


Thermal Shock Test for Coax Fixed Attenuators

DC-40 GHz, 10dB , 2 Watts, 2.92mm M/F

1. Test Purpose

To evaluate the Coax Fixed Attenuators are able to operate properly within specifications after thermal shock 10 cycles (-55°C to +100 °C) in accordance with method 107 of MIL-STD-202.

2. DUT Product Information

Product Name	Coaxial Fixed Attenuator DC-40 GHz, 10dB , 2 Watts, 2.92mm M/F	
Specs	DC-40 GHz VSWR 1.25 max, Accuracy 10 ± 0.7 dB	
P/N	RFHB4010292C2A	
Qty	5 PCS	

3. Test Instrument

No.	Instrument	Model
1	Hot And Cold Test Chamber	Shanghai Zhichou ZH/GDJS-50L
2	VNA	Ceyear VNA 3672E

4. Test Description

4.1 Before the thermal shock test, the DUT shall be measured by VNA in VSWR to 40GHz and shall be measured in Attenuation to 40GHz.

4.2 The DUT Attenuators RFHB4010292C2A shall be tested in accordance with method 107 of MIL-STD-202 in below procedures.

Two thermal conditioning chambers were used, one set to -55°C and the other set to 100°C . The DUT were placed into the 100°C chamber first and conditioned for a minimum of 30 minutes. DUT were then transferred to the -55°C chamber within 120 seconds. The DUT were transferred between two (2) thermal conditioning chambers for 10 cycles.



4.3 After thermal shock test, repeat the step of 4.1.

4.4 After thermal shock test, perform visual and mechanical inspection to verify the dimensions and workmanship are in accordance with specification requirements.

5. Test Results

Before and after thermal shock, VSWR and attenuation measurement of the 5 pcs RFHB4010292C2A coax fixed attenuators showed minimum change.

RFHB4010292 C2A	Max VSWR measurement from 10MHz-40GHz		Attenuation(dB) measurement from 10MHz -40GHz	
	Before Thermal Shock Test	After Thermal Shock Test	Before Thermal Shock Test	After Thermal Shock Test
S/N				
1	1.07	1.12	9.61~10.28	9.63~10.47
2	1.13	1.12	9.70~10.63	9.69~10.59
3	1.11	1.12	9.70~10.48	9.69~10.58
4	1.11	1.11	9.66~10.41	9.59~10.39
5	1.11	1.13	9.71~10.50	9.66~10.70