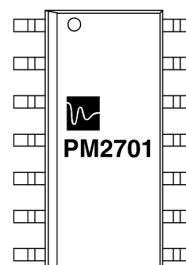


Single Supply RFIC Attenuator 800 to 4500 MHz Operation

Features

- 5.0V Single Supply
- >25 dB RF Attenuation
- Positive Control Voltage (0-4V)
- SO-14 Pin Plastic Package



SO-14 Package

Description

The PM2701 attenuator offers RF attenuation over a broad bandwidth, incorporating an integral driver and attenuator in a single GaAs RFIC. The PM2701 requires input and output DC blocking capacitors on the device.

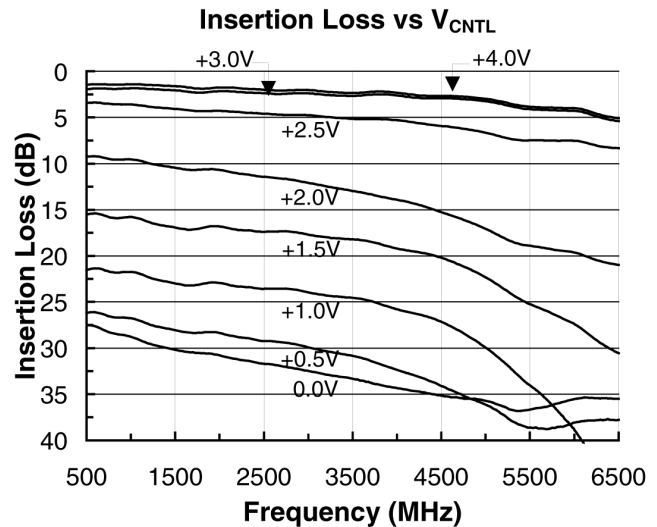
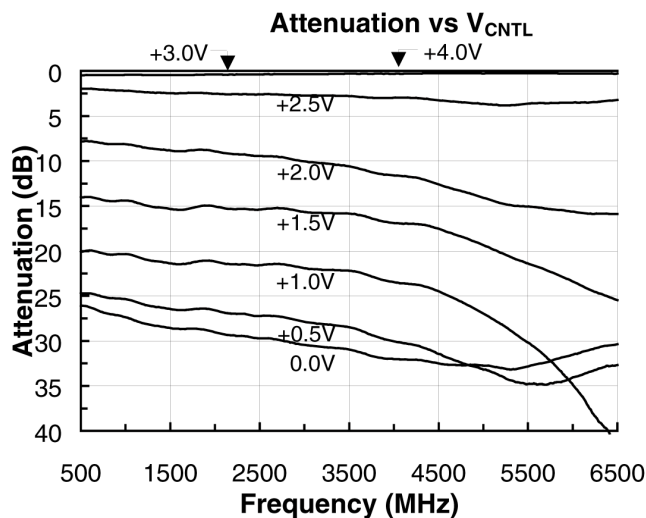
Electrical Characteristics $V_{DD}=5.0V$, $T_A = +25^{\circ}C$, 50 Ω System

Characteristics	Symbol	Conditions	Min	Typ	Max	Units
Frequency Range	F		800		4500	MHz
Insertion Loss	I_L			2.5		dB
Attenuation Range	ATTN		25	30		dB
VSWR (In/Out)	VSWR	Min. Attenuation State Max. Attenuation State		1.5:1 2.0:1	2.5:1 3.0:1	
Input Intercept Point	IIP_3		10	15		dBm
Control Voltage	V_{CTRL}		0		4	Volts
Supply Voltage	V_{DD}		4.75	5.0	5.25	Volts
Supply Current	I_{DD}			8		mA
Thermal Resistance	θ_{JC}			75		$^{\circ}C/W$

Absolute Maximum Ratings

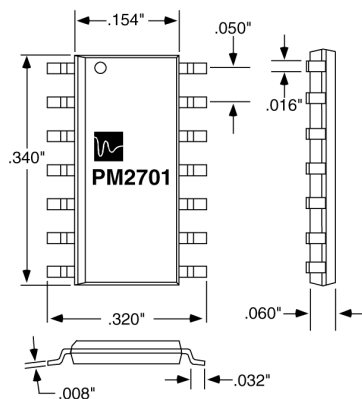
Characteristics	Symbol	Value	Units
Supply Voltage	V_{DD}	+9.0	V
Control Voltage	V_{CTRL}	+6.0	V
RF Input Power	P_{IN}	+20.0	dBm
Operating Baseplate Temperature	T_{OP}	-40 to +85	$^{\circ}C$
Junction Temperature	T_J	+150	$^{\circ}C$
Storage Temperature Range	T_{STG}	-65 to +150	$^{\circ}C$

Typical Performance Characteristics

Test Conditions: $T_A = +25^\circ\text{C}$, $V_{DD} = 5.0\text{V}$, $50\ \Omega$ System


Package Specifications

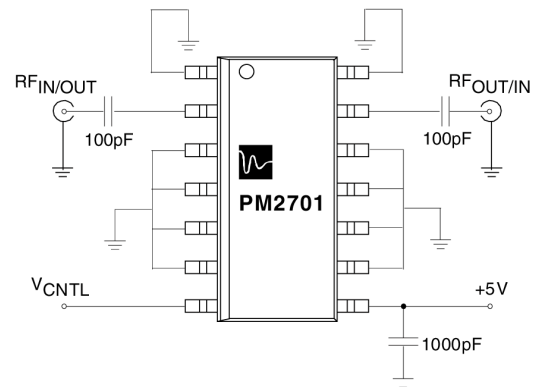
SO-14 Outline Drawing



Pin Connections

Pin #	Function
1	GND
2	RF _{IN/OUT}
3, 4, 5, 6	GND
7	V_{CNTL}
8	V_{DD}
9, 10, 11, 12	GND
13	RF _{OUT/IN}
14	GND

Typical Application



Technical Information

DC blocking capacitors are required for the input and output of the PM2701. Frequency response can be optimized for frequencies below 800 MHz and above 4500 MHz to some extent by modifying the values of the input and output DC blocking capacitors. Within the specified frequency range of 800 to 4500 MHz, it is recommended to use 100 pF capacitors.