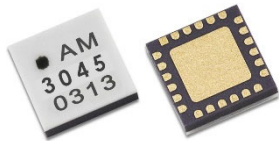


AM3045 – Tunable Filter

Digitally Tunable 3.0 to 6.0 GHz Bandpass

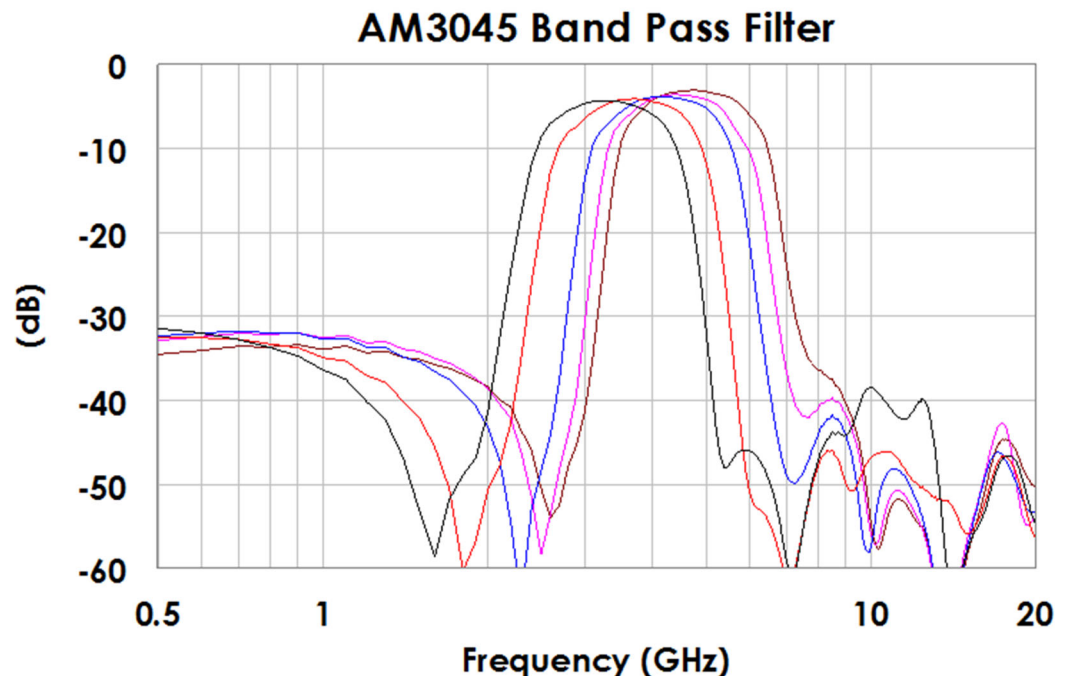


AM3045 is a miniature digitally tunable bandpass filter covering the 3.0 to 6.0 GHz frequency range. The filter provides a constant 1-GHz bandwidth and 500 MHz steps across the frequency range with 4 digital control bits. AM3045 is packaged in a 4mm QFN package and operates over the -40C to +85C temperature range.

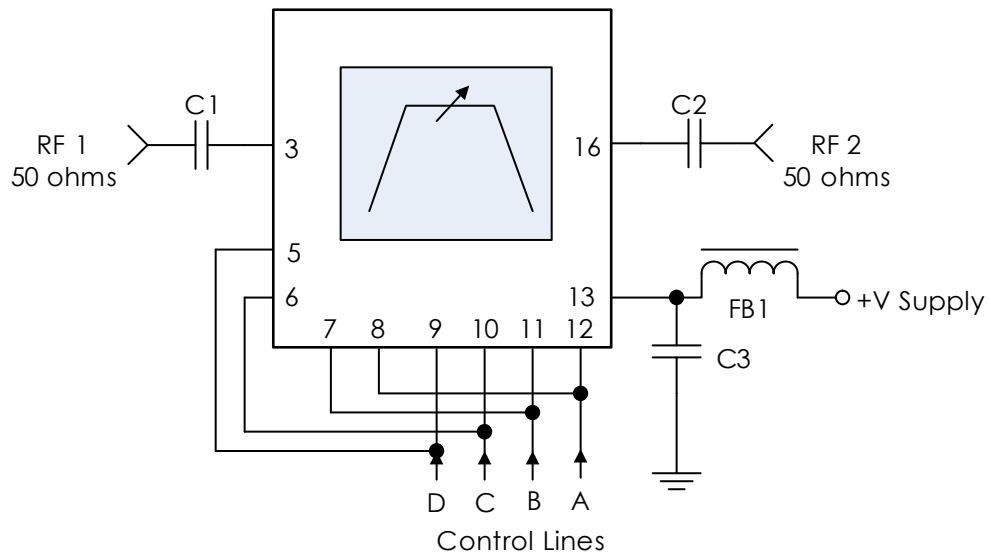
FEATURES

- Discrete 500-MHz steps
- 1-GHz Bandwidth
- 4-bit control, 3V or 5V Logic
- No calibration required
- +5V DC Supply
- -40C to +85C Operation

