

KR 2401 Surface Mount Diplexer

General Description

KR Electronics 2401 is a high performance diplexer filter supplied in a small surface mount package. It features a low-band filter from dc to 42 MHz and a highband filter from 54 to 870 MHz. Impedance at all ports is 75 Ω . Crossover isolation is 25 dB or better.

Features

- Small surface mount package
- 42 / 54 MHz frequency split
- Return loss 20 dB or better
- Crossover isolation 25 dB or better

Specifications

Parameter	Specification	Typical
Lowband Filter		
Passband 5 to 42 MHz	< 1.2 dB	1 dB
Stopband 54 MHz to 870 MHz	> 60 dB attenuation	65 dB
Return Loss to 42 MHz	> 20 dB	25 dB
VSWR to 42 MHz	< 1.2	1.12
Highband Filter		
Passband 54 to 870 MHz	< 1.2 dB	1 dB
Stopband dc to 42 MHz	> 60 dB attenuation	65 dB
Return Loss 54 to 870 MHz	> 20 dB	25 dB
VSWR 54 to 870 MHz	< 1.2	1.12
Cross over isolation	> 25 dB	30 dB
Impedance all ports	75 Ω	

KR 2401 Diplexer Filter

Typical Performance

Lowband Filter Response
(10 dB/div) 1 MHz to 1 GHz

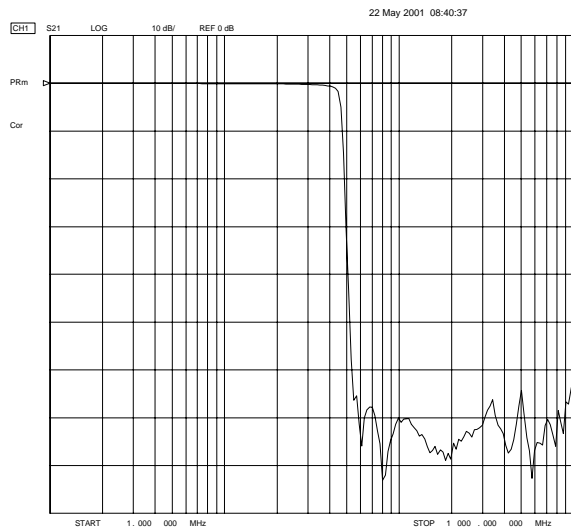


Figure 1

Highband Filter Response
(10 dB/div) 1 MHz to 1 GHz

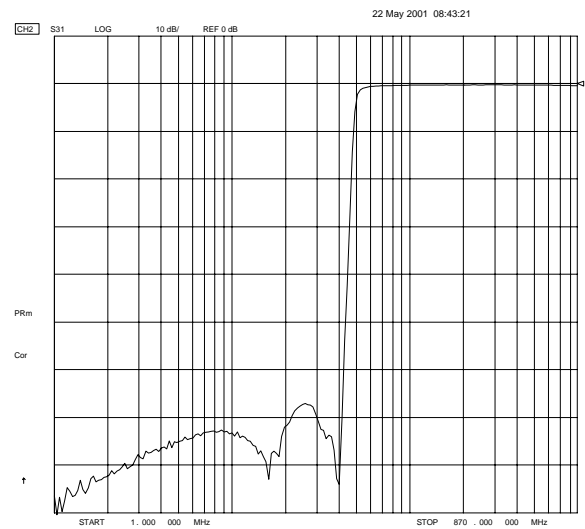


Figure 2

Isolation
(10 dB/div) 1 MHz to 1 GHz

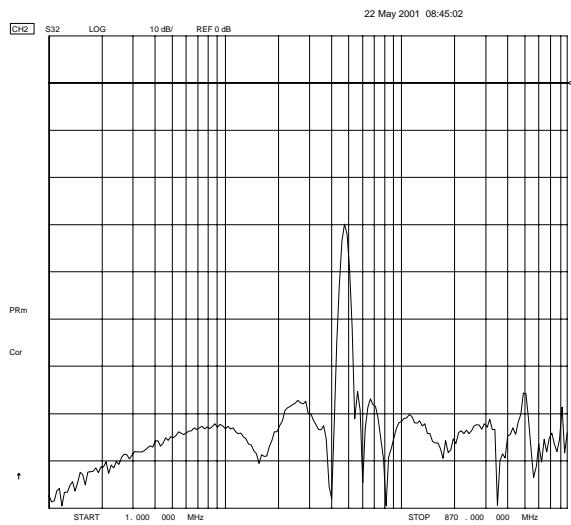


Figure 3

Return Loss
(5 dB/div) 1 MHz to 1 GHz

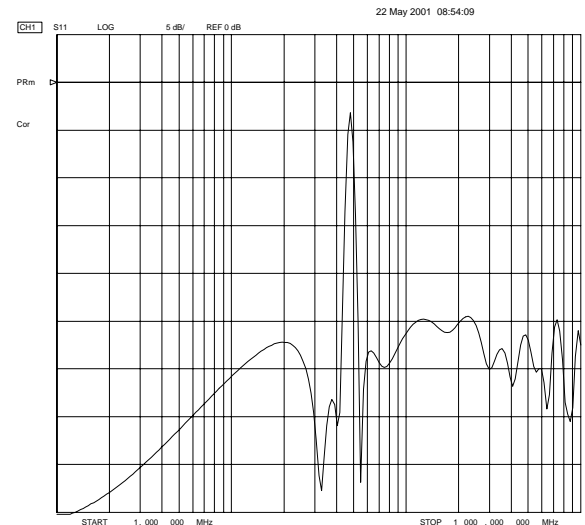
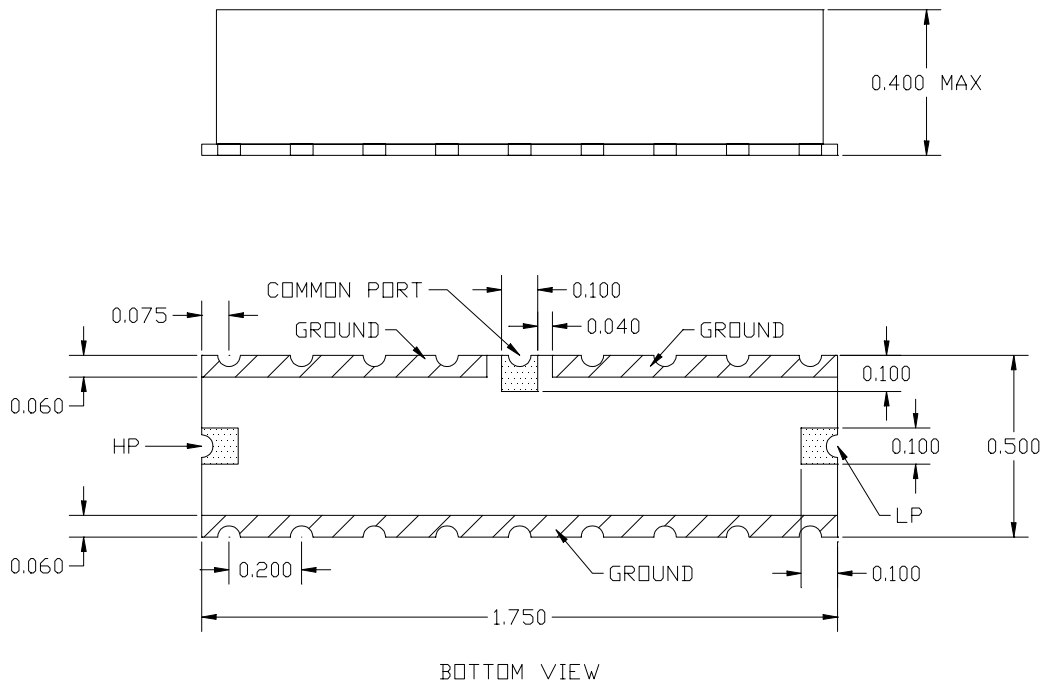


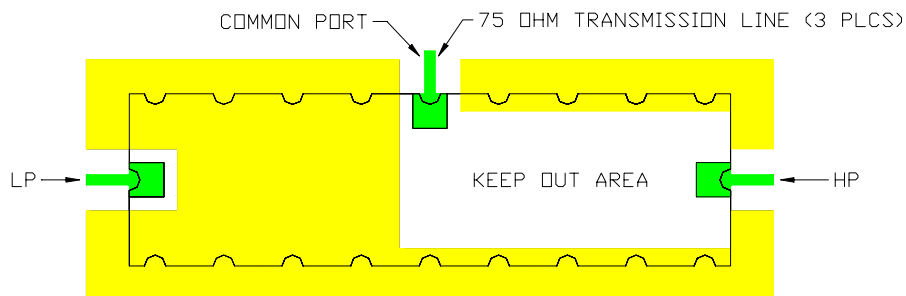
Figure 4

KR 2401 Diplexer Filter

Physical Dimensions



Recommended PCB Layout



NOTES:

1. RECOMMENDED PCB LAYOUT - TOP VIEW
2. GREEN SHOWS SIGNAL TRACES
3. YELLOW IS GROUND PLANE
4. KEEP ALL GROUND AND TRACES OUT OF DESIGNATED AREA ON TOP, BOTTOM AND ALL OTHER LAYERS OF PCB