

## 1. Scope.

This specification applied to SV1212-2990R8V220M

## 2. Ratings

	ITEM	SYMBOL	RATING	UNIT
1	Supply Voltage	Vcc	8±0.25	V
2	Tuning Voltage	Vt	0.0 ~ 18.0	V
3	Operating Temperature	Top	-40 ~ +85	°C
4	Storage Temperature	Tstg	-50 ~ +100	°C
5	Storage Humidity	Hstg	0 ~ 95%	%

## 3. Electrical Characteristics

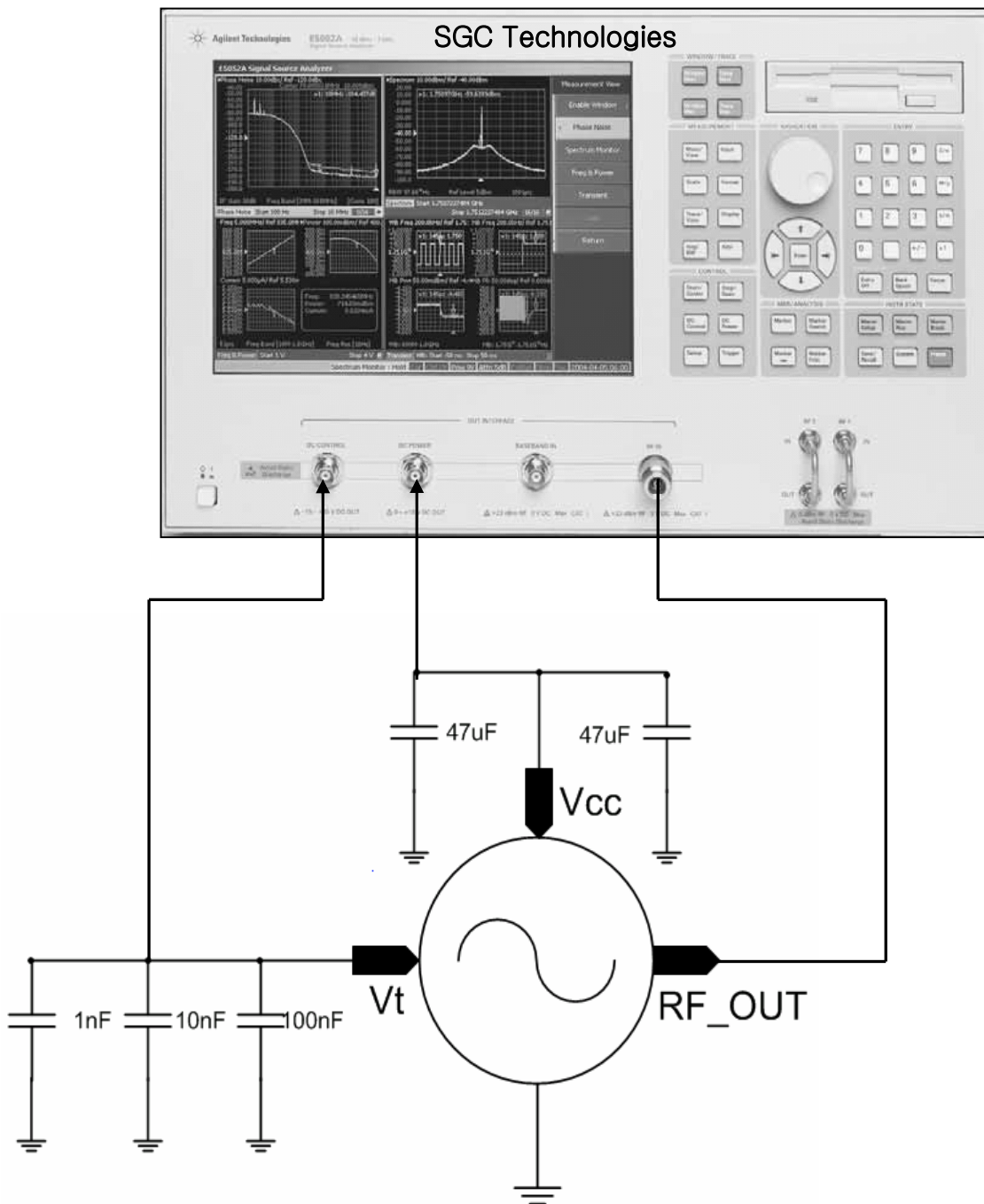
(Over output frequency range, T<sub>A</sub> -40 to +85°C, V<sub>cc</sub>=8.0V, Output load 50Ω, Unless otherwise stated)