TYPICAL PERFORMANCE



TYPICAL APPLICATION CIRCUIT



Recommended Component List (or Equivalent)

Part	Value	Part Number	Manufacturer
C1, C2	0.1uF	0402BB104KW160	Passives Plus
C3	0.1uF	C1005X7R1H104K050BB	TDK
FB1	-	MMZ1005A222E	TDK

Notes:

1. RF blocking capacitors should be high performance, low-loss, broadband capacitors for optimum performance.
2. RC filtering on the control lines is recommended to prevent digital noise from coupling to the RF path.

PIN DEFINITIONS

24 pin 4mm QFN Package

Pin	Name	Function
1-2	GND	Ground - Common
3	RF 1	RF Port 1 - 50 ohms, DC coupled. External AC coupling capacitor required.
4	GND	Ground - Common
5	D_HP	High Pass Control Bit D
6	C_HP	High Pass Control Bit C
7	B_HP	High Pass Control Bit B
8	A_HP	High Pass Control Bit A
9	D_LP	Low Pass Control Bit D
10	C_LP	Low Pass Control Bit C
11	B_LP	Low Pass Control Bit B
12	A_LP	Low Pass Control Bit A
13	Vcc	+5.0V DC Power Input
14	NC	Do Not Connect
15	GND	Ground - Common
16	RF 2	RF Port 2 - 50 ohms, DC coupled. External AC coupling capacitor required.
17-24	GND	Ground - Common

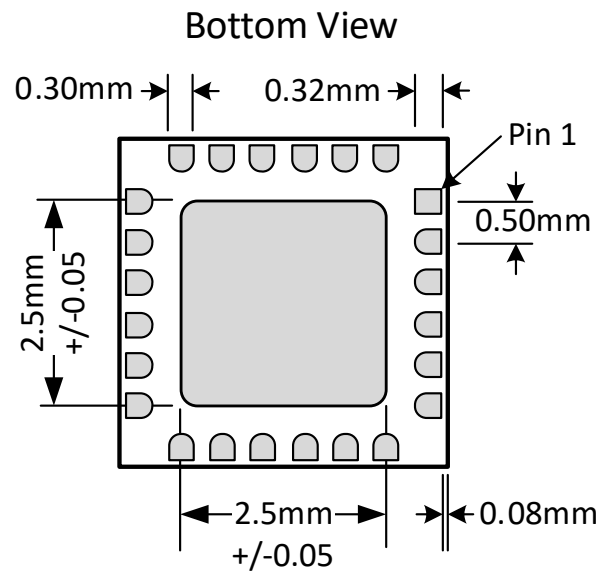
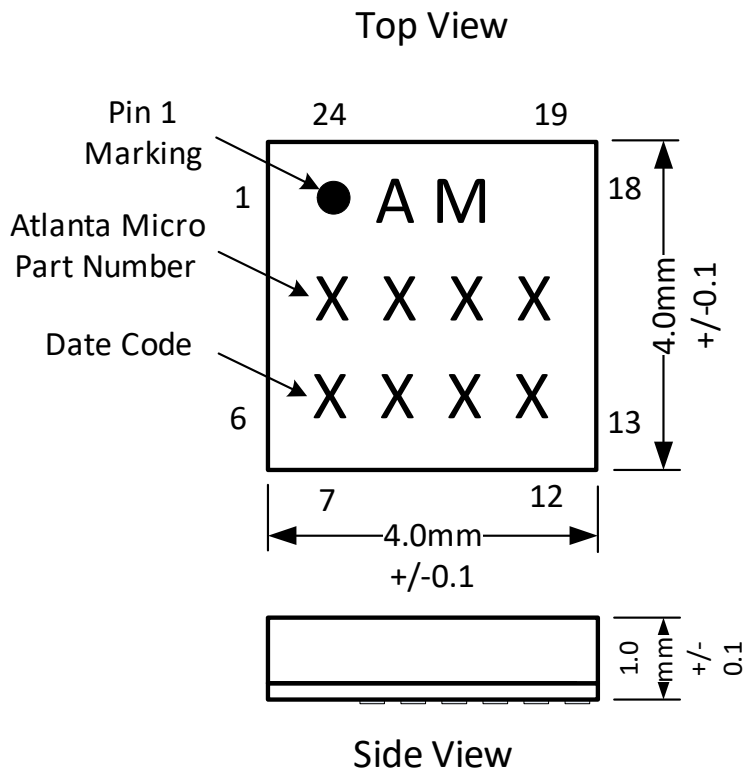
SPECIFICATIONS

