SAMSUNG
ELECTRO-MECHANICS

Messrs : 삼 성 전 자 (주).

SPECIFICATION

Dielectric Antenna Duplexer

DFY1765G1855A

CUSTOMER P/N:

SEMCO P/N: DFY1765G1855A

ISSUED DATE: June 30, 1999

DRAWN BY	CHECKED BY	ISSUED BY

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KYOUNGKI-DO, KOREA

1. APPLICATION

This specification covers the dielectric antenna duplexer DFY1765G1855A used in KOREA-PCS type cellular phone.

2. PART NUMBER

D F Y 1 7 6 5 G 1 8 5 5 A

- Serial Number
- Rx Center Frequency
- Number of Poles;A-1pole, … , G-7poles, …
- Tx Center Frequency
- Monoblock Duplexer
- Dielectric Filter Group

3. LOT NUMBERING (can be changed with the following 2 formats)

3-1 Weekly Base Format

98 29 A

- WEEK;01-1st week, 02-2nd week, 03-3rd week, ····
- YEAR;96-1996, 97-1997, 98-1998,····, 00-2000, 01-2001, ····

3-2 Daily Base Format

8 10 29 A

- DAY
- MONTH;10-OCT, 11-NOV ····
- YEAR;8-1998, 9-1999 (After 1999, this 1 digit will be set as 2 digits)

4. IMPLEMENTATION

4-1 Resonator : Ag Plated Dielectric Coaxial Resonator

4-2 TX : 3-pole B.P.F.
RX : 4-pole B.P.F.

4-3 Case : Cu Pb/Sn Plating

5. TEST CONDITION

5-1 Typical Condition

Temperature	20 ℃
Humidity	65 % RH

5-2 Standard Condition

Temperature	5 ~ 35 ℃
Humidity	45 ~ 85 % RH

6. TEMPERATURE RANGE

6-1 Operating -30 ~ +85 ℃

6-2 Storage -30 ~ +85 ℃

7. ELECTRICAL SPECIFICATION

ITEM	TX		RX	
Center Frequency	1,765 ㎒		1,855 ㎒	
Bandwidth	1,765 ± 15 ㎒		1,855 ± 15 ㎒	
Insertion Loss	2.5 dB Max.		3.2 dB Max.	
Ripple	1.3 dB Max.		1.3 dB Max.	
V.S.W.R	1.8 Max.		1.8 Max.	
Attenuation	Freq.(㎒)	Attenuation	Freq.(㎒)	Attenuation
	1,840~1,870	38 dB Min.	1,750~1,780	54 dB Min.
Isolation	1,750~1,780 ㎒		54 dB Min.	
	1,840~1,870 ㎒		38 dB Min.	
Rated Input Power	3 W Max.		1 W Max.	
Input/Output Impedance	50 Ω		50 Ω	

※ REMARKS

① Characteristics of Tx side is measured by Tx terminal to Ant terminal.

② Characteristics of Rx side is measured by Ant terminal to Rx terminal.

③ The measurements are done with SEMCO's standard test fixture, with which the insertion loss error of Tx and Rx pass-band should be within 0.15 dB.

④ HP 8753D/E Network Analyzer is used in the measurements.

8. ENVIRONMENTAL SPECIFICATION

8-1 Operating Temperature Range

The device should satisfy the characteristics specified in Item 7 at the temperature range from -30℃ to +85℃.

8-2 Temperature Resistance

The device should satisfy the characteristics specified in Item 7 after being left at +90℃ for 96 hours and dried for 1 hour at 25±5℃ with humidity condition less than 65% relative humidity.

8-3 Humidity Resistance

The device is subjected to more than 85% relative humidity at 45℃ for 96 hours,and dried at 25±5℃ with less than 65% relative humidity for 2 hours. The device should satisfy the characteristics specified in Item 7 after drying out.

8-4 Vibration Resistance

The device is subjected to vibrations of 3 perpendicualar plane directions; x,y,z diirection; five sweeps for each direction. Vibration frequency is varied from 10Hz to 50Hz with 4㎜ double amplitude and from 50Hz to 500Hz with $10 \times 9.8 m/s^2$ acceleration. The sweeping time of vibration frequency should be 15 minutes. The device should satisfy the characteristics specified in Item 7 after this test.

