

DOCUMENT NAME: PRODUCT SPECIFICATION	SUBJECT: RF IV I-TYPE BOARD		DOCUMENT NO: SPEC-ANB-400			
	CONNECTOR	PAGE	1 OF 11	REV	С	
PRODU	CT SPEC	IFICATI	ON			
	NO.SPEC-AN	B-4001				
R	F IV I-TYPE BOARD E (Product NO. ANB01	ND CONNECTOR				
APPROV	ED CHECKED	PREPARED	ISSU	ED BY	1:	
	ang Roy.Duan	Roy.Duan				



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		****	REV	ISION HISTORY	****			
	Rev.	Date		Revision Page No.	No	otes		
	A	2013-01	-5	New Reversion	初次	次发行		
	В	2017-07-	18	修改参数	更新	ī 发行		
	С	2018-05-	25	修改参数	更新	ī 发行		
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REV C

1. SCOPE

This product described in this document is a SMT Type Micro Coaxial RF Receptacle, whose part name in our comply is USS RF REC. It is special for micro strip-to -Coaxial adapter in RF circuit, such as Mobile Phone, Wireless Net, Mini PCI, Bluetooth, PDA, GPS, Electric Measurement Instruments and so on.

2. REQUIREMENT

2.1. PRODUCT DIMENSION

Product shall be intermateable with industry standard product of opposite gender. This connector shall have the dimensions as shown in Drawing .

2.2. PCB/PANEL LAYOUT

The recommended PCB layout are shown in Drawing .

2.3. BILL OF MATERIAL

The bill of material and product number of Connectors are described in Drawing .

2.4. MECHANICAL & ELECTRICAL CHARACTERISTIC

The connector shall have the mechanical and electrical performance as described in Table I.

2.5. PACKAGING

Parts shall be packaged according to requirements specified in purchase order for safe delivery. Connector container and the packing specification are shown in Drawing .

2.6. HARMFUL MATERIAL CONTROL

Harmful material controls please follow the Doc. No. QW-QA-10.

3. Part No., construction, material and finish

- (1) Part No. Receptacle : ANB0150*-411-R Plug : ANC*****-4**,
- (2) Construction, material and finish of the connector are covered as each drawing.
- (3) The plug side application cable requirements

Characteristic impedance: 50±2Q by TDR method

Nominal capacitance (Reference value): 96 pF/m

Conductor resistance of inner conductor at 293K (20C) (Reference value) : 1400 ohm/km Insulation resistance: 1000 mega-ohm.km MIN.

Dielectric withstand voltage: no breakdown at AC1000V for 1 minutes.



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4. PRO	DUCT PICTURE						
5.Rat	ings						
	Rated voltage	AC60Vrr	ns				
	Nominal characteristic Impedance	50 ohm					
	Frequency	DC~8GH	łz				
	VSWR	Plug: 0. 3- 6- Receptad 0 3- 6-	1~3GHz ~6GHZ ~8GHZ ≤: . 1~3GHz ~6GHz ~8GHZ	1.3Max 1.5Max 1.6Max 1.3Max 1.4Max 1.5Max	 K. K. K.		
	Service Temperature	233K~3	63K(-40	C~90C)			
	Storage condition	Tempera Humidity	aure:248k /:85% MA	(~333K(X.(No co	-25C~+600 ndensation	C))	

6. Test and Performance

Test Condition

Unless otherwise specified , all tests and measurements shall be performed under the following condition in accordance with MIL-STD-202G.

Temperature -----288K~308K(15C~35C)

Humidity -----45~75%R.H.

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DC PR	CUMENT NAME: ODUCT SPECIFICATION SUBJECT: RF IV I-TYPE BOARD END CONNECTOR DOCUMENT NO: SPEC-ANB-4001 I Electrical Performance AGE 5 OF 11 REV I Electrical Performance Subject the receptacle connector to the test board and mate the plug connector together, then measure the contact resistance as shown in Fig.1 by the four terminal method. Apply the low Level condition in accordance with ML-STD-202G, Method307. Open circuit voltage: 2 D mV Max. Circuit current : 10 mA Max. (DC or AC1 kHz) Contact resistance of Inner contact Subject the receptacle and plug connector together, Max. After testing: AR20 m Max. Fig.1 Initial S00MQ Min. And then apply DC 100V between the inner contact and the ground contact in accordance with MIL-STD-202G, Method 302. Initial 500MQ Min. After testing : 100 M Min.										
		-	-	CONNECTOR	PAGE	5 OF 11	REV	С			
6-′	1 Ele	ectrical Perf	ormanc	6							
	NO Item		Test	conditions	5	Specifications					
1	I	Contact resistance	Subject and mat measure by the fo Level co MIL-STE Open cir Circuit cu Contact Contact	Subject the receptacle connector to the test board and mate the plug connector together, then measure the contact resistance as shown in Fig.1 by the four terminal method. Apply the low Level condition in accordance with MIL-STD-202G, Method307. Open circuit voltage: 20 mV Max. Circuit current : 10 mA Max. (DC or AC1 kHz) Contact resistance of inner contact[Signal conta Initial: 20 mC After testing: Max. [Ground cont Initial: 20 mC Max.Contact resistance of Inner contact=A-B Contact resistance of Ground contact=D-C[Signal conta Initial: 20 mC Max.							
		Fig.1	E2			23					
2	2.	Insulation Resistance	Mate the and the and the MIL-ST	e receptacle and plug connector togeth n apply DC 100V between the inner cor ground contact in accordance with D-202G, Method 302.	er, I ntact A N	nitial :500MQ After testing : ⁄lin.	Min. 100 M0	2			