PARAMETER	SPEC.			UNIT	Test conditions
	Min	Typ	Max		
Supply Voltage		8		V	DC Voltage
Oscillator Frequency Range			2880	MHz	V <sub>cc</sub> = 8.0V, V <sub>t</sub> = 0.0V
	3100				V <sub>cc</sub> = 8.0V, V <sub>t</sub> = 18.0V
Supply Current		30	35	mA	V <sub>cc</sub> = 8.0V, V <sub>t</sub> = 10.0V
Output Power	-2.5	0	2.5	dBm	V <sub>cc</sub> = 8.0V, V <sub>t</sub> = 0.0V ~ 18.0V
SSB Phase Noise		110	106	dBc/Hz	10kHz offset, V <sub>cc</sub> =8.0V, V <sub>t</sub> =10.0V
		130	126	dBc/Hz	100kHz offset, V <sub>cc</sub> =8.0V, V <sub>t</sub> =10.0V
Harmonic Suppression(2 <sup>nd</sup> )		-20	-10	dBc	V <sub>cc</sub> = 8.0V, V <sub>t</sub> = 10.0V
Tuning Sensitivity		14		MHz/V	V <sub>t</sub> = 0.0V ~ 18.0V
Frequency Pulling		< 2		MHz	V <sub>cc</sub> = 8.0V, V <sub>t</sub> = 10.0V VSWR = 1.5 : 1 All phase
Frequency Pushing		< 1		MHz	V <sub>cc</sub> = 8.0V ±0.25V, V <sub>t</sub> = 10.0V
Input Capacitance		15		pF	