8-5 Mechanical Shock Resistance

The device is subjected to 3 shocks in each direction of 6 mutually perpendicular plane directions. Each shock should be a half-sine wave shaped with the magnitude of $30 \times 9.8 m/s^2$ acceleration and a duration of 11msec.

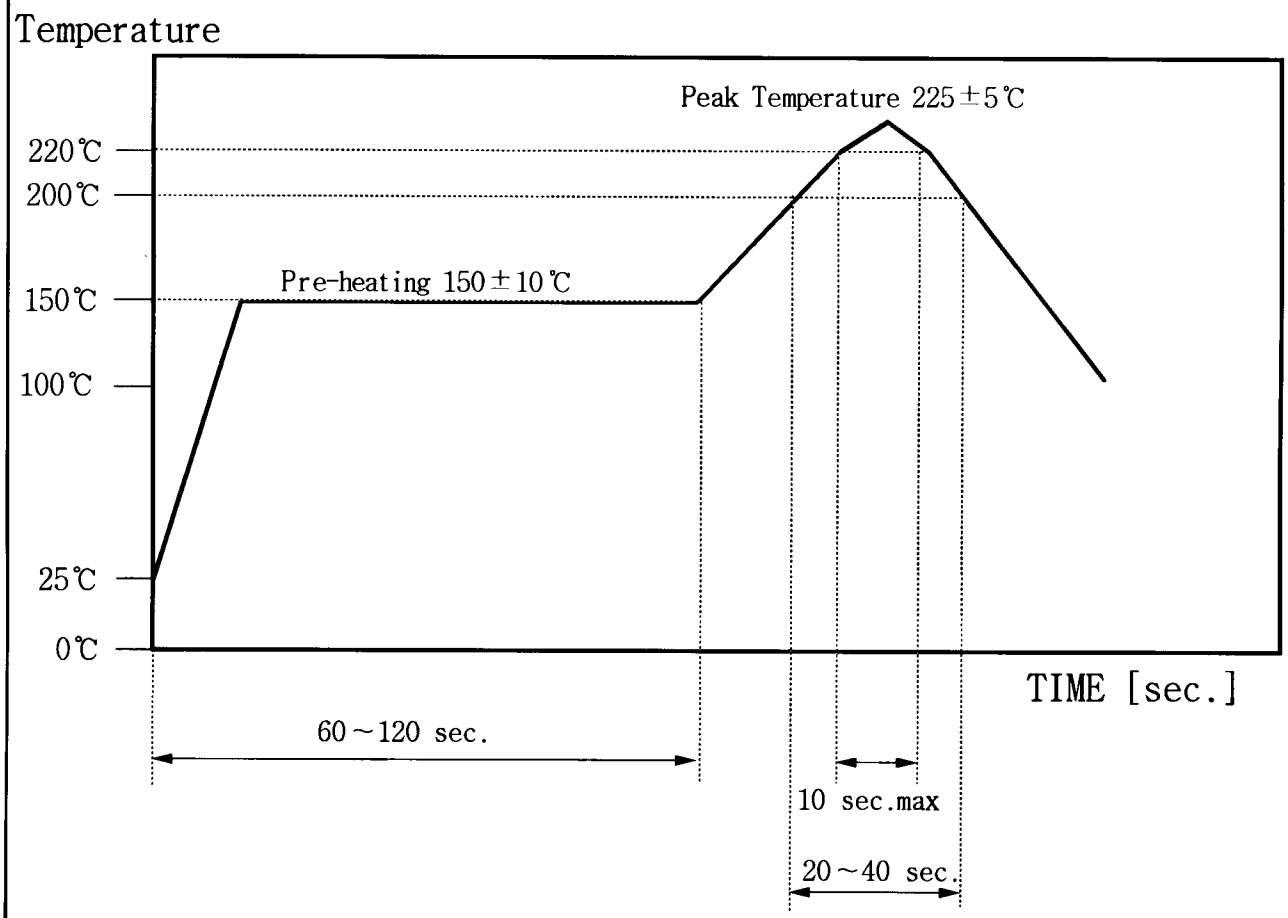
The device should satisfy the characteristics specified in Item 7 after this test.

