0		F0		G0			
W	044		044		044		044		056		056		056		056		056			
△4 B0	25.25	25.75	26.25	26.75	27.25	27.75	30.25		32.75		35.25		37.75		40.25		42.75			
AO	4.30		4.30		4.30		4.30		4.30		4.30		4.30		4.30		4.30			
A1	6.00		6.00		6.00		6.00		6.00		6.00		6.00		6.00		6.00			

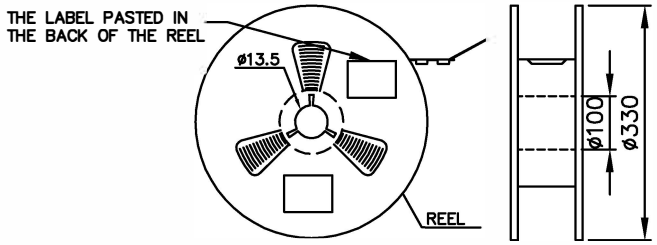
△4 ITEM	△4 K0	K1	PITCH	PCS/REEL
DIM	2.20	2.80	12.00	1500

W	W1	W2
16		7.50
24		11.50
32	28.40	14.20
44	40.40	20.20

NOTES:
1. 10 SPROCKET HOLE PITCH CUMULATIVE TOLERANCE ±0.20.
2. CARRIER CAMBER IS WITHIN 1mm IN 250mm
3. MATERIAL : BLACK CONDUCTIVE POLYSTYRENE ALLOY
4. COMPONENT LOAD PER 13" REEL: 1500 pcs.
5. FOR WB105−XXXX−X2X
6. TOTAL LENGTH: 19.18 Meters.
7. THIS DRAWING PRODUCTS COMPLY WITH THE WIT GREEN PRODUCT SPECIFICATION.

△4 ORDER INFORMATION: X 3 XX N − 0006 − 0 XX

- X: △4 L: PAPER CARRIER; R: PLASTIC CARRIER
- 3: CARRIER PITCH
- XX: CARRIER WIDTH
- N: PRODUCT DIRECTION
- 0006: TYPE
- 0: CKT: 10~98, A0=100, B0=110, C0=120, D0=130, E0=140, F0=150, G0=160
- XX: CKT



SER	REVISIONS	CHK	DATE
△6	RE201401007	JOSH	04/01/14
△5	RE201204024	JIMMY	05/02/12
△4	RE201202025	JIMMY	03/01/12
△3	RE200909045	JOHN	10/01/08
△2	RE080611	JOAN	08/16/08
△1	RE050528	Tommy	04/14/08

GENERAL TOLERANCE UNLESS OTHERWISE SPECIFIED
X.X ±0.2
X.XX ±0.1
X.XXX
ANG. ±0°30'

东莞市文章济美电子有限公司

DRAWN	Nelly NOV-03-2004
CHECKED	Leo NOV-03-2004
APPROVED	Jack NOV-03-2004
SHEET	1/1
PART NO.	X3XXN−0006−0XX
TITLE?	WB105−XXXX−X2X
UNIT	MM
SCALE	2?1
SIZE	A4
REV	G