


Thermal Shock Test for Coax Fixed Attenuators

DC-6 GHz, 30 dB, 10 Watts, SMA 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-6 GHz, 30 dB, 10 Watts, SMA M/F	
Specs	DC-6GHz VSWR 1.2 max, Accuracy 30±0.8dB	
P/N	RFHB0630SC10	
Qty	1 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 at each end (input and output) to 6GHz in 1 GHz increment and shall be measured in Attenuation between ends to 6GHz in 1 GHz increment.

4.2 The DUT Attenuator RFHB0630SC10 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 was placed into the 100°C chamber first and conditioned for a minimum of 30 minutes. DUT was then transferred to the -55°C chamber within 120 seconds. The DUT was transferred between two (2) thermal conditioning chambers for 10 cycles.



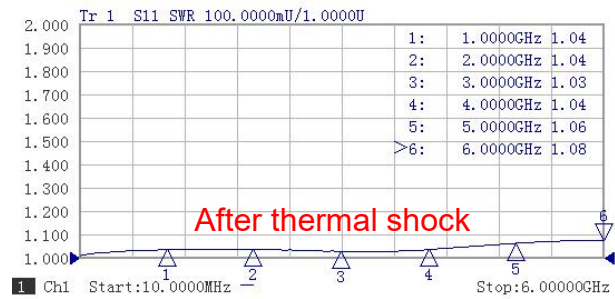
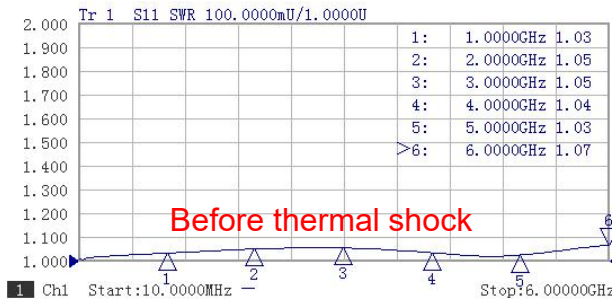
4.3 After thermal shock test, repeat the step of 4.1.

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

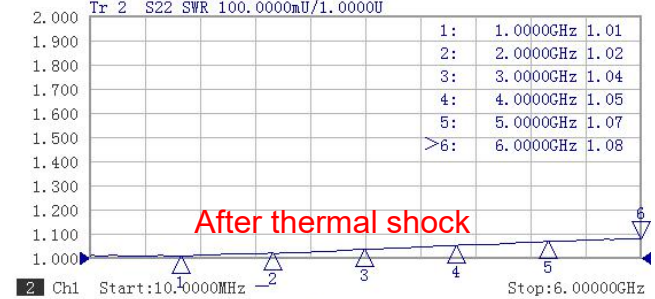
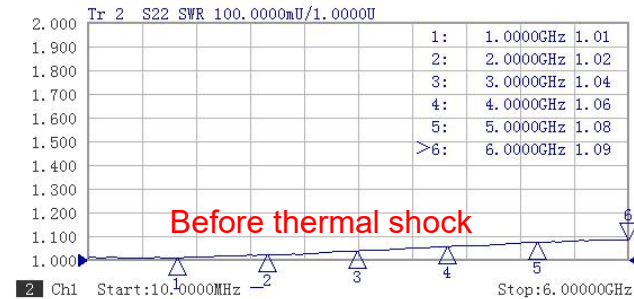
5. Test Results

Before and after thermal shock, VSWR and attenuation measurement of the coax fixed attenuator RFHB0630SC10 showed minimum change.

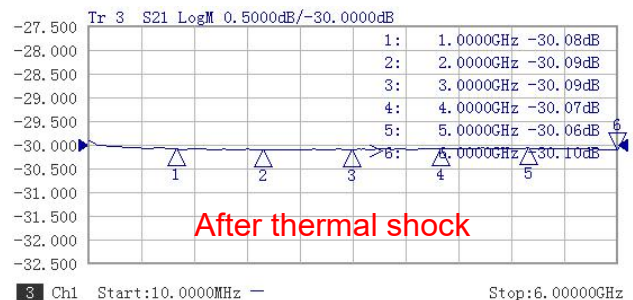
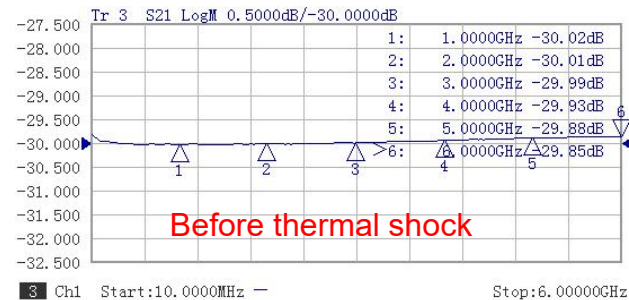
S11(SMA Female Port)



S22(SMA Male Port)



S21(SMA Female to Male)



S12(SMA Male to Female)

