

# AM6002A – Switch

## DC to 14 GHz, SPDT

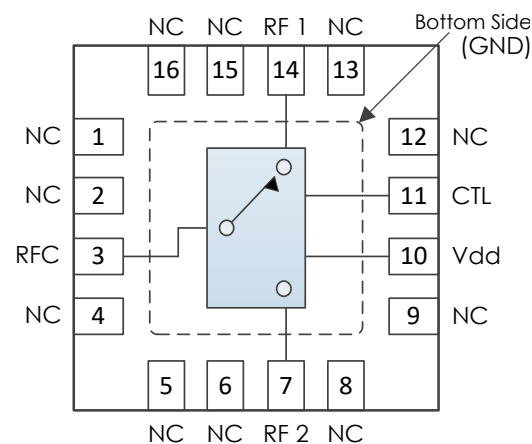


**AM6002A is a Single-Pole Double-Throw (SPDT) switch covering the DC to 14 GHz frequency range.** This positive control device exhibits low insertion loss, flat frequency response and high isolation over the operating temperature range.

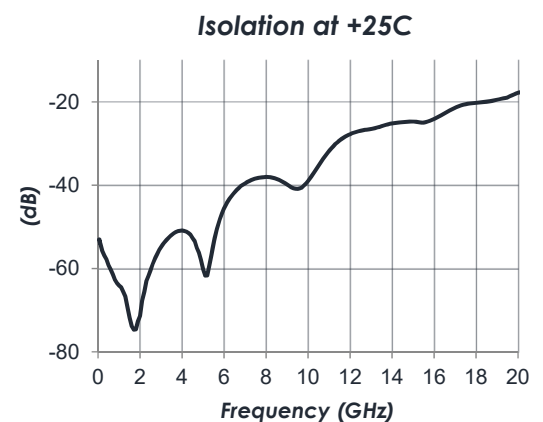
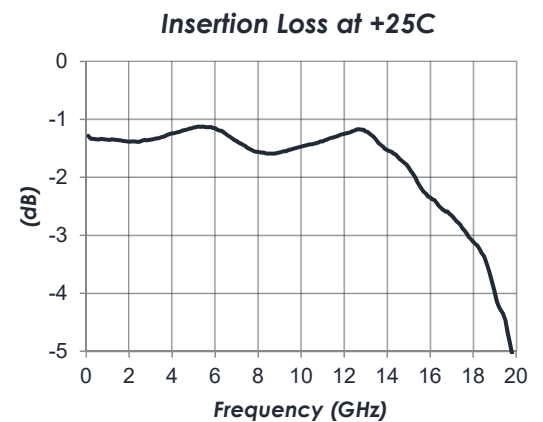
### FEATURES

- 1.5 dB Insertion Loss
- +5V supply
- +3V control
- >40 dB Isolation
- +36 dBm IP3
- +21 dBm P1dB
- 3mm QFN package
- -40°C to +85°C Operation

### FUNCTIONAL DIAGRAM



### CHARACTERISTIC PERFORMANCE





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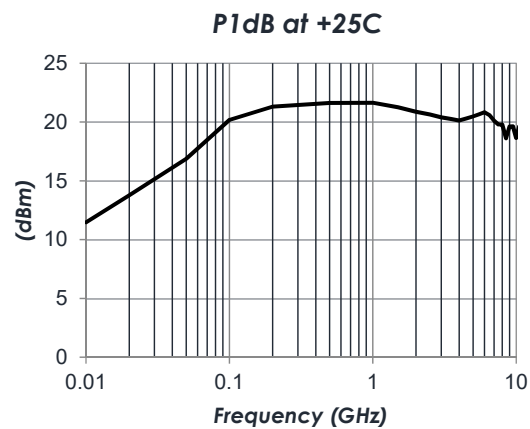
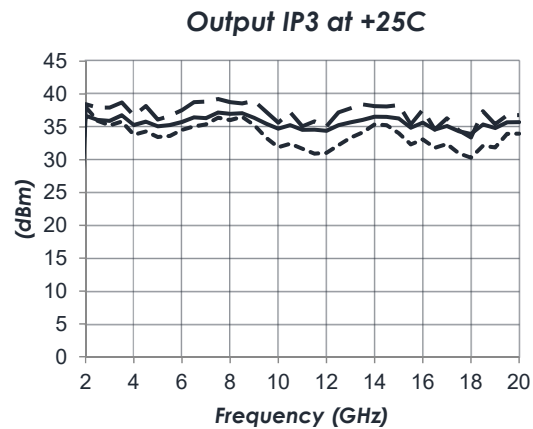
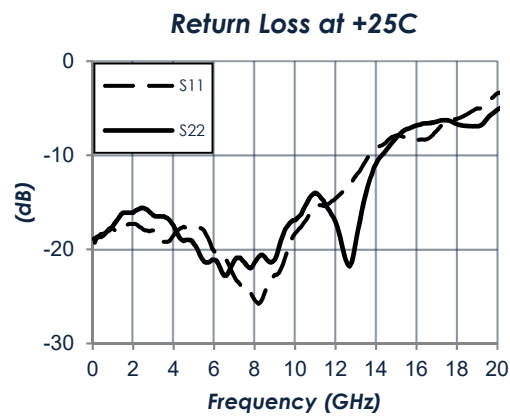
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REVISION HISTORY

