

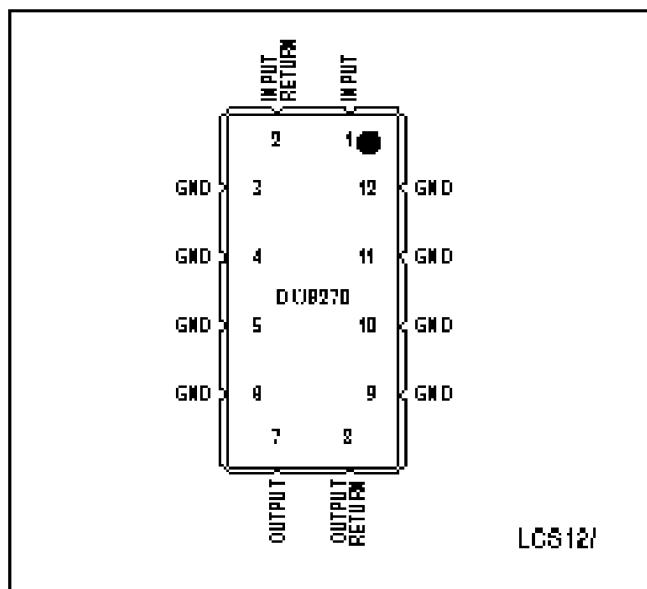
The DW9270 has been designed specifically for the Digital Wireless Communications market, as an IF filter with a centre frequency of 240MHz. The filter utilises Mitel Semiconductor's low loss (8.5dB typical), Transversal filter technology based on a Quartz substrate for excellent temperature stability.

With a typical 3dB passband of 1MHz, and an adjacent channel rejection of 12dB (min.) the device exhibits excellent close-in and ultimate rejection, which combined with a Group Delay Ripple of 200ns (max.) makes the DW9270 an ideal IF filter for Digital Wireless Communications systems.

The device is available in a surface mount ceramic chip carrier suited to high volume automated assembly systems.

### FEATURES

- 240MHz Centre Frequency ( $f_0$ )
- Low Insertion Loss (10dB max.)
- 3dB Passband 1.05MHz (typ.)
- Quartz Temperature Stability
- Low Profile Ceramic LCC Package



### ABSOLUTE MAXIMUM RATINGS

|                  |     |       |
|------------------|-----|-------|
| DC Voltage       | VDC | 0V    |
| Input Power Max. | PIN | 10dBm |

### NOMINAL IMPEDANCE

|         |                |
|---------|----------------|
| Input:  | 255Ω // 14pF   |
| Output: | 400Ω // 11.5pF |

### 50Ω TEST BOARD COMPONENTS

|         |                                                     |
|---------|-----------------------------------------------------|
| Input:  | Shunt Cap. 27pF, Series Ind. 47nH, Shunt Cap. 1.5pF |
| Output: | Shunt Cap. 1.5pF, Series Ind. 47nH, Shunt Cap. 30pF |

Components: Coilcraft 1008CS Inductors : Murata 0805 Capacitors

### PACKAGE

13.5mm x 6.5mm : 12 Lead SMD

### OPERATION

Balanced or Unbalanced configuration available.

