### MAXIMUM RATING:

Electrostatic Sensitive Device (ESD)

1. Operating temperature range: -40°C to 80°C
2. Storage temperature range: -40°C to 85°C
3. Input Power Level: 10dBm
4. Maximum DC Voltage: 10V

### CHARACTERISTICS:

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Sign</th>
<th>Unit</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center Frequency</td>
<td>$F_0$</td>
<td>MHz</td>
<td>69.9</td>
<td>70</td>
<td>70.1</td>
</tr>
<tr>
<td>Insertion Loss</td>
<td>IL</td>
<td>dB</td>
<td>-</td>
<td>9.8</td>
<td>12</td>
</tr>
<tr>
<td>-1dB Pass Bandwidth</td>
<td>BW1</td>
<td>MHz</td>
<td>-</td>
<td>1.0</td>
<td>-</td>
</tr>
<tr>
<td>-3dB Pass Bandwidth</td>
<td>BW3</td>
<td>MHz</td>
<td>1.26</td>
<td>1.32</td>
<td>-</td>
</tr>
<tr>
<td>-40dB Pass Bandwidth</td>
<td>BW40</td>
<td>MHz</td>
<td>-</td>
<td>2.84</td>
<td>2.9</td>
</tr>
<tr>
<td>Amplitude Ripple $F_c \pm 0.35$MHz</td>
<td>AR</td>
<td>dB</td>
<td>-</td>
<td>0.3</td>
<td>1.0</td>
</tr>
<tr>
<td>Group Delay Time Deviation in Pass Band $F_c \pm 0.35$MHz</td>
<td>GDV</td>
<td>nsec</td>
<td>-</td>
<td>160</td>
<td>280</td>
</tr>
<tr>
<td>Relative Attenuation DB</td>
<td>dB</td>
<td>UR</td>
<td>45</td>
<td>55</td>
<td>-</td>
</tr>
<tr>
<td>75MHz ~ 200MHz</td>
<td>dB</td>
<td>UR</td>
<td>45</td>
<td>55</td>
<td>-</td>
</tr>
</tbody>
</table>

Source and Load Impedances RS/RL | Ohm | 50   |
C. FREQUENCY CHARACTERISTICS:

1. Wide band Response: (span 10MHz)

Fig. 1. Horizontal: 1MHz / Div, Vertical: 10dB / Div

2. Pass band Response and Group Time Delay response:

Fig 2. Horizontal: 0.2MHz / Div, Vertical: 1dB / Div
3. Group Time Delay response:

![Graph showing Group Time Delay response](image)

Fig 3. Horizontal: 0.2MHz / Div, Vertical: 100ns / Div

D. MATCHING CIRCUIT:

![Matching Circuit Diagram]

L1 = 330 ~ 480nH, C1 = 82pF, L2 = 330 ~ 480nH, C2 = 82pF

Z\text{IN} = 50\,\text{ohm}, \quad Z\text{OUT} = 50\,\text{ohm}
E. OUTLINE DRAWING:

- A: RF input
- B: RF input ground
- G: RF output
- H: RF output ground
- C, D, E, F, J, K, M, N: Ground
- Unit: mm

F. PCB FOOTPRINT:
G. PACKING:

1. Reel Dimension

2. Tape Dimension
H. RECOMMENDED REFLOW PROFILE:

1. Preheating shall be fixed at 150 ~ 180°C for 60 ~ 90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50 ~ 80 seconds and at 245 ~ 260°C peak (min. 10 sec).
4. Time: 2 times.