Date	Revision	Notes
June 21, 2017	1	Preliminary Release.
July 19, 2024	2	Changed to Mercury branding. No content changes.

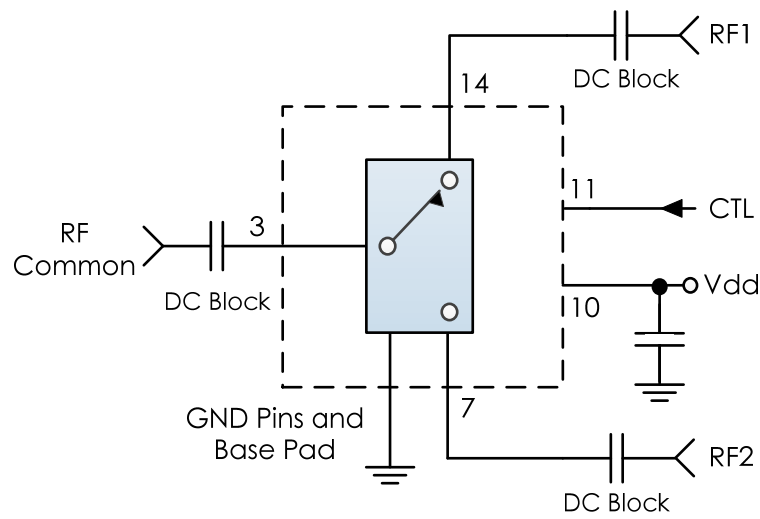
TYPICAL PERFORMANCE



ADDITIONAL SPECIFICATIONS

RF Impedance	50 ohms
Supply Voltage (Vdd)	+4.5V to +5.2V
Supply Current	0.5mA typ, 0.6mA max
Control Voltage Range (CTL)	0.0V to +0.5V (Low) +2.0V to 5.0V (High)
Control Current	200uA typ
Maximum RF Input	+24dBm
Switching Speed	100 ns
Operating Temperature Range	-40C to +85C
Storage Temperature Range	-50C to +125C

