

DS3232 Series [Preliminary]

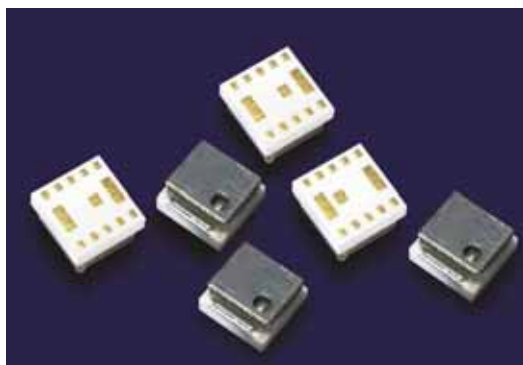
Antenna Switch Module

Features

- ❖ Combined function of diplexer, two Tx/Rx switches, and two low-pass filters
- ❖ Small, low profile SMD

Applications

- ❖ Dual-band / Quad-band cellular phones.



Electrical Specifications

<GSM850/900 Band>

Tx mode	Frequency Range (MHz)		824~849 / 880~915MHz
	Insertion Loss (dB)	Tx - ANT	1.6 max.
	Attenuation (dB)	Tx - ANT	30.0 min. @ 2 x fo MHz
			26.0 min. @ 3 x fo MHz
	Return Loss (dB)	Tx & ANT	10.0 min.
	Isolation (dB)	Tx - Rx	21.0 min.
	Current Consumption (mA)		10.0 max.
Power Capacity (dBm)		35.0 typ.	
Rx mode	Frequency Range (MHz)		869~894 / 925~960 MHz
	Insertion Loss (dB)	ANT - Rx	1.2 max.
	Return Loss (dB)	Rx & ANT	10.0 min.
	Isolation (dB)	Tx - ANT	21.0 min.

<GSM1800/1900 Band>

Tx mode	Frequency Range (MHz)		1710~1785/1850~1910MHz
	Insertion Loss (dB)	Tx - ANT	1.90 max.
	Attenuation (dB)	Tx - ANT	23.0 min. @ 2 x fo MHz
			22.0 min. @ 3 x fo MHz
	Return Loss (dB)	Tx & ANT	10.0 min.
	Isolation (dB)	Tx - Rx	16.0 min.
	Current Consumption (mA)		10.0 max.
Power Capacity (dBm)		33.0 typ	
Rx mode	Frequency Range (MHz)		1805~1880/1930~1990MHz
	Insertion Loss (dB)	ANT - Rx	1.50 max.
	Return Loss (dB)	Rx & ANT	10.0 min.
	Isolation (dB)	Tx - ANT	21.0 min.

Operating Temperature Range : -30 ~ +85 °C
 Storage Temperature Range : +5 ~ +35 °C, Humidity 45~75%RH
 Storage Period : 6 months max.
 Q'ty/Reel (pcs) : 2,000

<Control voltage application>

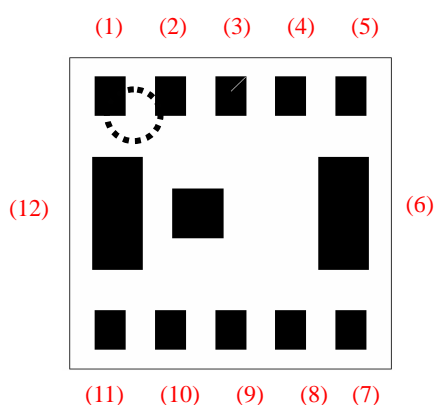
Mode	Vc1	Vc2	Current
GSM850/900-Tx	2.4~2.8 V	0~0.1 V	10mA max.
GSM850/900-Rx	0~0.1 V	0~0.1 V	--
GSM1800/1900-Tx	0~0.1 V	2.4~2.8 V	10mA max.
GSM1800/1900-Rx	0~0.1 V	0~0.1 V	--

Part Number

DS **3232** - **B** **0918** **CC** **□**
 ① ② ③ ④ ⑤ ⑥

① Type	DS : Dual-band Switch Module	② Dimensions (L × W)	3.2 × 3.2 mm
③ Material Code	B	④ Frequency Range	0918=900MHz /1800MHz
⑤ Specification Code	CC	⑥ Packaging	T: Tape & Reel B: Bulk