8-6 Solderability

The bottom surface of the device ceramic block is subjected to the immersion in solder bath at 235±5℃ for 5±0.5 seconds with the speed of 25±2.5mm/sec. The flux must be used for this test and the terminal should guarantee more than 90% solder coverage after the test.

9. SOLDERING CONDITION

9-1 Standard Reflow Soldering Condition



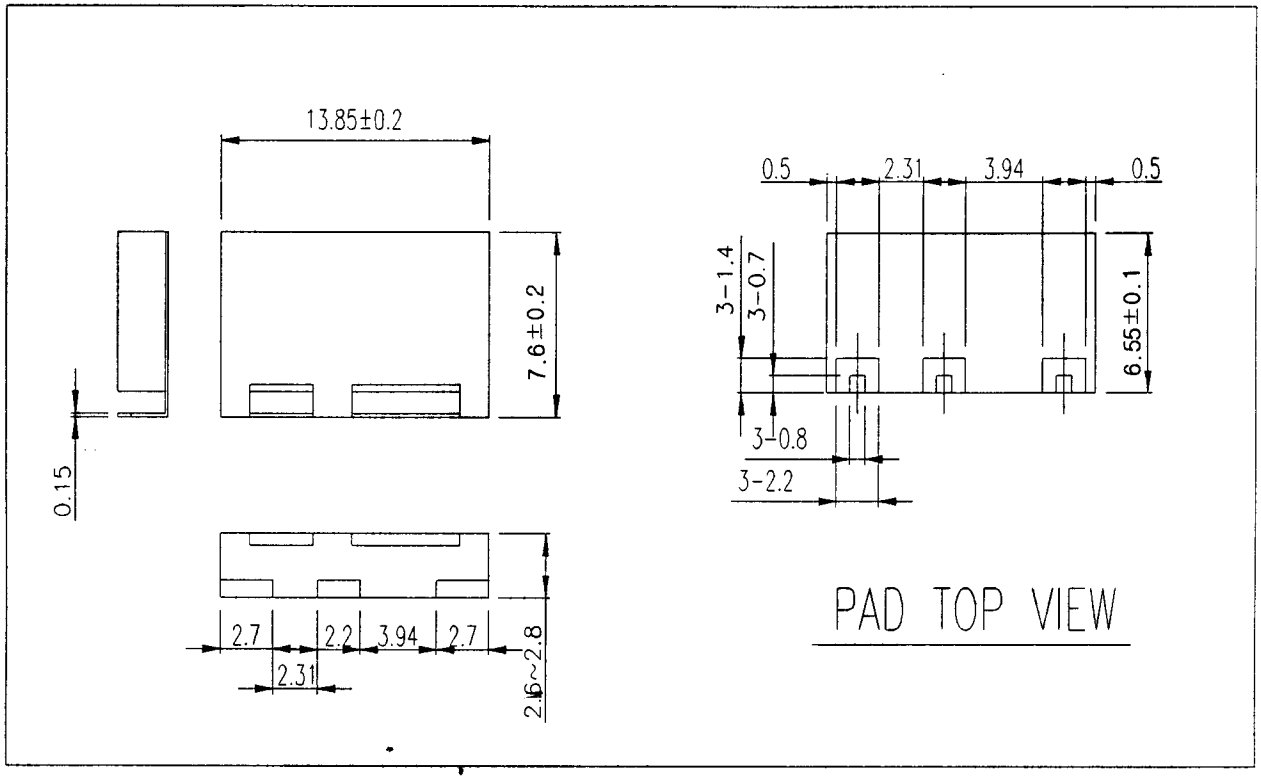
The standard condition of reflow soldering temperature and time is shown in the above. When the reflow soldering may be repeated, the maximum time must be the accumulated total time.

The temperature of the graph shown in the above must be the temperature at the in-output terminal of the device.

9-2 Manual Soldering(When using soldering iron)

Pre-heating Temperature	: 120℃
Time	: 60 ~ 300 sec.
Soldering Temperature of soldering iron	: 340℃±5℃
Time	: max. 5 sec. per each terminal

10. OUTSIDE DIMENSION



TOLERANCE UNLESS
OTHERWISE SPECIFIED : ± 0.3
DIMENSION : mm

11. PACKAGING

Reel and Tape Type