





BUREAU  
VERITAS





BUREAU  
VERITAS



### W52 & W53 bands: 802.11ax (HE40)

TEST CONDITION	Burst Length (ms)			
	CH 38 (5190MHz)	CH 46 (5230MHz)	CH 54 (5270MHz)	CH 62 (5310MHz)
$V_{normal}$	0.98	0.95	1.01	0.95
$V_{max.}$	0.97	0.95	0.98	0.94
$V_{min.}$	1.00	0.95	0.98	0.98

### W56 band: 802.11ax (HE40)

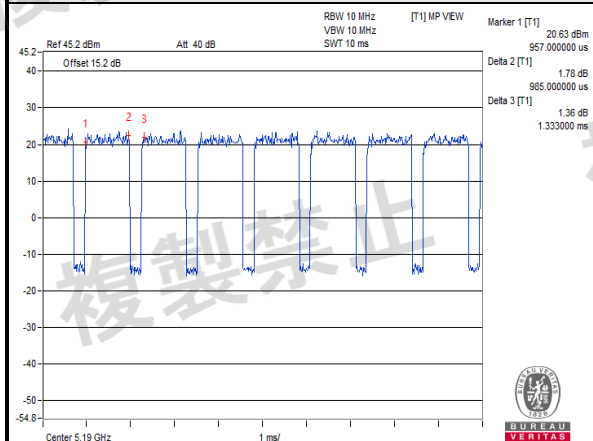
TEST CONDITION	Burst Length (ms)		
	CH 102 (5510MHz)	CH 118 (5590MHz)	CH 142 (5710MHz)
$V_{normal}$	1.00	0.85	0.98
$V_{max.}$	0.97	1.00	0.98
$V_{min.}$	0.98	0.97	0.94

Note: The spectrum plots are attached on the following pages.

