

Product Number: **SMALFN8-8100-250115**  
Product Name: Coaxial Cable



## Specification For Approval

Date: 2011 / 12 / 02

File No.: 11120200039

Version: 1.0

Customer : 晶暉科技股份有限公司

Customer P/N : /

INVAX P/N : SMALFN8-8100-250115

Description : Coaxial Cable

Cortec Checked By:



Customer Approved By:



**INVAX System Technology Corp.**  
4F. No. 815. Chung Hsiao East Rd., Sec.5  
Taipei, TAIWAN



**Cortec Technology Inc.**  
Xian-Xi Industrial, Sha-Tou Administration Zone,  
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Province, China

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## 1. Specification

Sample Photo																	
																	
<b>A. Electrical Characteristics</b>																	
<table border="1"> <tr> <td>Frequency</td><td>DC~6GHz</td></tr> <tr> <td>Impedance</td><td>50 Ohm</td></tr> <tr> <td>S.W.R.</td><td>&lt;= 2.0</td></tr> <tr> <td>Insertion Loss</td><td>&lt; -1.5 dB</td></tr> <tr> <td>Voltage (breakdown)</td><td>&gt; 500V</td></tr> <tr> <td>Insulation Resistance</td><td>&gt;= 500 M ohm</td></tr> <tr> <td>Center Conductor Contact Resistance</td><td>&lt;= 25 m ohm</td></tr> <tr> <td>Outer Conductor Contact Resistance</td><td>&lt;= 15 m ohm</td></tr> </table>		Frequency	DC~6GHz	Impedance	50 Ohm	S.W.R.	<= 2.0	Insertion Loss	< -1.5 dB	Voltage (breakdown)	> 500V	Insulation Resistance	>= 500 M ohm	Center Conductor Contact Resistance	<= 25 m ohm	Outer Conductor Contact Resistance	<= 15 m ohm
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<b>B. Material &amp; Mechanical Characteristics</b>																	
Material of Conductor	Brass (Cu)																
Pull Test (Retention)	>= 27 Kg (270N) for Screw Type																
Pull-Engagement Force	<= 2.7 Kg (27N) for Plug Type																
Pull-Separation Force	1~2 Kg (10 ~ 20 N) for Plug Type																
Pull Test of SMA Connector	>= 3Kg																
Mating Cycles	> 500																
<b>C. Environmental</b>																	
Operation Temperature	- 40 °C ~ + 65 °C																
Storage Temperature	- 40 °C ~ + 80 °C																

## 2. Characteristics and Reliability Test

Test Items		Test Condition and Procedure	Requirements
C1	S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification
C2	Insertion Loss	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification
C3	Voltage Breakdown	MIL-STD-202G, 301 Test voltage should be applied between insulated portions, or between ground as specified.	Max Voltage: $\geq 500$ V DC or directive material specification
C4	Insulation Resistance	MIL-STD-202G, 302, cond. B Test Voltage: $500 \pm 50$ V; between the insulated portions, or between ground as specified.	Resistance $\geq 500$ M ohm or directive material specification
C5	DC Resistance	MIL-STD-202G, 303 Air Temp: $25^{\circ}\text{C}$ ; measured with test equipment	Directive material specification
C6	Contact Resistance	MIL-STD-202G, 307 Air Temp: $25^{\circ}\text{C}$ ; measured with test equipment	Directive material specification
M1	Vibration	MIL-STD-202G, 201A Amplitude: 0.03 inch (0.76mm); Freq: 10 to 55 Hz 3 directions; 2 hours for each direction	1. No Visual Damage 2. Frequency Tol. $\leq 5\%$
M2	Random Drop	Height: 1.5 Meter; 3 directions; 1 time for each direction	1. No parts separated 2. Frequency Tol. $\leq 5\%$
M3	Solderability	MIL-STD-202G, 210F, cond. A Solder iron: $260 \pm 10^{\circ}\text{C}$ ; Duration: 5 seconds	1. Mounted on PCB 2. No Visual Damage
M4	Terminal-Pull Test	MIL-STD-202G, 211A, cond. A Holding with individual specification; force applied to axis of terminal	1. Directive DUT specification 2. Frequency Tol. $\leq 5\%$
M5	Terminal-Torque Test	MIL-STD-202G, 211A, cond. E Holding with individual specification; applied clockwise and counterclockwise to the axis of terminal	1. Directive DUT specification 2. Frequency Tol. $\leq 5\%$
M6	Dimension	Inspection of dimension, color, material, package, surface process	Directive DUT specification
E1	Salt Spray	MIL-STD-202G, 101E, cond. B Temp: $35^{\circ}\text{C}$ ; RH: $\geq 95\%$ ; NaCl solution: $\geq 5\%$ ; Time: 48 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. $\leq 5\%$
E2	Humidity	MIL-STD-202G, 103B, cond. B Temp: $40^{\circ}\text{C}$ ; RH: $\geq 95\%$ ; Time: 48 hours	After 2 Hours Recovery 1. No Visual Damage