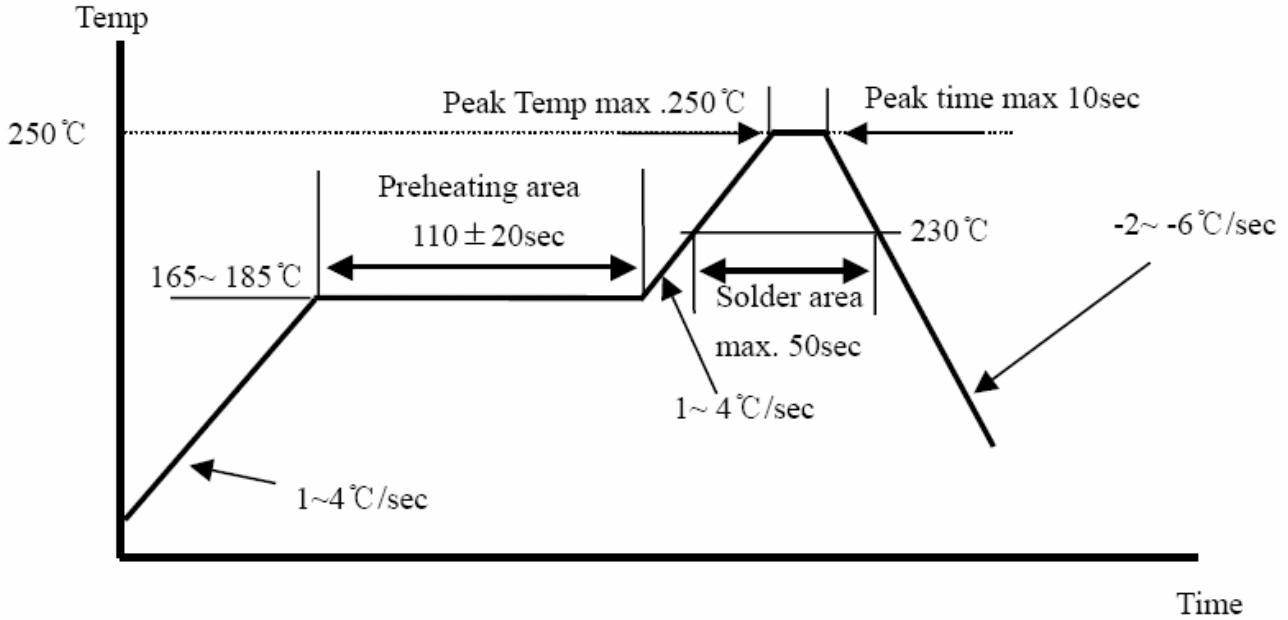
Testing temperature at 25±5°C

#### 4. Measurement Circuit

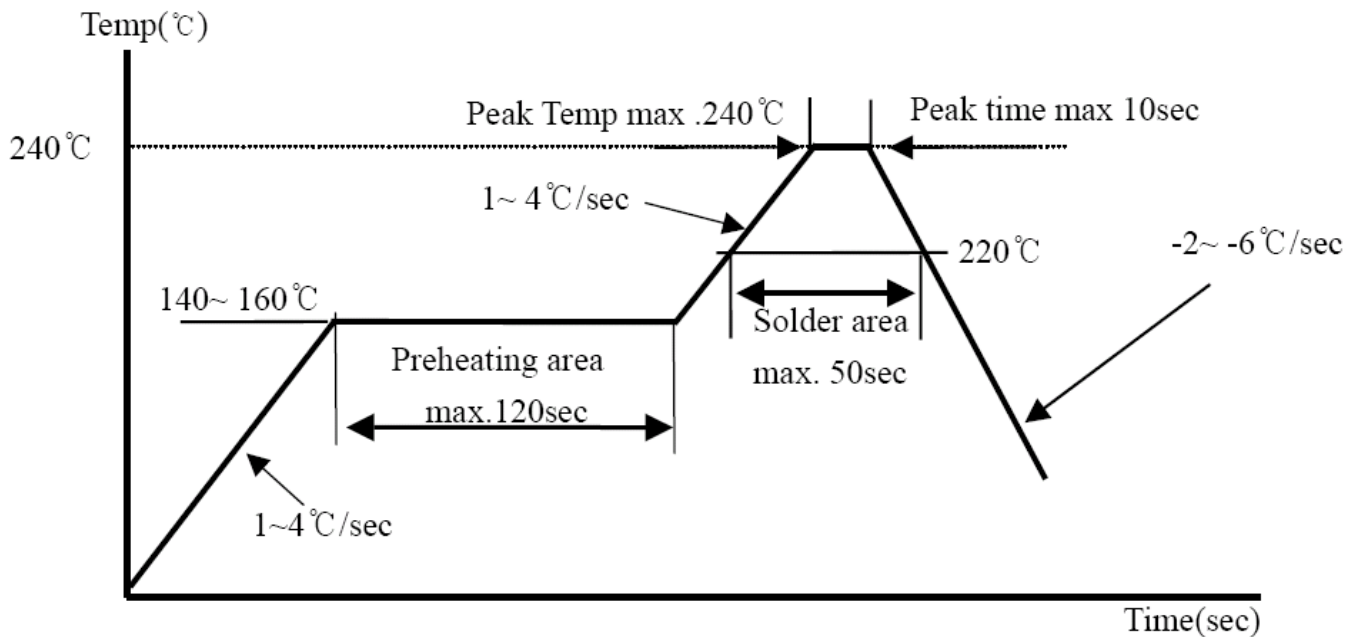
### Test Equipment : Agilent E5052A or 4352B



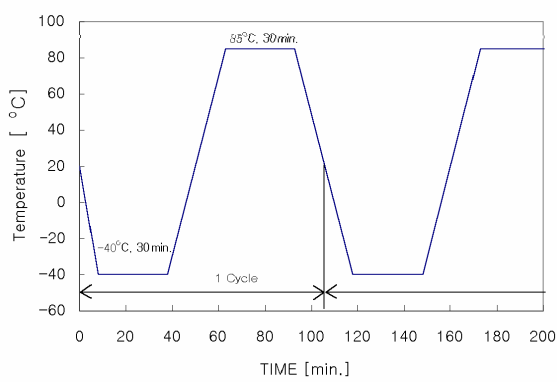
### 5. Recommendable Reflow Soldering Profile (Pb - Free)



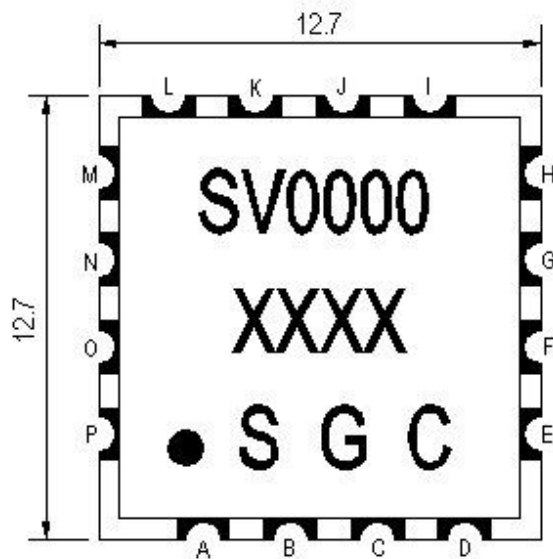
### 6. Recommendable Reflow Soldering Profile (Sn : Pb = 63:37)