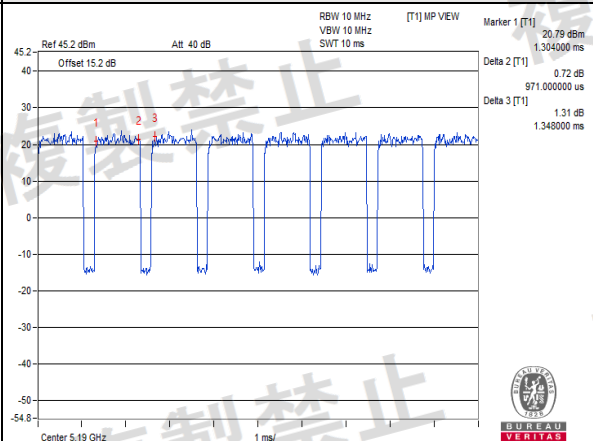


BUREAU  
VERITAS

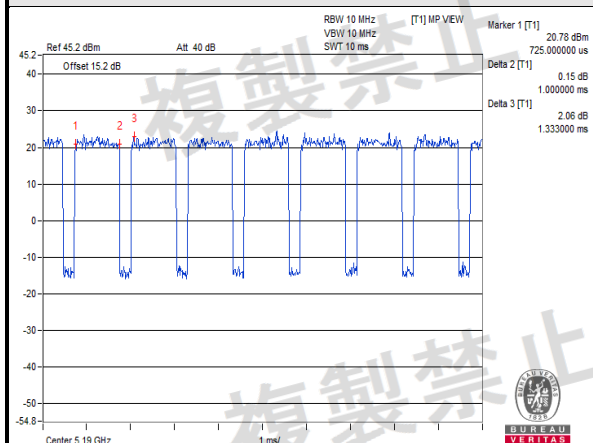
V<sub>normal</sub>



V<sub>max.</sub>



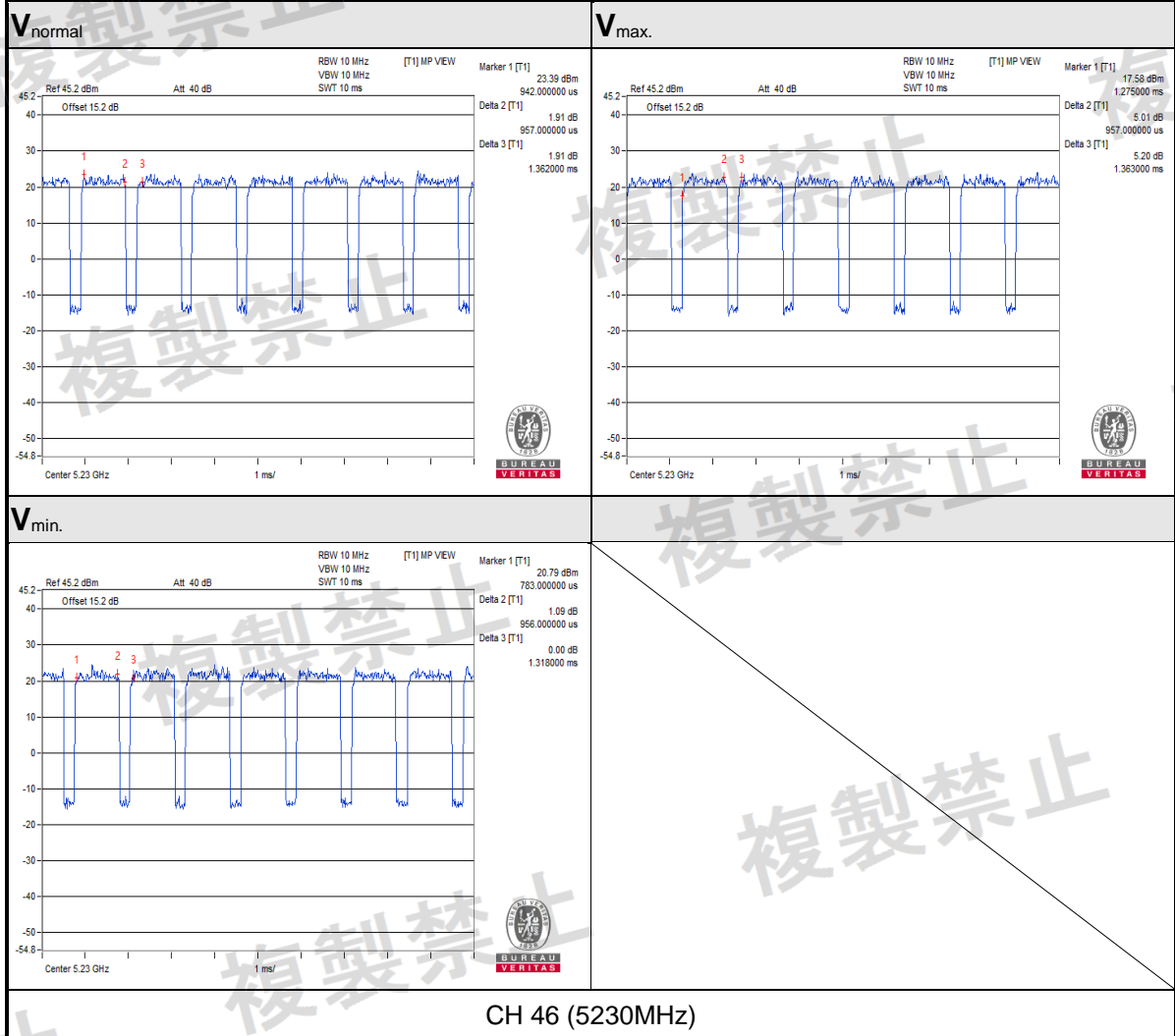
V<sub>min.</sub>



CH 38 (5190MHz)



