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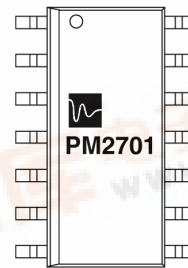
# PM 2701

# DATA SHEET

## 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 $\Omega$ System

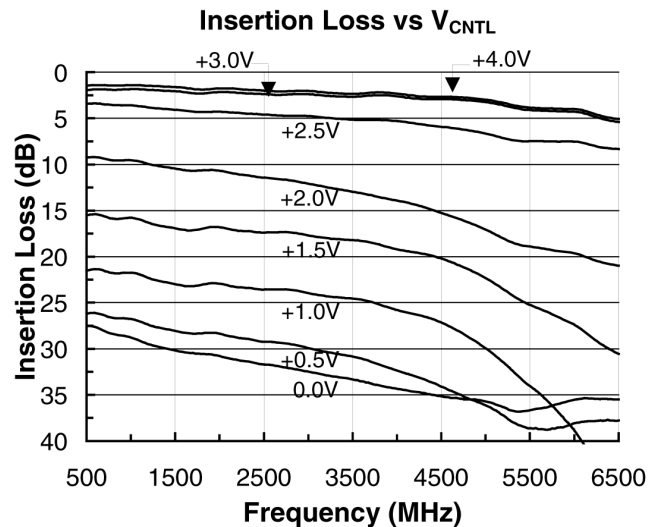
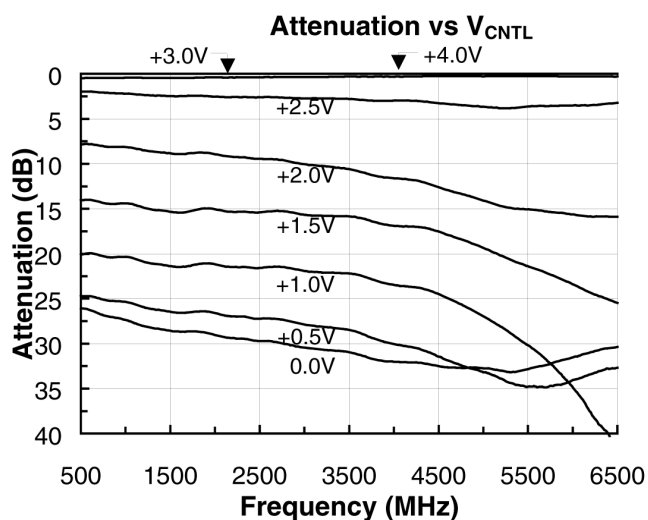
Characteristics	Symbol	Conditions	Min	Typ	Max	Units
Frequency Range	F		800		4500	MHz
Insertion Loss	$I_L$			2.5		dB
Attenuation Range	ATTN		25	30		dB
VSWR (In/Out)	VSWR	Min. Attenuation State Max. Attenuation State		1.5:1 2.0:1	2.5:1 3.0:1	
Input Intercept Point	$IIP_3$		10	15		dBm
Control Voltage	$V_{CTRL}$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

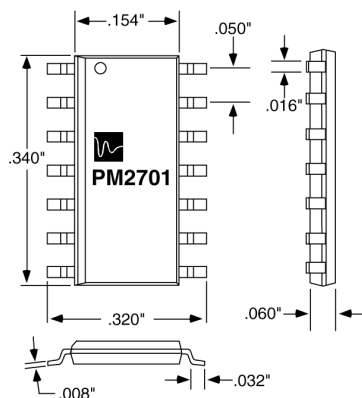


## Typical Performance Characteristics

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


## Package Specifications

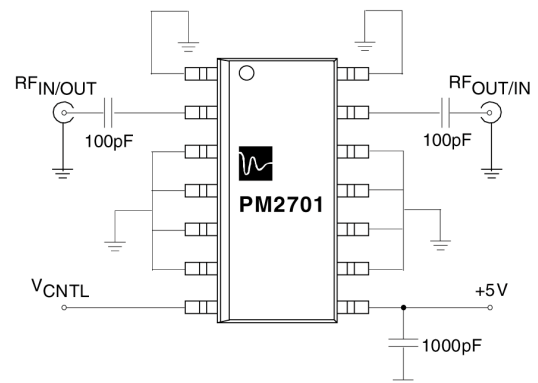
### SO-14 Outline Drawing



### Pin Connections

Pin #	Function
1	GND
2	RF <sub>IN/OUT</sub>
3, 4, 5, 6	GND
7	$V_{CNTL}$
8	$V_{DD}$
9, 10, 11, 12	GND
13	RF <sub>OUT/IN</sub>
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.