Terminal Configuration

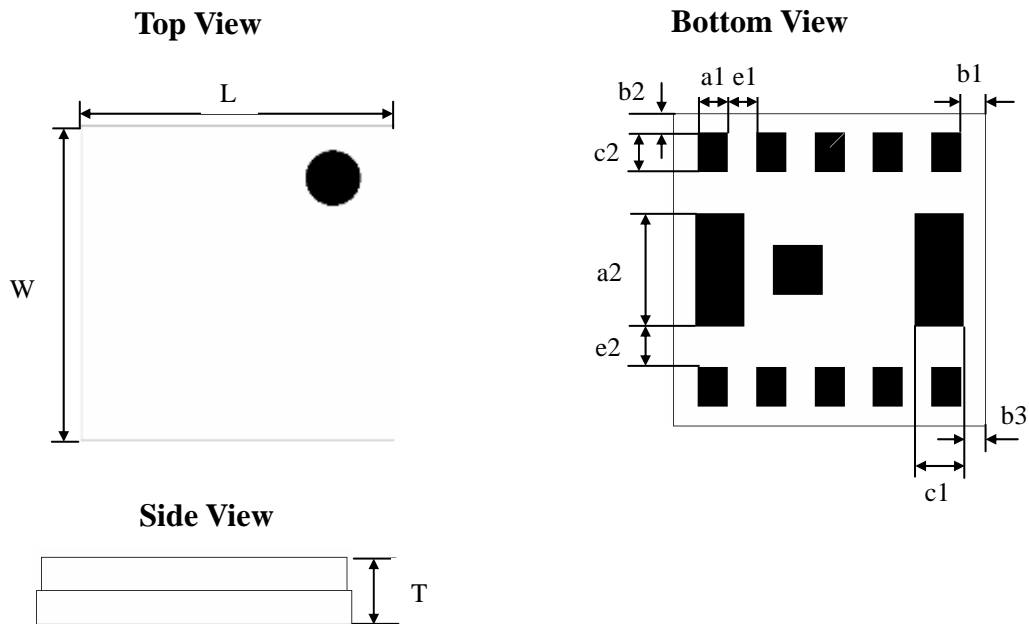


No.	Terminal Name	No.	Terminal Name
(1)	GSM1800/1900-Rx	(7)	GSM850/900-Tx
(2)	NC	(8)	GND
(3)	GSM850/900-Rx	(9)	ANT
(4)	Vc1	(10)	Vc2
(5)	GSM1800/1900-Tx	(11)	NC
(6)	GND	(12)	GND