BUREAU  
VERITAS





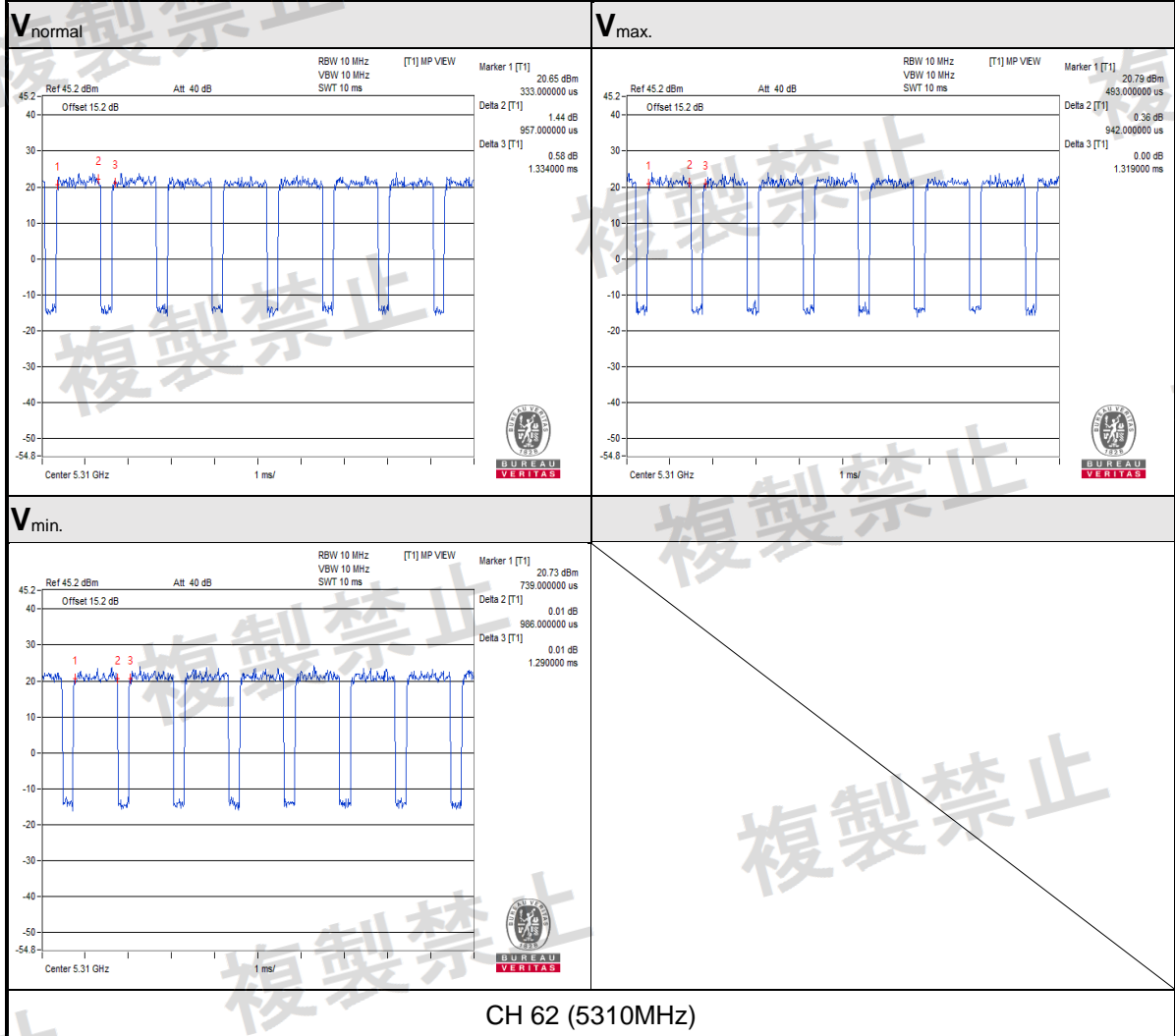


BUREAU  
VERITAS





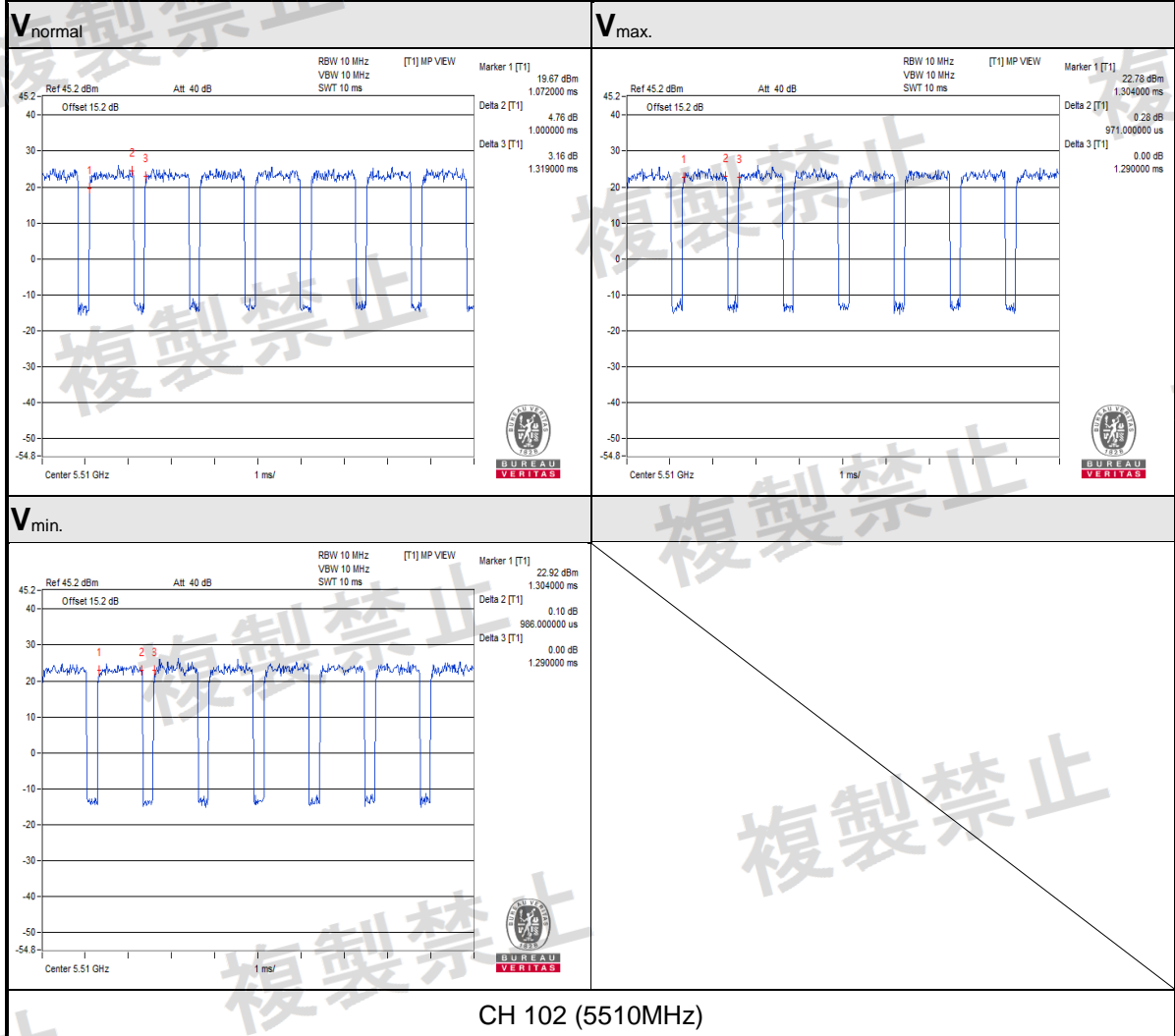
BUREAU  
VERITAS







BUREAU  
VERITAS





BUREAU  
VERITAS





BUREAU  
VERITAS



### W52 & W53 bands: 802.11ax (HE80)

TEST CONDITION	Burst Length (ms)			
	CH 42 (5210MHz)	CH 58 (5290MHz)	CH 106 (5530MHz)	CH 122 (5610MHz)
$V_{normal}$	1.78	1.81	1.78	1.76
$V_{max.}$	1.78	1.76	1.75	1.76
$V_{min.}$	1.79	1.81	1.76	1.79

### W56 band: 802.11ax (HE80)

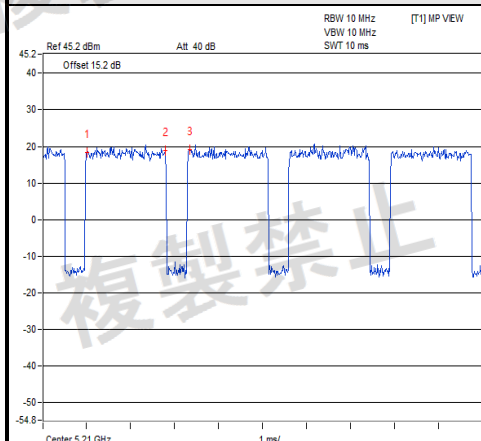
TEST CONDITION	Burst Length (ms)
	CH 138 (5690MHz)
$V_{normal}$	1.75
$V_{max.}$	1.76
$V_{min.}$	1.78

Note: The spectrum plots are attached on the following pages.

