### PCB

- **Type:** Rigid-Flexible PCB
- **Number of Layers:** 6
- **Material:** FR4 (TG170)+Polyimide
- **Functional reliability class according to IPC-A-600H&IPC-6012B:** 2
- **Circuit size (X,Y), mm:** 66x91.5
- **Panel size (X,Y), mm:** 238±0.15x158±0.15
- **Finished Thickness, mm:** 1.2±10%
- **Circuits per panel / Different PCB types:** 6/1

### PCB STACK-UP

<table>
<thead>
<tr>
<th>Layer</th>
<th>Description</th>
<th>Thickness, mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cover FR4 Con</td>
<td>21.300</td>
</tr>
<tr>
<td>2</td>
<td>Core FR4 Con</td>
<td>25.400</td>
</tr>
<tr>
<td>3</td>
<td>Cover FR4 Con</td>
<td>299.99</td>
</tr>
<tr>
<td>4</td>
<td>Core FR4 Con</td>
<td>74.930</td>
</tr>
<tr>
<td>5</td>
<td>Core FR4 Con</td>
<td>50.040</td>
</tr>
<tr>
<td>6</td>
<td>Core FR4 Con</td>
<td>50.800</td>
</tr>
</tbody>
</table>

### COMPONENTS

- **Total amount:** 214
- **Number of denominations:** 69
- **Minimal size of passive case:** 0402
- **Complex cases (size/step):**
  - QFN(9*9, 64 pin, pitch 0.5)
  - BGA(15*20, 300 pin, pitch 0.5)
  - LGA(22.5*26.5, 96 pin, pitch 1.1)

### USAGE:

**CARGO TRACKING**
FRONT VIEW

BACK VIEW

MAIN CHARACTERISTICS

PCB

- PCB Type: Rigid PCB
- Number of layers: 8
- Material: IT180A
- Functional reliability class according to IPC-A-600H & IPC-6012B: 2
- Circuit size (X,Y), mm: 101.3 x 11.82
- Panel size (X,Y), mm: 101.3 ± 0.15 x 82.88 ± 0.15
- Finished Thickness, mm: 1 ± 10%
- Circuits per panel / Different PCB types: 4/1

PCB STACK-UP

- 1st Copper/Photoimageable Mask
- 2nd Copper/Photoimageable Mask
- 3rd Copper/Photoimageable Mask
- 4th Copper/Photoimageable Mask
- 5th Copper
- 6th Copper
- 7th Copper
- 8th Copper
- Core FR4 Core

COMPONENTS

- Total amount: 224
- Number of denominations: 39
- Minimal size of passive case: '0201
- Complex cases (size/step):
  - BGA(10*10, 236 pin, pitch 0.5)
  - TFBGA(10*10, 100 pin, pitch 0.8)

USAGE:

- VOIP EQUIPMENT

- SM: Liquid Photoimageable Mask
- PP: FR4 Core
- 108: FR4 Core
FRONT VIEW

BACK VIEW

USAGE:
VOIP EQUIPMENT

MAIN CHARACTERISTICS

PCB
- PCB Type: Rigid PCB
- Number of layers: 6
- Material: IT180A
- Functional reliability class according to IPC-A-600H&IPC-6012B: 2
- Circuit size (X,Y), mm: 81.28x59.18
- Panel size (X,Y), mm: 91.28±0.15x128.35±0.15
- Finished Thickness, mm: 1.74±0.10%
- Circuits per panel / Different PCB types: 2/1

PCB STACK-UP

COMPONENTS
- Total amount: 325
- Number of denominations: 66
- Minimal size of passive case: '0402
- Complex cases (size/step): PBGA(24*24, 737 pin, pitch 0.8)
  - FBGA(12.5*7.5, 84 pin, pitch 0.8)
  - QFN58(12*10, 58pin, pitch 0.65)
  - LQFP128(22*16, 128 pin, pitch 0.5)
**MAIN CHARACTERISTICS**

**PCB**
- **PCB Type**: Rigid PCB
- **Number of layers**: 4
- **Material**: FR4 HiTg
- **Functional reliability class according to IPC-A-600H&IPC-6012B**: 2
- **Circuit size (X,Y), mm**: 222x121.9
- **Panel size (X,Y), mm**: 222±0.15x121.8±0.15
- **Finished Thickness, mm**: 1.6±10%
- **Circuits per panel / Different PCB types**: 1/1

**PCB STACK-UP**

**COMPONENTS**
- **Total amount**: 1145
- **Number of denominations**: 77
- **Minimal size of passive case**: 0603
PCB

PCB Type: Rigid PCB
Number of layers: 14
Material: FR4 IT 180A
Functional reliability class according to IPC-A-600H & IPC-6012B: 2
Circuit size (X,Y, mm): 160x100
Panel size (X,Y, mm): 160±0,15x105±0,15
Finished Thickness, mm: 1,6±10%
Circuits per panel / Different PCB types: 1/1

PCB STACK-UP

COMPONENTS

Total amount: 351
Number of denominations: 64
Minimal size of passive case: ‘0402
Complex cases (size/step): BGA(17*17, 400 pin, pitch 0,8) FBGA(8*14, 96 pin, pitch 0,8)

USAGE:

TELECOMMUNICATION
FRONT VIEW

<table>
<thead>
<tr>
<th>Main Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PCB</strong></td>
</tr>
<tr>
<td><strong>Type</strong></td>
</tr>
<tr>
<td><strong>Number of layers</strong></td>
</tr>
<tr>
<td><strong>Material</strong></td>
</tr>
<tr>
<td><strong>Functional reliability class according to IPC-A-600H &amp; IPC-6012B</strong></td>
</tr>
<tr>
<td><strong>Circuit size (X,Y), mm</strong></td>
</tr>
<tr>
<td><strong>Panel size (X,Y), mm</strong></td>
</tr>
<tr>
<td><strong>Finished Thickness, mm</strong></td>
</tr>
<tr>
<td><strong>Circuits per panel / Different PCB types</strong></td>
</tr>
</tbody>
</table>

**PCB STACK-UP**

**COMPONENTS**

Total amount 646
Number of denominations 68
Minimal size of passive case 0402
Complex cases (size/step)
- PBGA(24*24, 737 pin, pitch 0.8)
- FBGA(12,5*7,5, 84 pin, pitch 0.8)
- QFN58(12*10, 58pin, pitch 0.65)
- LQFP128(22*16, 128 pin, pitch 0.5)

**USAGE:**

TELECOMMUNICATION
FRONT VIEW

BACK VIEW

PCB

PCB Type: Rigid PCB
Number of layers: 6
Material: FR4 HiTg
Functional reliability class according to IPC-A-600H&IPC-6012B: 2
Circuit size (X,Y), mm: 54±0,15x50±0,15
Panel size (X,Y), mm: 415±0,15x275,5±0,15
Finished Thickness, mm: 1,6±10%
Circuits per panel / Different PCB types: 6/1

PCB STACK-UP

COMPONENTS

Total amount: 1380/230
Number of denominations: 84
Minimal size of passive case: 0402

USAGE:

GPS TRACKING