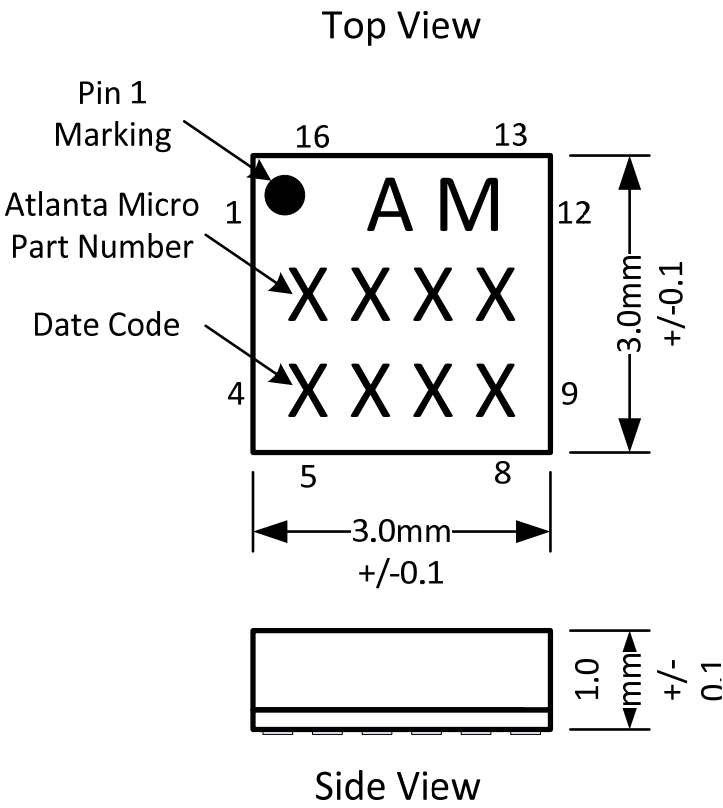
TYPICAL APPLICATION CIRCUIT



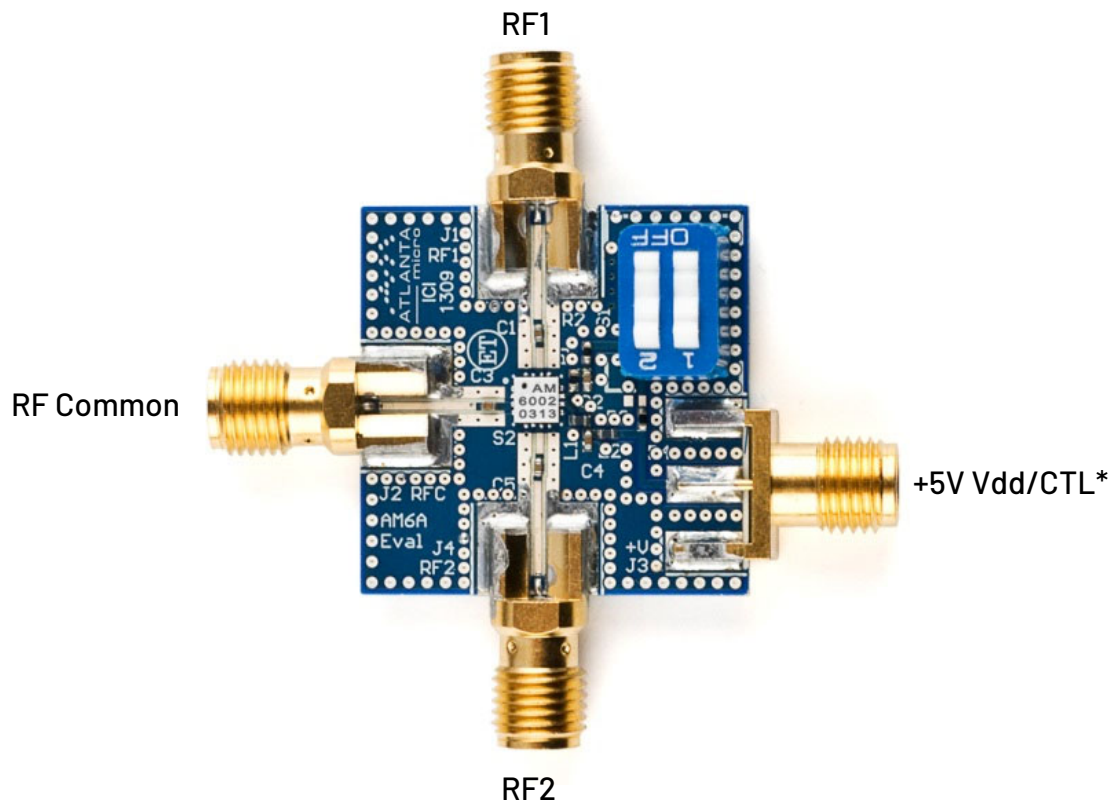
\*External DC blocking capacitors are required. Select capacitance values for low impedance across the frequency range of interest. See table below for CTL control information. NC pins may be left open or connected to ground.

Control Line CTL	RFC to RF1	RFC to RF2
L	On	Off
H	Off	On

PACKAGE DETAILS



EVALUATION PC BOARD



\* On the evaluation board, CTL is derived from the +5V supply and is controlled by the DIP switch. Toggle DIP switch 1 to change the RFC switch connection between RF1 and RF2.

## COMPONENT COMPLIANCE INFORMATION

**RoHS:** Mercury Systems, Inc. hereby certifies that all products comply with the EC Directive 2011/65/EC on the Restriction of Hazardous Substances, commonly known as EU-RoHS 6 and 10. All products supplied by Mercury shall be compliant with the European Directive 2011/65/EC based on the following substance list.

Substance List	Allowable Maximum Concentration
Lead (Pb)	<1000 PPM (0.1% by weight)
Mercury (Hg)	<1000 PPM (0.1% by weight)
Cadmium (Cd)	<75 PPM (0.0075% by weight)
Hexavalent Chromium (CrVI)	<1000 PPM (0.1% by weight)
Polybrominated Biphenyls (PBB)	<1000 PPM (0.1% by weight)
Polybrominated Diphenyl ethers (PBDE)	<1000 PPM (0.1% by weight)
Decabromodiphenyl Deca BDE	<1000 PPM (0.1% by weight)
Bis (2-ethylhexyl) Phthalate (DEHP)	<1000 PPM (0.1% by weight)
Butyl Benzyl Phthalate (BBP)	<1000 PPM (0.1% by weight)
Dibutyl Phthalate (DBP)	<1000 PPM (0.1% by weight)
Diisobutyl Phthalate (DIBP)	<1000 PPM (0.1% by weight)

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**Mercury takes its responsibility as a global partner seriously and will use due diligence within our supply chain to ensure all standards are met to the best of our knowledge.**



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