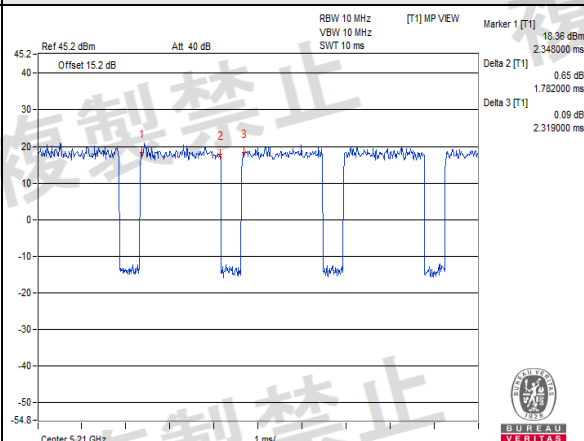


BUREAU  
VERITAS

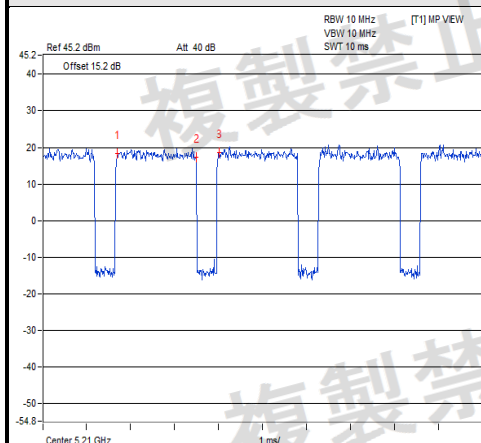
V<sub>normal</sub>



V<sub>max.</sub>



V<sub>min.</sub>



CH 42 (5210MHz)



