

# KCB807

## 30 dB Voltage Variable Attenuator

DC – 6.0 GHz



### Features

- ❑ Wideband frequency range: DC to 6.0 GHz
- ❑ Attenuation: 40dB @ 2.5 GHz
- ❑ High Reliability Class B and S Screening Available
- ❑ See Page 3 for Hi –Rel Ordering Details



### Description

The KCB807 is a GaAs FET 30 dB Voltage Variable Attenuator. The KCB807 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-38535 Class B and S, in addition to the required QCI.

1	GND
2	RF
3	GND
4	V2
5	V1
6	GND
7	RF
8	GND

### Electrical Characteristics ( +25°C)

Parameter	Conditions	Min.	Typ.	Max.	Units
Insertion Loss	300 KHz – 2.5 GHz			1.7	dB
	2.5 GHz – 6.0 GHz			2.5	dB
MAX Attenuation	300 KHz – 2.5 GHz		40		dB
	2.5 GHz – 6.0 GHz		30		dB
Flatness over Frequency Ref: 25 dB attenuation V1=V2=0V	300-2.5 GHz	- .5			dB
VSWR (Input)	300 KHz – 2.5 GHz			1.5:1	dB
	2.5 GHz – 6.0 GHz			2.33:1	dB

Note: RF input power = 0 dBm. Vctrl = 0, -5v

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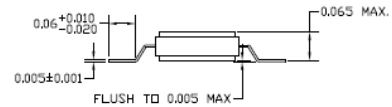
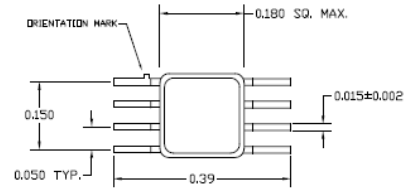
DC – 6.0 GHz



## Absolute Maximum Ratings

Characteristic	Min Value	Max Value	Units
Control Voltage	-9.0	+0.2	Volts
RF Input Power		+10	dBm
Storage Temperature	-55	+150	° C
Operating Case Temp	-55	+125	° C

## Outline Drawing



## Truth Table / Control Voltages

Control Input		Attenuation State
V1	V Control	
0	-5	Insertion Loss
-5	0	Max Attenuation

## Screening Flow

Test Inspection	MIL – STD -883		Requirement	
	Method	Condition	Class B	Class S
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	A= Class S B = Class B	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	100% 80 Hours @ 150°C	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	1014	A	100%	100%
Gross Leak		C		
External Visual	2009		100%	100%

## Ordering Information

KCB Solutions Part Number	Screening Level
KCB807C	Unscreened
KCB807B	Class B Screening
KCB807S	Class S Screening