DC PR	CUMENT NAME: ODUCT SPECIFICATION Provide the second secon	T NAME: SPECIFICATION	SUBJI RF]	ECT: [V I-TYPE BOARD END	DOCUMENT NO: SPEC-ANB-4001					
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6-2	2 Mech	nanical Perfor	mance							
	NO	ltem	Test conditio	ns	Spe	cifications				
	1	Mating Force And Un-mating Force	Solder the r board, then place the bo machine, measure of i cycles at a speed 25±3	receptacle connector to the te ard and plug on push-on/pull- nitial and mating/un-mating 3 mm/min. along the mating axis	est Mat Initi off 30c Tota Initi Afte	t Mating Initial : 30 N Max. ff 30cycles: 30 N Max. Total un-mating force Initial :4N Min. After 30 cycles:2N Min				
	2	Receptacle shearing strength	Solder the receptacle connector to the test board, 15N Min. Push the receptacle connector from each directions as 15N Min. Shown in Fig. 3 Measure the strength when the connector is broken . 15N Min.							
		Fig.3	Direction3	Direction2	0. Recepta	Block gage 15mm				
	3	Durability	Mate and un connector(so plug connec mm/minutes push-on / pu	-mate the receptacle oldered to the test board) and tor 30 cycles at speed 25±3 along the mating by the III–off machine.	[A abn [(Sh	ppearance] 1 ormality Contact Resista all meet 6. 1.1	No ance]			



	SUMENT NAME: DUCT SPECIFICATION SUBJECT: RF IV I-TYPE BOARD END CONNECTOR DOCUMENT NO: SPEC-ANB-40 PAGE 8 OF 11 Item Test conditions Item Specifications Item Contact resistance with force on the cable Apply force on the cable as shown in Fig.4 Specifications Iteparance] Looseness between the check electrical discontinuity. Iteparance] Looseness between the check electrical discontinuity. Fig.4 Plug Item Itest conditions Item Contact Fig.4 Plug Item Plug Item Contact Resistance] Shall meet 6. 1.1 Item Shall neet 6. 1.1 Vibration App y the following vibration to the mating connector. During the testing, run 100mA DC to check electrical discontinuity. Iteperance] Looseness between parts, chiping, breakage abnormality shall not cor gater Vibration App y the following vibration to the mating connector. During the testing, run 100mA DC to check electrical discontinuity. Frequency: 10Hz → 10Hz → 10Hz/approx 20 minutes. Iteperance] Looseness between parts, chiping, breakage abnormality shall not cor Looseness between parts, chiping, breakage abnormality shall not cor (Electrical discontinuity). No electrical discontinuity. No electrica	: 001							
			CONNECTOR		PAGE	8 OF 11	REV	С	
N	Item	Test co	nditions	Sp	Specifications				
4	Contact resistance with force on the cable	Apply f Fig.4 During check d discont	orce on the cable as shown in the testing, run 100mA DC to electrical inuity.	 [Appearance] Looseness between the parts, hipping, breakage or other bnormality shall not occur. [Electrical discontinuity] No electrical discontinuity rater than 1 ps shall occur. [Contact Resistance] Shall meet 6. 1.1 					
	Fig.4	_F Recep	2N Plug btacle Board		Cable	► 4N			
5	Vibration	App ly the follo connector. During the te electrical disc Frequency: 10 minutes. Half amplitud 1.5mm or 59 Directions, cy direction, 3	owing vibration to the mating sting, run 100mA DC to check continuity. $0Hz \rightarrow 100 Hz \rightarrow 10Hz/approx 20$ e, Peak value of acceleration : $m/s^{2}(6G)$ ycle: 3 mutually perpendicular cycles about each direction	[ab [gra th	Appearan Loosend Ints, chip Inormality Electrica No elec ater nan 1 ps Contact Shall me	nce] ess between ping, breaka / shall not oc l discontinuity ctrical discor shall occur. Resistance] eet 6. 1.1	the lige or oth ccur. /] htinuity	her	
6	Shock	App ly the follo connector. During the te electrical disc Peak value of Duration : 110 Wave Form : Direction, cyc direction,	owing vibration to the mating sting, run 100mA DC to check continuity. f acceleration: 735 m/s²(75G) msec half sinusoidal cle :6 mutually perpendicular 3 cycle about each direction.	[Appearance] Looseness between the parts, chipping, breakage or other abnormality shall not occur. [Electrical discontinuity] No electrical discontinuity grater than 1 ps shall occur. [Contact Resistance] Shall meet 6.1.1					