			2. Frequency Tol.<= 5%
E3	Thermal Shock	1 Cycle: - 40°C (30 minutes) to + 80°C (30 minutes) Cycles: 24	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E4	Life (High Temp.)	MIL-STD-202G, 108A, cond. A Temp: 85°C; Time: 96 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
R1	RoHS	With Reference to IEC 62321:2008 with flow chart	Directive RoHS 2002/95/EC
R2	PFOS	With Reference to USA EPA 3540C:1996 by LC/MS	Directive RoHS 2006/122/EC
R3	PFOA	With Reference to USA EPA 3540C:1996 by LC/MS	Directive RoHS 2006/122/EC

### 3. Samples Test Data

Test Items		Requirements	No.1	No.2	No.3	No.4	No.5
C1	S.W.R.	TBD	ok	ok	ok	ok	ok
C2	Insertion Loss	TBD	ok	ok	ok	ok	ok
C3	Voltage Breakdown	> 500 V	> 500	> 500	> 500	> 500	> 500
C4	Insulation Resistance	> 500 Mohm	> 500	> 500	> 500	> 500	> 500
M4	Pull Force	spec	ok	ok	ok	ok	ok
M6	Dimension	drawing	ok	ok	ok	ok	ok

### 4. Mechanical Drawing

See attached files

1

2

3

4

5

6

7

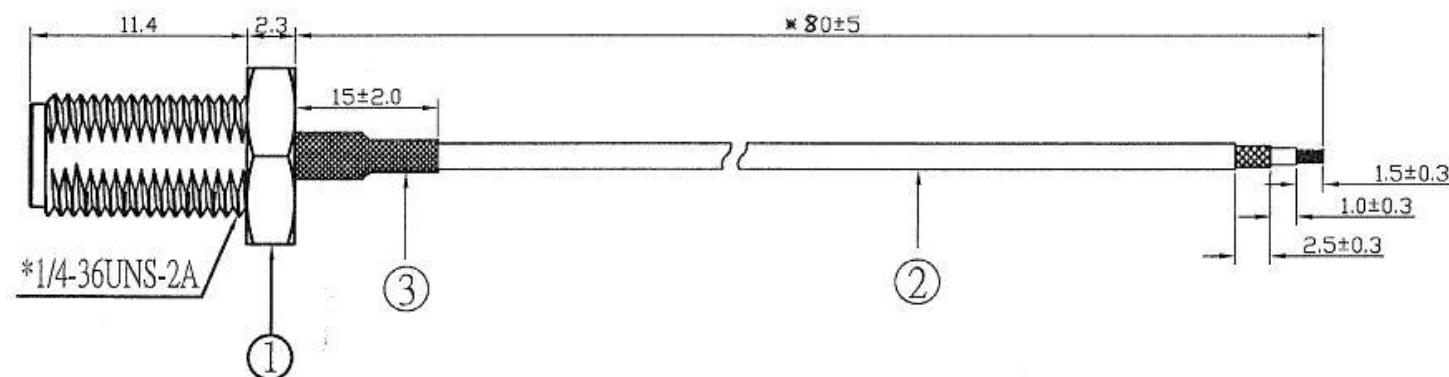
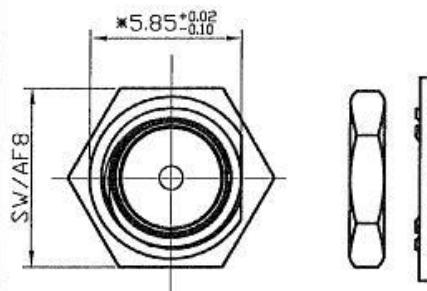
8

SIGN	DATE	DESCRIPTION	APPROVER
AA			
AA			
AA			

# RoHS

Compatible

"\*" Stress



3	Shrink Tub	HT-36	Φ3.5*15mm	1
2	Cable	RG178; Color : Red	L= 80mm	1
1	SMA	Cu Au plated	180° Female	1
NO	Description	Material	Specification	Q'ty

Invox System Group.  
**Cortec**

Cortec Technology Inc.  
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TITLE: SMA / RG178 /Open

PART NO.: SMALFN8-8100-250115 DWG NAME: SMALFN8-8100-250115.dwg

APPROVED BY	CHECKED BY	DESIGNED BY	Tolerance
Grant 2011.04.27	Tony 2011.04.27	Lvybaos 2011.04.27	UNITS: mm X.X ±0.5
			SCALE: XXX ±0.3
			REVISION: B X* ±1*