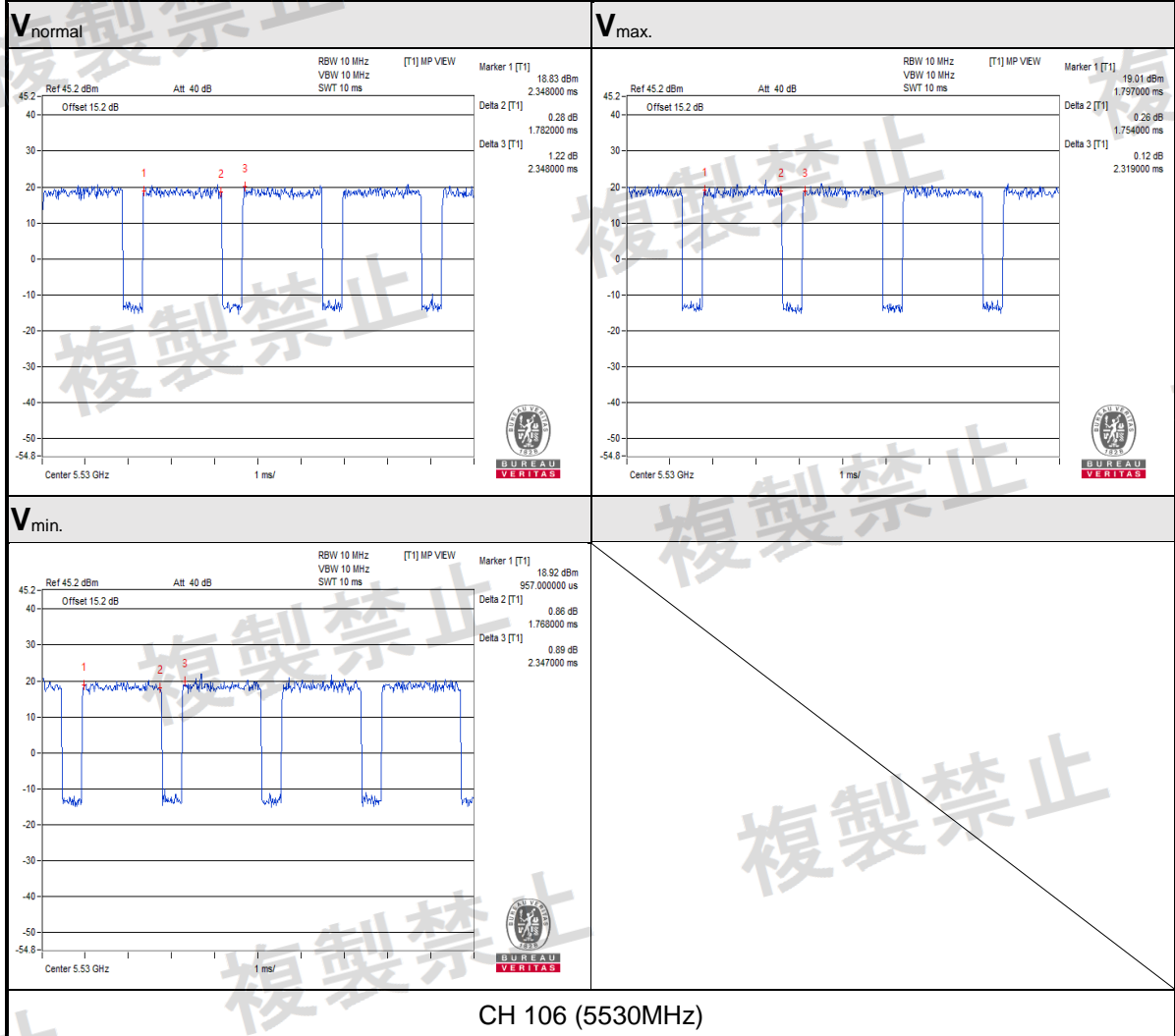
BUREAU  
VERITAS

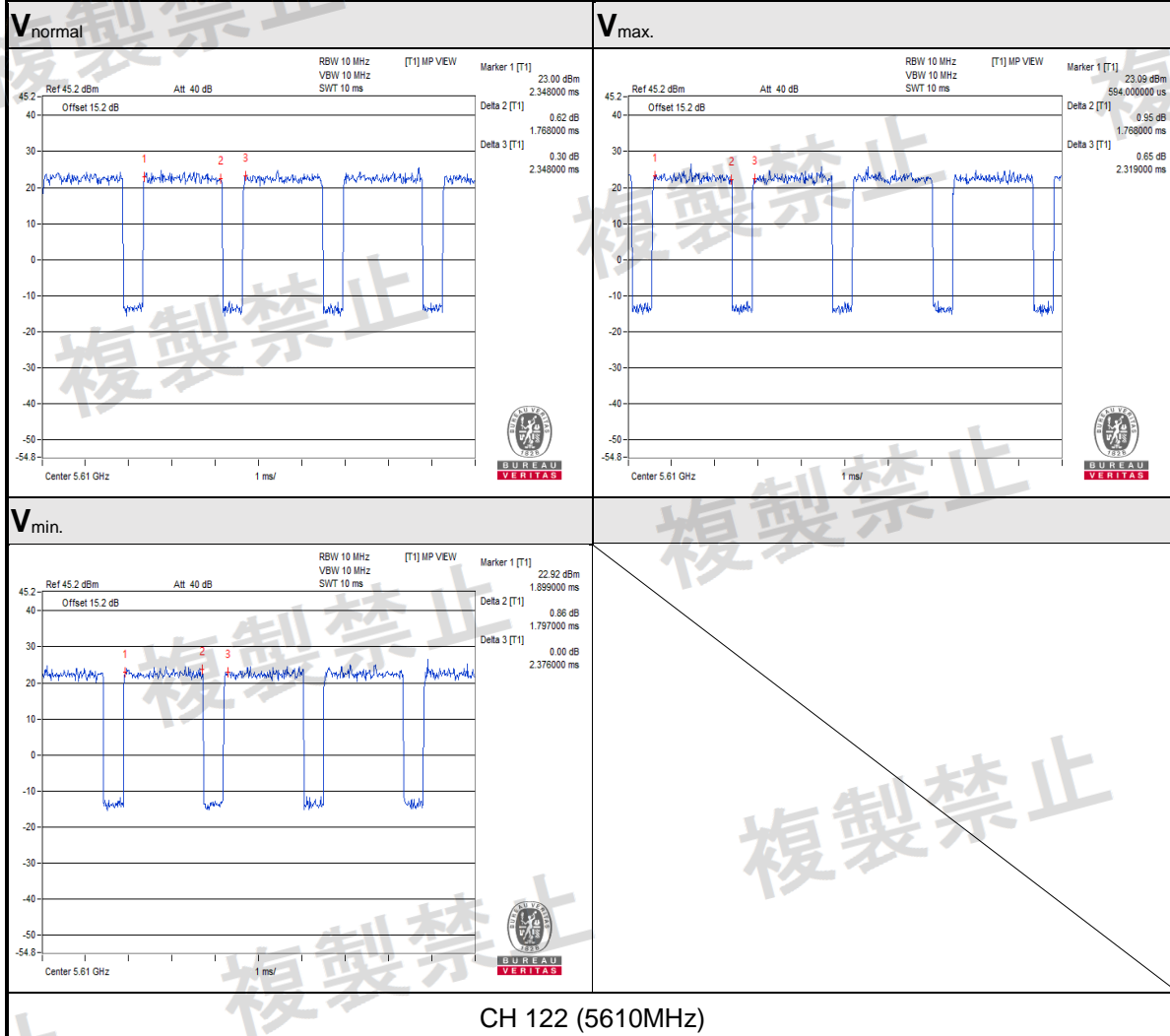






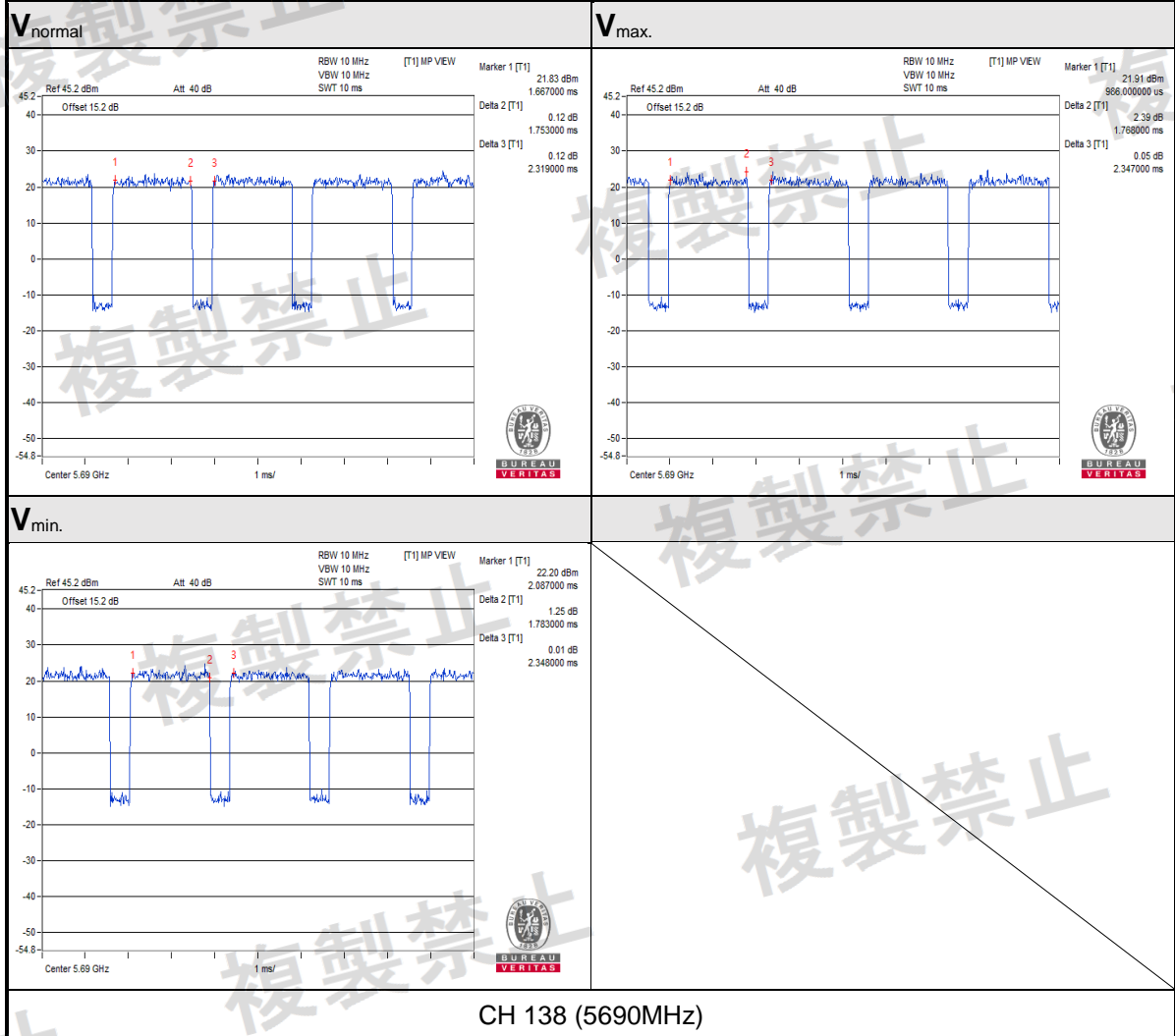
BUREAU  
VERITAS







BUREAU  
VERITAS

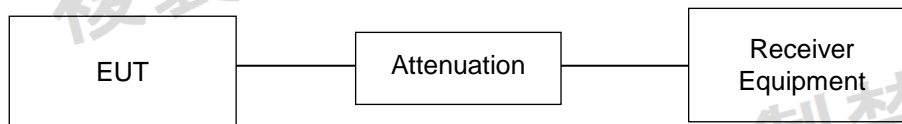


## 4.8 Interference Prevention Function

### 4.8.1 Limits of Interference Prevention Function

Radio equipment used mainly on the same premises and automatically transmits or receives identification code.

