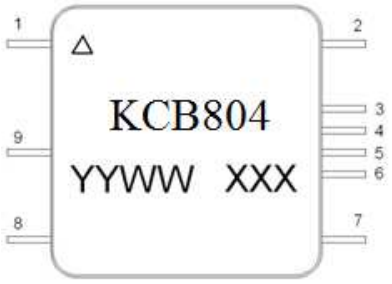
KCB804

SP4T w/ CMOS Driver
20 MHz – 2.0 GHz

Features

- ❑ Frequency range: 20 MHz to 2 GHz
- ❑ TTL Control (0/+5V)
- ❑ Non Reflective
- ❑ High Reliability Class B and S Screening Available
- ❑ See Page 2 for Hi –Rel Ordering Details



Description

The KCB804 is a GaAs FET Non Reflective high performance multi throw switch. The device consists of a single GaAs IC and two Silicon CMOS logic IC's which allows for TTL control.
The KCB804 uses Hermetic Surface-Mount Technology (SMT) for Defense and Satellite application.
The device can be supplied and tested to the screening requirements of MIL-PRF-385354 Class H and K, in addition to the required QCI.

1	J2
2	J3
3	GND
4	C0
5	C1
6	+5 V
7	J4
8	J5
9	J1

Electrical Characteristics (+25°C)

Parameter	Conditions	Min.	Typ.	Max.	Units
Insertion Loss	20 – 500 MHz 20 – 1000 MHz 20 – 2000 MHz			1.5 1.6 1.8	dB dB dB dB
VSWR (I/O)	20 – 40 MHz 40 – 500 MHz 40 – 1000 MHz 40 – 2000 MHz			1.8:1 1.4:1 1.5:1 2.0:1	dB dB dB dB
Isolation	20 – 500 MHz 20 – 1000 MHz 20 – 2000 MHz	52 47 37			dB dB dB dB dB
Input Power for 1 dB Output Compression	20 - 300 MHz 500 – 2.0 GHz		+13 +20		dBm
Third Order Intercept Point (IP3)	20 MHz 100 – 300 MHz 500 MHz 1.0 – 2.0 GHz		+22 +30 +37 +42		dBm

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Rev(-), Date 03/28/13

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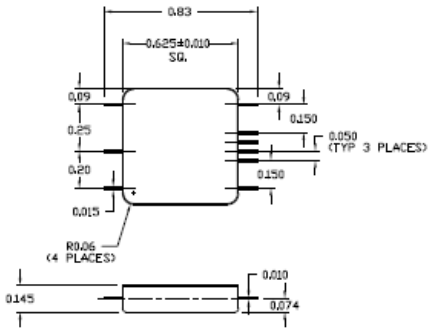
SP4T w/ CMOS Driver
20 MHz – 2.0 GHz

KCB SOLUTIONS
RF DESIGN & MANUFACTURING

Absolute Maximum Ratings

Characteristic	Min Value	Max Value	Units
Control Voltages	0	+5.5	Volts
RF Input Power		+ 27	dBm
Bias voltage		+7	V
Storage Temperature	-65	+165	° C
Operating Case Temp	-55	+125	° C

Outline Drawing



Truth Table / Control Voltages

Control Input		Signal Path States J1 to			
C0	C1	J2	J3	J4	J5
High	High	ON	OFF	OFF	OFF
Low	High	OFF	ON	OFF	OFF
High	Low	OFF	OFF	ON	OFF
Low	Low	OFF	OFF	OFF	ON

State	Bias Conditions
Low	0.0 to 0.8V
High	+2V To +5.5V

Screening Flow

Test Inspection	MIL – STD -883		Requirement	
	Method	Condition	Class H	Class K
Wafer Lot Acceptance	5007		N/A	Per Wafer Lot
Non-Destructive Bond Pull	2023		Process under Statistical Control	Process under Statistical Control
Internal Visual	2010		100%	100%
Temperature Cycle	1010	C	100%	100%
Acceleration	2001	E (Y1 only)	100%	100%
PIND	2020	A (5 Cycles)	N/A	100%
Serialization	Per Product Specification		N/A	100%
Radiographic	2012		N/A	100%
Electrical Test	Per Product Specification	+25°C	100%	100%
Burn In	1015	A 160 Hours @ +125°C	100%	100%
Electrical Test	Per Product Specification	+25°C	N/A	100%
Burn In	1015	A 160 Hours @ +125°C	N/A	100%
Final Electrical	Per Product Specification	+25°C	100%	100%
Group A Electrical	Per Product Specification	-55°C + 125°C	45/0	45/0
Seal Fine Leak Gross Leak	1014	 A C	100%	100%
External Visual	2009		100%	100%

Ordering Information

KCB Solutions Part Number	Screening Level
KCB804C	Unscreened
KCB804B	Class H Screening
KCB804S	Class K Screening

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