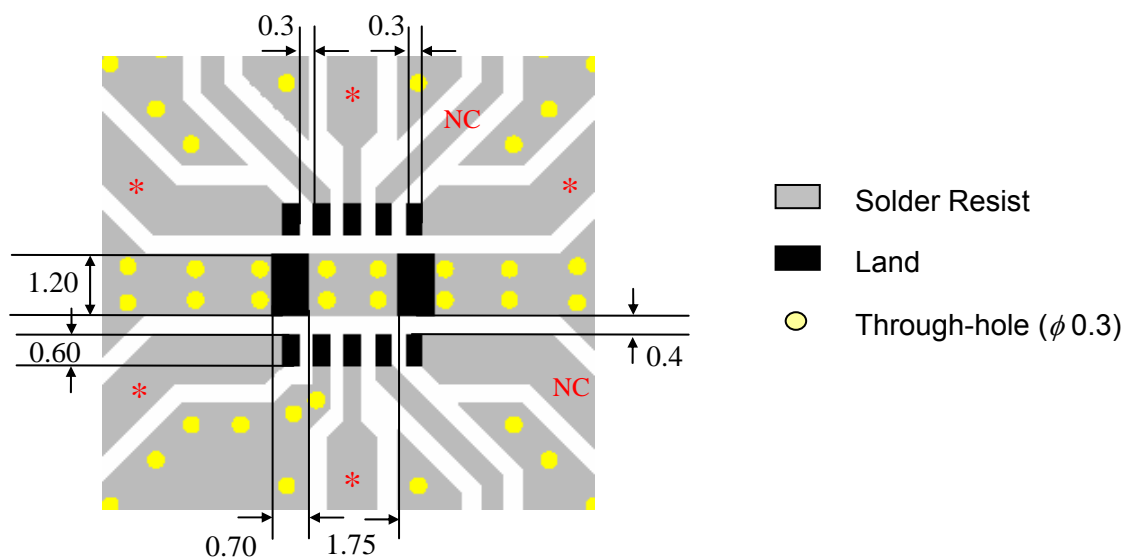
<Bottom View>

Dimensions and Recommended PC Board Pattern

Unit : mm



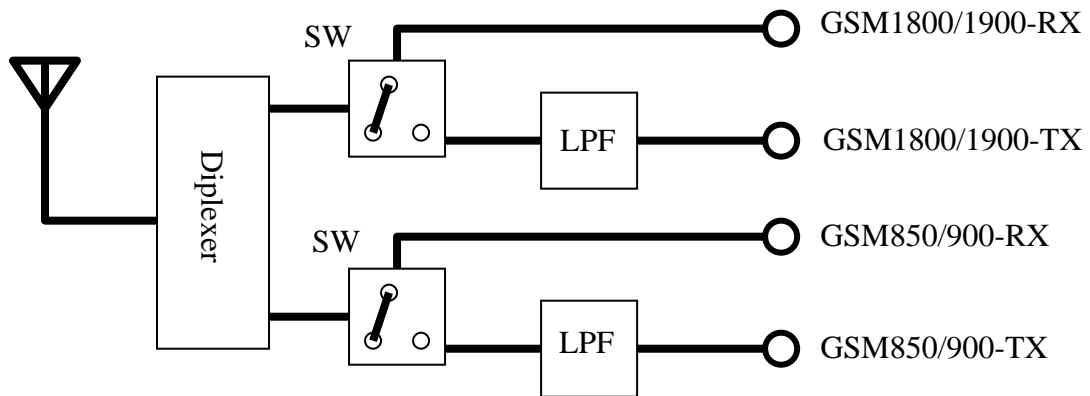
Mark	Dimensions	Mark	Dimensions
L	3.2 ± 0.2	b2	0.2 ± 0.2
W	3.2 ± 0.2	b3	0.2 ± 0.2
T	1.35 max.	c1	0.5 ± 0.1
a1	0.3 ± 0.1	c2	0.4 ± 0.1
a2	1.2 ± 0.1	e1	0.3 ± 0.1
b1	0.25 ± 0.2	e2	0.4 ± 0.1



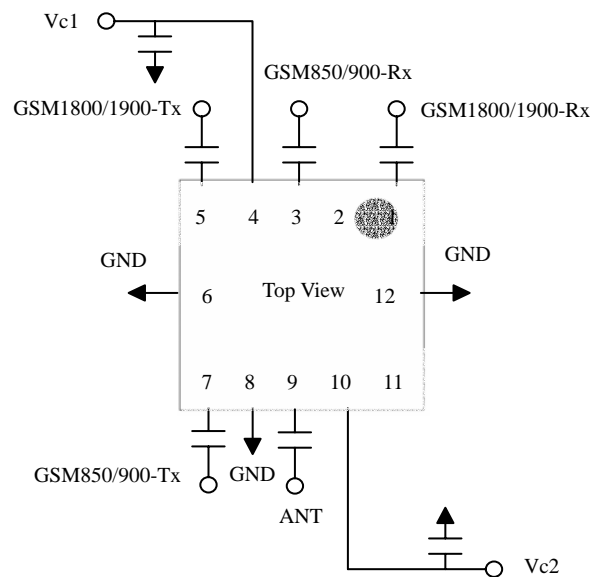
* Line width should be designed to match 50Ω characteristic impedance, depending on PCB material and thickness.

* Pin2 and Pin11 are used as NC pin for Dual-Band application.