DC PR	CUMENT NAME: DUCT SPECIFICATION Environmental Pe NO Item 1 Thermal 1 Shock 2 Humidity (Steady State) 3 Salt Water Spray	SUBJECT: RF IV I-TYPE BOARD END	DOCUMENT NO: SPEC-ANB-4001								
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6 -	3 En	vironmental Per	ormance			1					
	5-3 Envir NO It 1 T S 2 H (3 3 S	ltem	Test conditions	Spec	Specifications						
		Thermal Shock	Apply the following environment to the mating connector. Temperature, duration in accordance with MIL-STD-202G, Method 107G, Condition A. Temperature : $218K (-55C)/30$ minutes. $\rightarrow 358K(85C)/30$ minutes. Transition time: 5 min. Max. No. of cycles : 5 cycles	 [Appearance] Looseness between the parts , chipping , breakage or other abnormality shall not occur. [Contact Resistance] Shall meet 6. 1.1 [Insulation Resistance] Shall meet 6. 1.2 [Appearance] Looseness between the parts , chipping , breakage or other abnormality shall not occur. [Contact Resistance] Shall meet 6. 1.1 [Insulation Resistance] Shall meet 6. 1.2. [Appearance] No abnormality Adversely affecting the performance shall occur. 							
		Humidity (Steady State)	Apply the following environment to the mating connector in accordance with MIL-STD-202G, Method 103, Condition B. Temperature : 313±2K (40±2C) Humidity : 90~95%RH Duration : 96 hours								
	3	JCT SPECIFICATION	App y the following environment to the mating connector in accordance with MIL-STD-202G,Method 101E, Condition B. Temperature: 308±2K (35±2C) Salt water density : 5± 1%(by weight) Duration : 48 hours								
	CUMENT NAME: DUCT SPECIFICATION DUCT SPECIFICATION NO Item NO Item 1 Thermal Shock Shock 2 Humidity (Steady State) 3 Salt Water Spray 4 High Temperature Life	High Temperature Life	gh mating connectorApp ly the following environment to the mating connector[Appeara Loosen parts , chi or other al not occur.eDuration: 96 hours[Contact Shall m								



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BRODUCT	dering								
	Item	Test conditions	Spe	ecifications					
NO 1 2	Solder ability Soldering Heat	Dip the solder tine of the contacts in the solder bath at 518±5K(245±5C) for 5±0.5seconds after immersing the tine in the flux of RMA type for 5 to 10 seconds in accordance with MIL-STD-202,Method 208.	Mo the sha wet	of ce No					
		Resistance Fig.5	shown in Fig.5	Adversely affecting the performance shall occur.					
		Temperature	Gradient 1~4 K/sec. 433~473K (160~200°C) 1~2 minutes Time	533K (20	60°C) sec. Gradient -3 ~ -6 K/sec.				



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		Table	п:	Tes	t Seq	uence	and	Samp	le Qua	antity				
Test: Measurement or Examination	A	В	с	D	Е	F	G	Н	I	J	к	L	М	
1.Contact Resistance				1,3	1,3	1,3	1,3	1,5	1,5	1,3	1,3	1,3		
2.Insulation Resistance 3.Dielectric Withstanding								2,6 3,7	2,6 3,7					
Voltage 4.VSWR	1													
5.Un-mating force		1												
6.Crimp strength			1											
7.Durability				2										
8.Contact resistance with force on the cable					2									
9. Vibration						2								
10.Shock							2							
11. Thermal Shock								4						
12. Humidity									4					
13. Salt Water Spray 14. High										2				
Temperature Life											2			
16.Soldering												2		
Heat Resistance													1	
Sample QTY.	10	10	10	10	10	10	10	10	10	10	10	10	10	