HB Series

TRADITIONAL Pb *RoHS COMPLIANT*

Butterworth
Frequency Range from 100 Hz to 500 MHz
Application-Specific Designs

SERIES NUMBER	NUMBER OF POLES	INSERTION LOSS at 5.0 x f_{-3dBc} dB MAXIMUM	STOPBAND ATTENUATION dBc MINIMUM	FREQUENCY
		FREQUENCY $_{-3dBc}$ – 100 Hz to 500 MHz – specify any f within that range		
HB3	3	0.5	-40	0.20 x f_{-3dBc}
HB4	4	0.5	-45	0.25 x f_{-3dBc}
HB5	5	0.5	-60	0.22 x f_{-3dBc}
HB6	6	0.5	-60	0.30 x f_{-3dBc}
HB7	7	0.5	-60	0.35 x f_{-3dBc}
HB8	8	0.5	-60	0.40 x f_{-3dBc}
HB9	9	0.5	-60	0.43 x f_{-3dBc}
HB10	10	0.5	-60	0.47 x f_{-3dBc}
HB11	11	0.5	-60	0.50 x f_{-3dBc}

Note: TTE's products are made in the USA. Application-specific designs are made to order. Typical delivery is 2 weeks. Expedited lead time of 3-5 days is available on many products.

For RoHS compliant, add "R" to part number. Example: HB7R-100M-50-3A
TTE designates a component RoHS-compliant by adding "R" (RoHS) within the part number.
These RoHS components meet the ≤ 0.1% lead requirement and they are compatible with 260°C soldering processes.

NOTES:
- Operating Temperature Range:
     0°C to +70°C
- Number of Poles: 3-11
- VSWR: 1.5:1 Typical
- Input Power: 20 mW
- Case Type: Refer to **Case Selection Guide**
- Case Options: PCB, SMT, BNC or SMA
- Normalized Response: Refer to **Graphs**
- Product Info: Refer to **HB Series**

TERMINATIONS:

50 Ω	100 MHz - 500 MHz
50 Ω or 75 Ω	300 kHz - 100 MHz
1 kΩ - 50 Ω	10 kHz - 300 kHz
10 kΩ - 1 kΩ	100 Hz - 10 kHz

STOPBAND FREQUENCY CALCULATIONS:

Using part number HB7-100M-50-3A, we know that the filter is a 7 pole Butterworth highpass filter. Scroll down to series number HB7. Moving to the right we find the stopband specification listed as -60dBc minimum at 0.35 x f_{-3dBc}. Thus, the -60dBc frequency is at 35 MHz (0.35 x 100 MHz).

PART NUMBER DERIVATION:

HB7	*(R)	-100M	-50	-3A
1 2	3	4	5	6

1) Series, HB
2) Number of poles, 7
*3) "R" RoHS compliant. Allow for longer lead time.
4) f_{-3dBc}
5) Terminations
6) Case selection from the case selection guide.

www.tte.com

TTE Filters, LLC • 7426A Tanner Parkway, Arcade, NY 14009 USA • (t) 1-716-532-2234 • (f) 1-716-532-2702 • tte@tte.com
TTE relocated from Los Angeles in mid-2015 • The LA numbers will continue to operate • (t) 1-310-478-8224 • (f) 1-310-445-2791
An Affiliate of Gowanda Holdings, LLC • www.gowandaholdings.com

101915