Circuit Block



Measuring Diagram

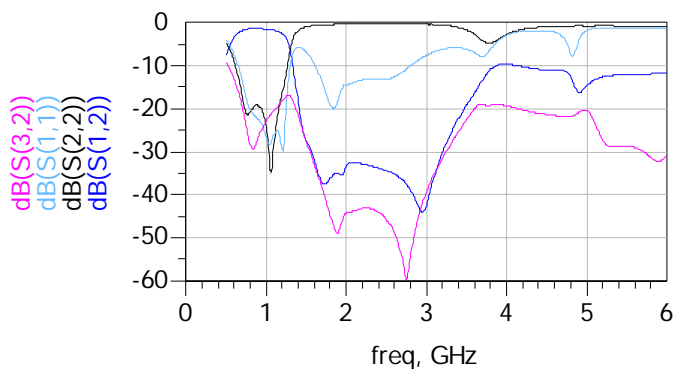


* Blocking and de-coupling capacitance:100pF

Typical Electrical Characteristics (T=25°C)

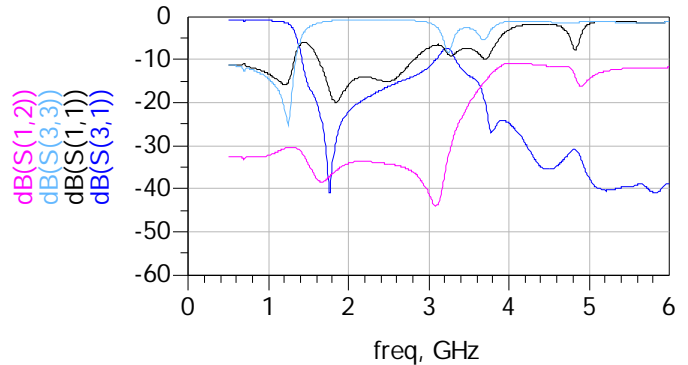
GSM850/900-Tx Mode:

(Port1 : Ant, Port2 : Tx, Port3 : Rx)



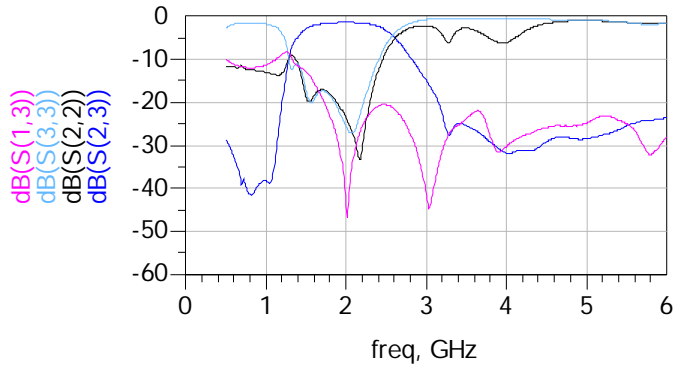
GSM850/900-Rx Mode:

(Port1 : Ant, Port2 : Tx, Port3 : Rx)



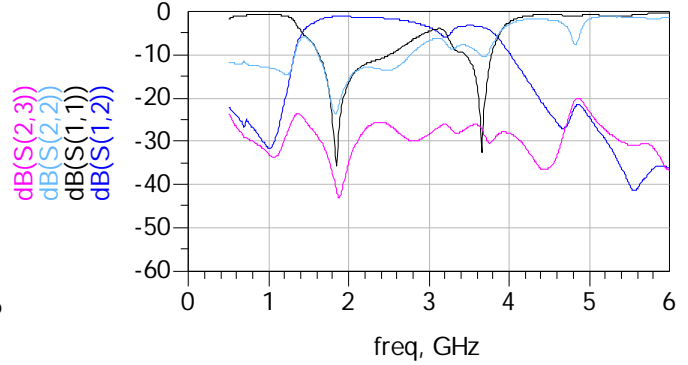
GSM1800/1900-Tx Mode:

(Port1 : Rx, Port2 : Ant, Port3 : Tx)



GSM1800/1900-Rx Mode:

(Port1 : Rx, Port2 : Ant, Port3 : Tx)



Notes

- ❖ The contents of this data sheet are subject to change without notice. Please confirm the specifications and delivery conditions when placing your order.

Advanced Ceramic X Corp.

16 Tzu Chiang Road, Hsinchu Industrial District Hsinchu Hsien 303, Taiwan

TEL:886-3-5987008 FAX:886-3-5987001

E-mail: acx@acxc.com.tw

<http://www.acxc.com.tw>