Specifications	Minimum	Typical	Maximum
Frequency Range	3.0 GHz		6.0 GHz
Insertion Loss		3 dB	
Input IP3		+40 dBm	
RF Input Level			+27 dBm
Switching Speed			1 us
Logic Level Low	-0.1V		+0.5V
Logic Level High	+2.0V		+5.0V
Package Size		4.0 x 4.0 x 1.0mm	
DC Supply Voltage	+4.7V	+5.0 V	+5.2V
DC Supply Current		1 mA	
Power Consumption		5 mW	
Operating Temperature	-40 C		+85 C
Storage Temperature	-50 C		+125 C

CONTROL TABLE

Band Select Control Line				Typical Cutoff Freq. (GHz)
D	C	B	A	
L	L	L	L	3.5
H	L	L	L	4.0
H	H	L	L	4.5
H	H	H	L	5.0
H	H	H	H	5.5

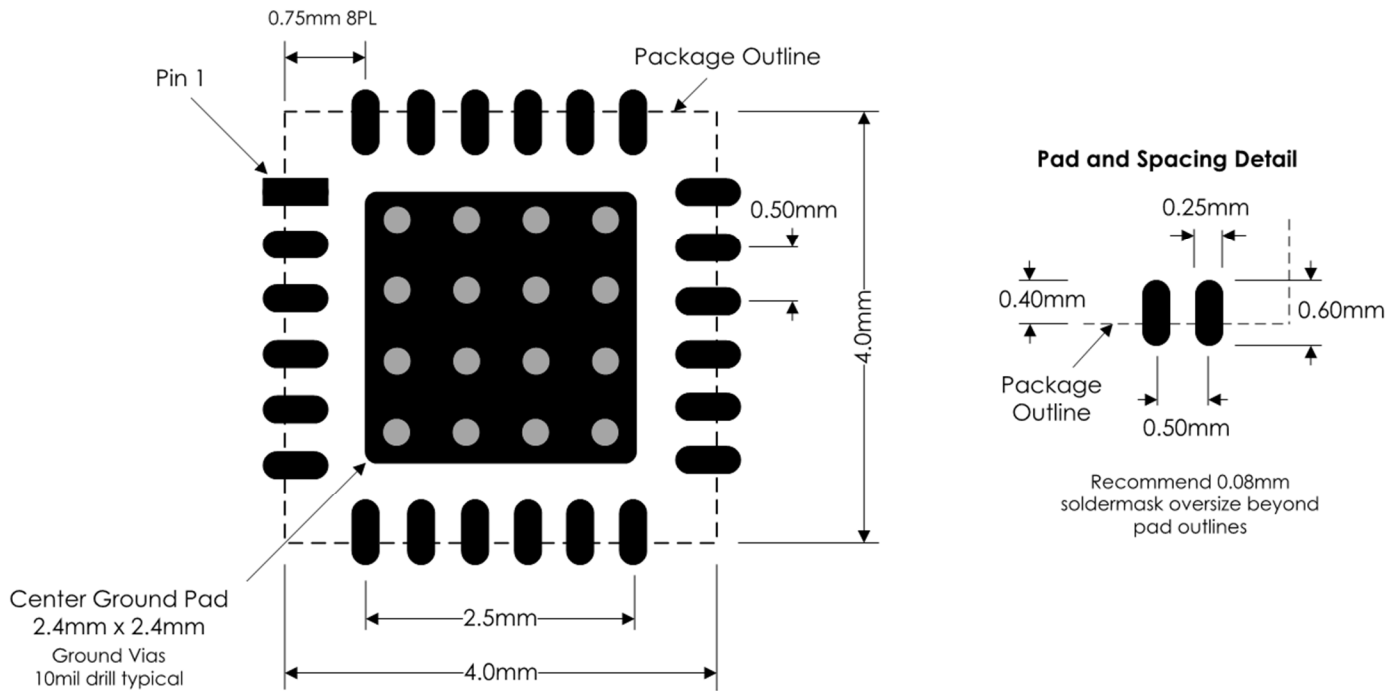
PACKAGE DETAILS



Notes:

1. All dimensions shown are in mm
2. Package material Alumina
3. Lead finish: Ni/ Au

RECOMMENDED FOOTPRINT



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