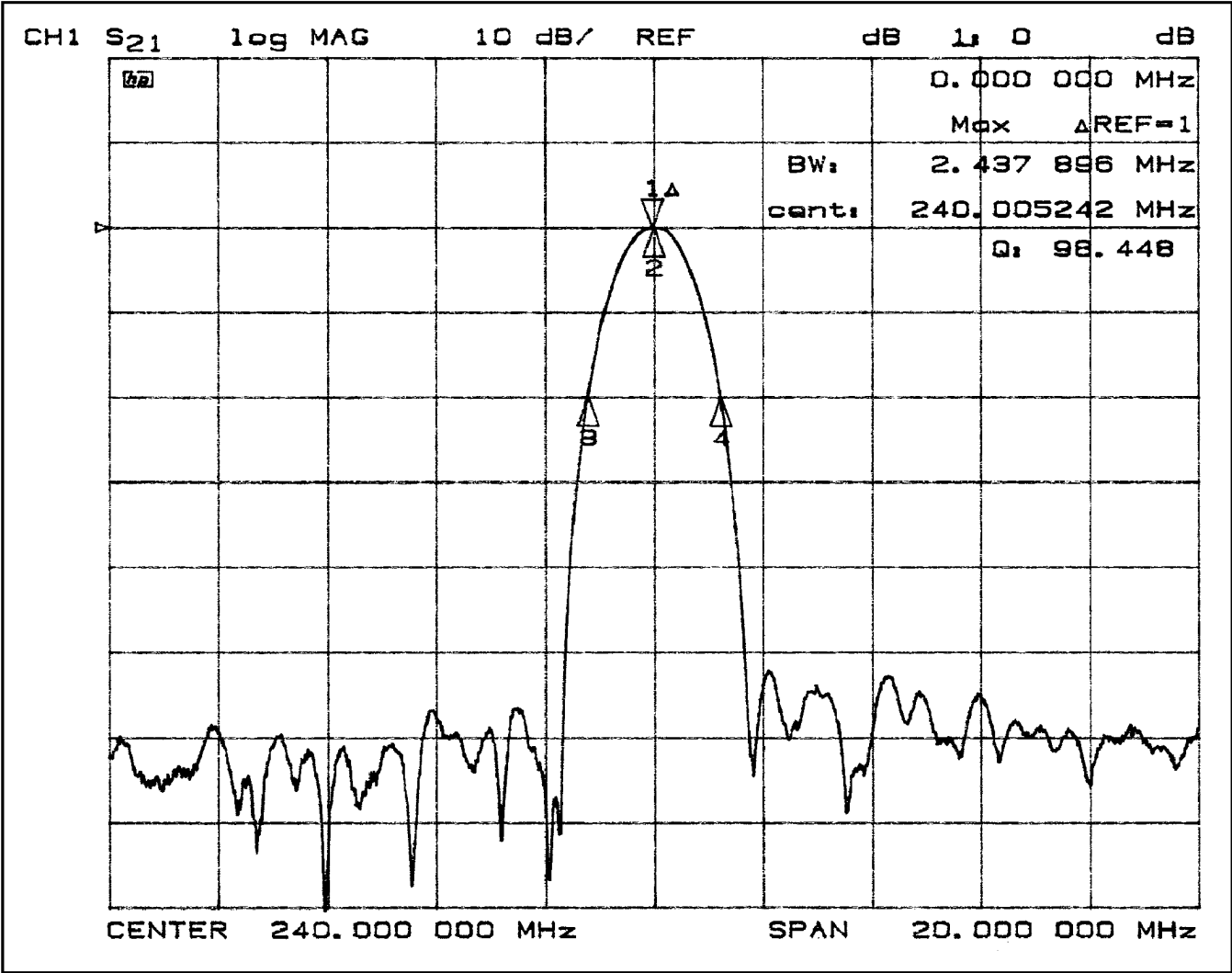
### ORDER INFORMATION

DW9270

## DW9270

### ELECTRICAL CHARACTERISTICS @ 25 °C

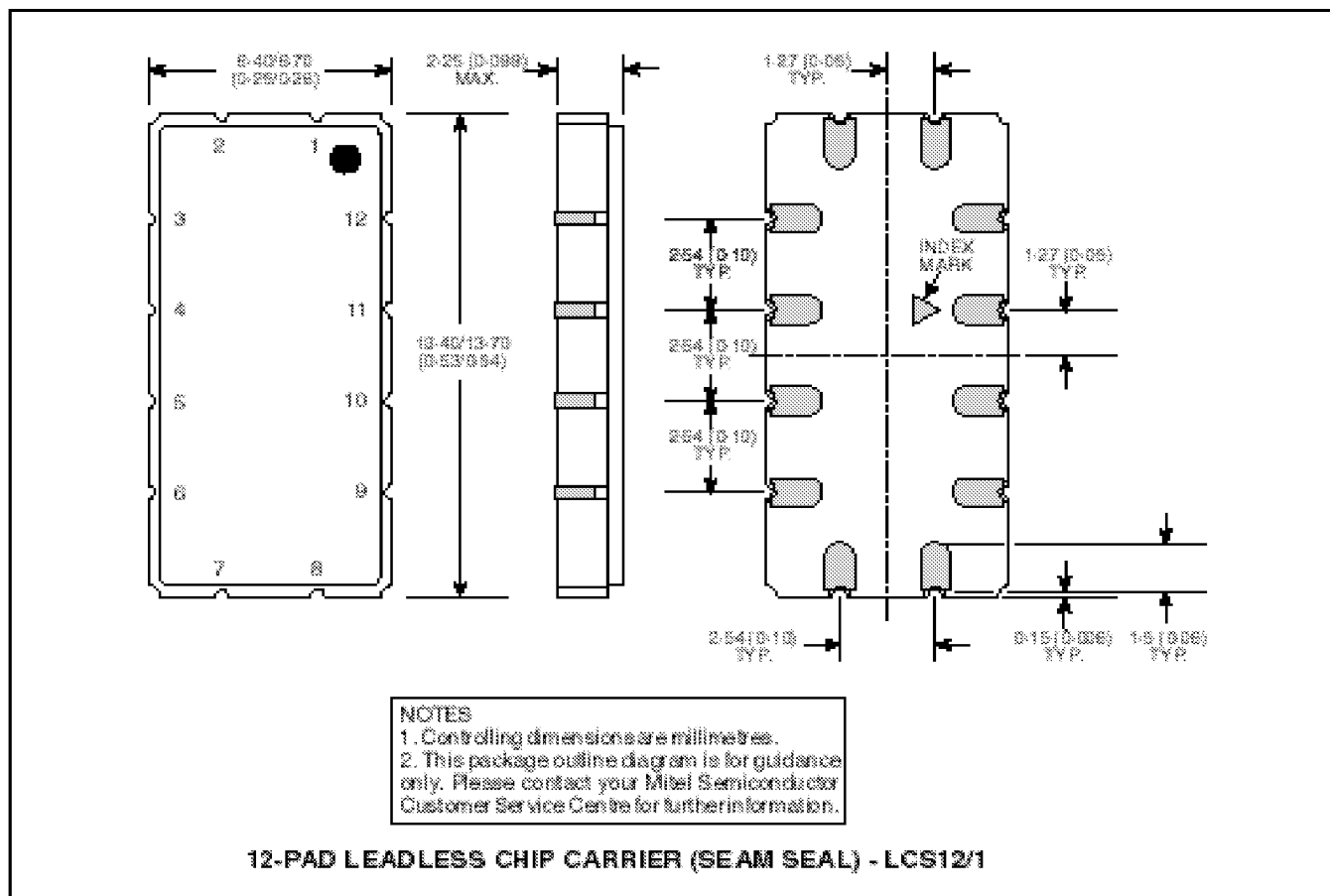
| Parameter                   | Min    | Typ  | Max    | Units |
|-----------------------------|--------|------|--------|-------|
| Centre Frequency            | 239.96 | 240  | 240.40 | MHz   |
| 3dB Bandwidth               | 1000   | 1050 |        | kHz   |
| Insertion Loss              | -      | 8.5  | 10     | dB    |
| Amplitude Ripple            | -      | 0.2  | 1      | dB    |
| Group Delay Ripple          | -      | 50   | 200    | ns    |
| Stopband Rejection          |        |      |        |       |
| $f_c \pm 1.0$ MHz           | 11.0   | 13   | -      | dB    |
| $f_c \pm 1.75 - 2.5$ MHz    | 44     | 55   | -      | dB    |
| $f_c \pm 2.50 - 3.50$ MHz   | 48     | 55   | -      | dB    |
| $f_c \pm 3.50 - 50.0$ MHz   | 50     | 60   | -      | dB    |
| Operating Temperature Range | -20    | -    | +60    | °C    |



## DW9270

### PACKAGE DETAILS

Dimensions are shown thus: mm (in). For further package information, please contact your local Customer Service Centre.



#### HEADQUARTERS OPERATIONS

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