## 7. Environmental Requirement

No	ITEM	Condition and Method	Evaluation
1	High Temperature Test	Temp. : +85°C ± 2°C Time : 96hrs ± 2hrs When measured after 2 to 24 hours in normal condition	It shall be satisfied electrical requirement, and not be mechanical damage.
2	Low Temperature Test	Temp. : -40°C ± 2°C Time : 96hrs ± 2hrs When measured after 2 to 24 hours in normal condition	
3	High Temperature & High Humidity	Temp. : +60°C ± 2°C Humi. : 90~95%RH Time : 72hrs ± 2hrs When measured after 2 to 24 hours in normal condition	
4	Temperature Cycle	 <p>-40°C 30min., +85°C 30min., 5 Cycle                      When measured after 2 to 24 hours in normal condition</p>	
5	Vibration Test	Freq. : 10 ~ 30Hz, Amplitude : 1.52mm Freq. : 30~60Hz, 6G Cycle : 20 min. / Cycle Position : Three perpendicular planes.	
6	Shock Test	Height : 75cm Times : 3 Method : Dropped onto wood surface	

### 8. Mechanical Characteristics



#### TITLE OF TERMINAL

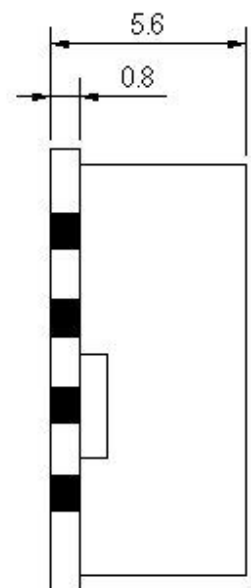
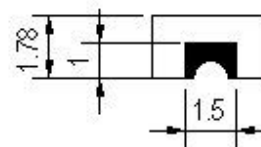
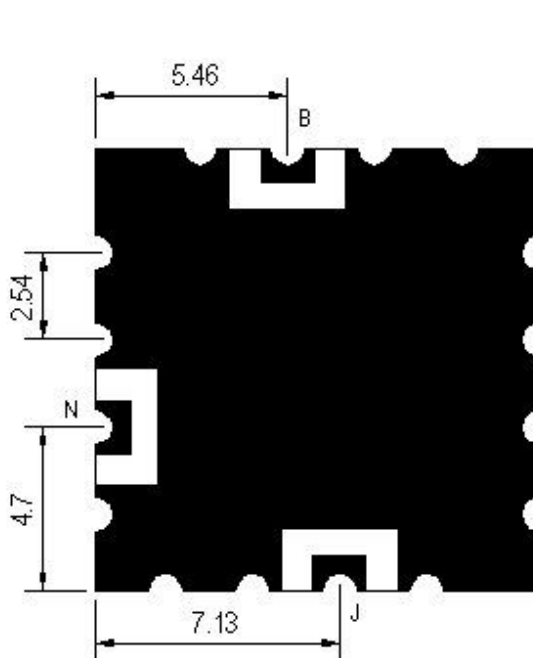
A,C,D,E,F,G,H,I,K,L,M,O,P : Ground

N : Power Supply

J : Output Power

B : Control Voltage

\* Unit : mm



## 9. PART MARKING

### 9.1 Marking

- Add dot on the corner for pin 'A' identification
- Supplier part number
- Date code

**Note** : Marking shall be permanent, solvent resistant, and can withstand to the soldering process.

## 10. CRITICAL TO QUALITY (CTQ) PARAMETERS

SGC will check the following specific parameters during the design and manufacturing process:

- Phase noise at 10 KHz offset
- Temperature transition stability
- Tuning sensitivity
- Phase noise at 100 KHz offset

## 11. QUALITY ASSURANCE SYSTEM

SGC will implement and maintain a quality assurance system to ensure that operation that contribute to the design, development, production and service of material are in compliance with the ISO-9001:2000.

## 12. QUALITY ASSURANCE

SGC will implement and maintain the following quality Assurance requirements in Harris PPD.

- Quality of workmanship
- Serialization and lot control
- Material handling, packaging and marking
- Process controls
- Outgoing quality and reliability
- Corrective actions
- Process Controls

## 13. RELIABILITY

SGC will implement and maintain the following reliability requirement in Harris PPD.

- Design reliability
- Field returns tracking and FMA capabilities

### 14. QA Flowchart and TQM Organization and Main Tasks