### 4.8.2 Test Setup

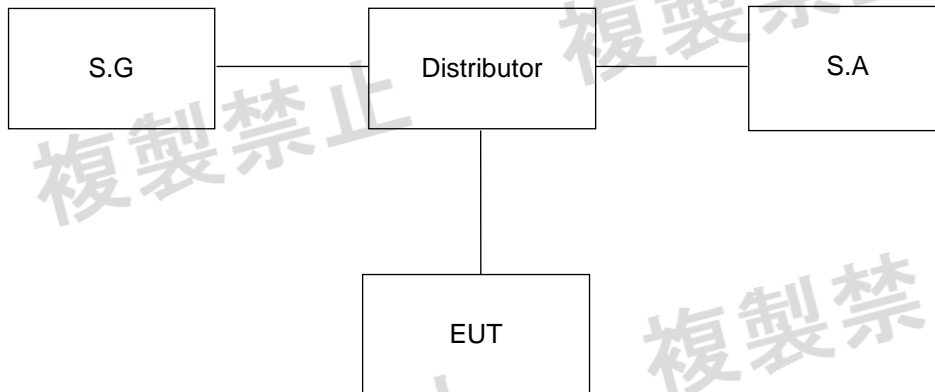


### 4.8.3 Test Results

Environmental Conditions	25 deg.C, 60 % RH
Link Mode	Test Result
WiFi	Pass

#### 4.9 Carrier Sense Capability

##### 4.9.1 Measuring System Block Diagram



##### 4.9.2 Measuring Operation Procedures

- Turn the standard signal generator output OFF. Leave the equipment under test to be ready for transmission and verify the transmission with the spectrum analyzer.
- Set the equipment under test to the receiving state.
- Turn the standard signal generator ON and leave the equipment under test to be ready for transmission and verify with the spectrum analyzer that no transmission is being made.

#### 4.9.3 Level of the Ambient Carrier

##### 802.11a / 802.11n (HT20) / 802.11ac (VHT20) / 802.11ax (HE20)

Frequency (MHz)	Pcs (dBm)
5180	-47.63
5200	-47.66
5240	-47.73
5260	-47.76
5300	-47.83
5320	-47.86
5500	-48.15
5600	-48.31
5700	-48.46
5720	-48.49

Note:

Pcs (dBm) = 22.79 + Gr - 20log(F).

Gr: Antenna gain (**3.18 dBi**).

F: Transmission frequency (MHz).

##### 802.11n (HT40) / 802.11ac (VHT40) / 802.11ax (HE40)

Frequency (MHz)	Pcs (dBm)
5190	-47.65
5230	-47.71
5270	-47.78
5310	-47.84
5510	-48.17
5590	-48.29
5670	-48.41
5710	-48.48

Note:

Pcs (dBm) = 22.79 + Gr - 20log(F).

Gr: Antenna gain (**3.18 dBi**).

F: Transmission frequency (MHz).

##### 802.11ac (VHT80) / 802.11ax (HE80)

Frequency (MHz)	Pcs (dBm)
5210	-47.68
5290	-47.81
5530	-48.20
5610	-48.32
5690	-48.45

Note:

Pcs (dBm) = 22.79 + Gr - 20log(F).

Gr: Antenna gain (**3.18 dBi**).

F: Transmission frequency (MHz).



#### 4.9.4 Test Results

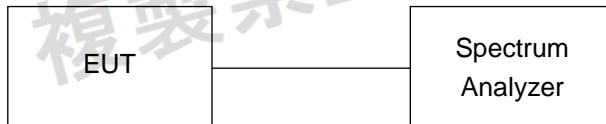
Environmental Conditions	25 deg.C, 60 % RH
Link Mode	Test Result
WiFi	Pass

#### 4.10 Number of Carriers within 1 MHz Bandwidth in OFDM

##### 4.10.1 Limit of Number of Carriers

For each 1MHz bandwidth in OFDM, there should be at least 1 carrier.

##### 4.10.2 Test Setup



##### 4.10.3 Test Results

About OFDM Technical, one OFDM Channel will have 52 sub-carriers. At present, we observe this product via the spectrum, and we know that there are 3 carriers in 1 MHz bandwidth in OFDM.

## 5 Photographs of the Test Configuration



## Appendix - Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

**Lin Kou EMC/RF Lab**

Tel: 886-2-26052180

Fax: 886-2-26051924

**Hsin Chu EMC/RF/Telecom Lab**

Tel: 886-3-6668565

Fax: 886-3-6668323

**Hwa Ya EMC/RF/Safety Lab**

Tel: 886-3-3183232

Fax: 886-3-3270892

**Email:** [service.adt@tw.bureauveritas.com](mailto:service.adt@tw.bureauveritas.com)

**Web Site:** [www.bureauveritas-adt.com](http://www.bureauveritas-adt.com)

The address and road map of all our labs can be found in our web site also.

--- END ---