

# MPD0938W2

## Power Splitters/Combiners

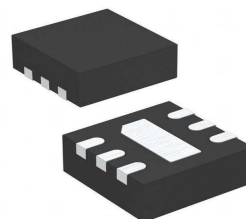
MECSINE 兆讯

### APPLICATIONS

1. Multi-frequency signal combined
2. Indoor antenna distribution system Balanced Amplifiers
3. Multi-frequency Small Cell & Pico

### Features

1. Low Insertion Loss 0.9dB typ based on IPD technology
2. Based on IPD technology
3. High isolation
4. Frequency covers a wide range of applications



Case1: DFN2\*2

### Description

The MPD0938W2 is a low cost, high performance two ways power splitters in an easy to use surface mount package. It is ideal for multi-frequency signal combined, indoor antenna distribution system and multi-frequency Small Cell & Pico. MPD0938W2 is Based on IPD technology which possess excellent electrical and mechanical stability. All components are 100% RF tested.

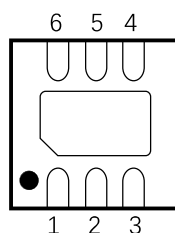
### Characteristics 1)

| Item            | Min.  | Typ.@25°C | Max.  | Unit    |
|-----------------|-------|-----------|-------|---------|
| Frequency Range | 900   |           | 3800  | MHz     |
| isolation       | 12    | 20        |       | dB      |
| Insertion Loss  |       | 1         | 1.5   | dB      |
| Phase Unbalance | -5    | 2         | +5    | degrees |
| Amplitude       | -0.75 | 0.5       | +0.75 | dB      |
| VSWR (:1)       |       | 1.2       | 2.0   | :1      |
| Operating Temp. | -55   |           | +105  | °C      |
| Power           |       |           | 2     | W       |

1) All the above data are based on specified demo board and tested in 25° environment.

### PORT CONFIGURATIONS

Figure 1. MPD0938W2 (Top View)



| Pin # | Connection |
|-------|------------|
| 1     | GND        |
| 2     | IN         |
| 3     | GND        |
| 4     | OUT        |
| 5     | GND        |
| 6     | OUT        |

All Use For RF & Microwave

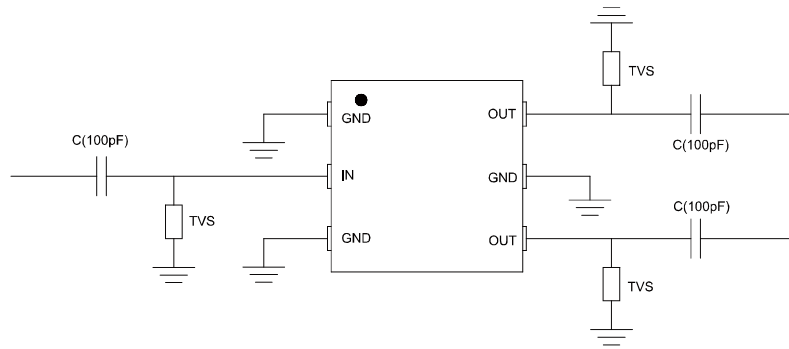
# MPD0938W2

## Power Splitters/Combiners

**MECSINE** 兆讯

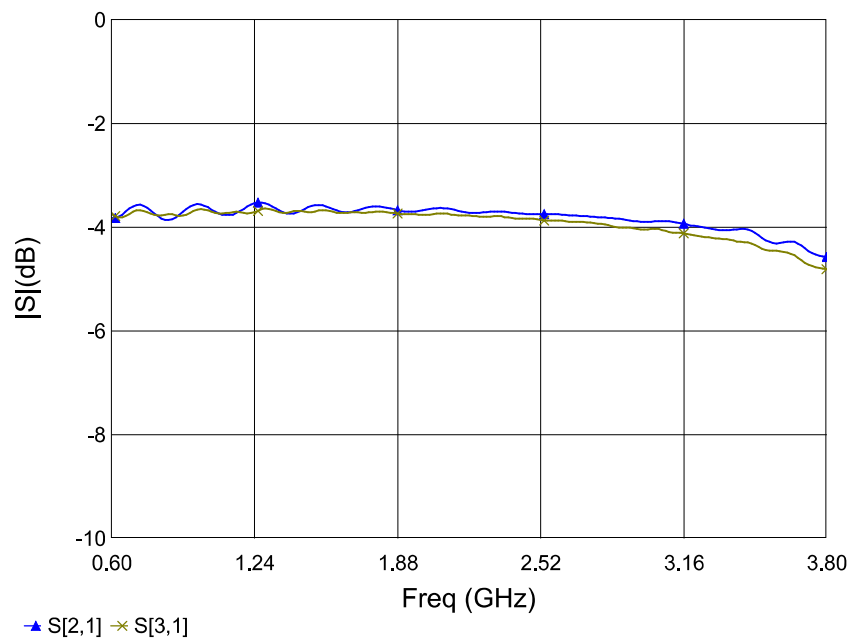
2) Suggest to add a TVS Diode in parallel between electrode and Capacitors external connected to electrode to prevent DC signal entry to guarantee parts normal work.

Figure 2. MPD0938W2 Suggested Circuits



**Typical Performance** 25°C: (900-3800 MHz)

Figure 3. MPD0938W2 Insertion Loss



All Use For RF & Microwave

Shenzhen Megsine technology co., ltd [www.megsine.com](http://www.megsine.com) [sales@megsine.com](mailto:sales@megsine.com) may contain us for future information  
Ju 09, 2021

Figure 4. MPD0938W2 Return Loss

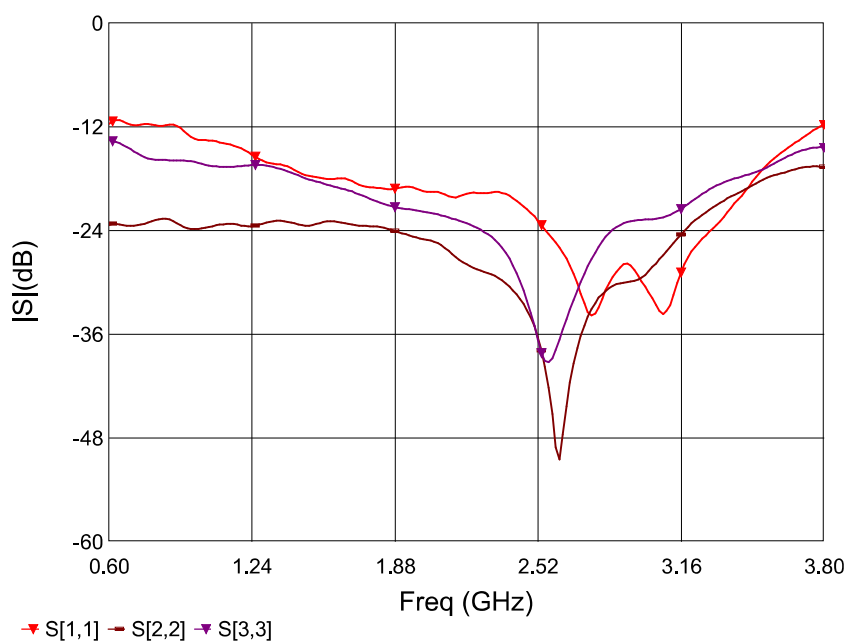
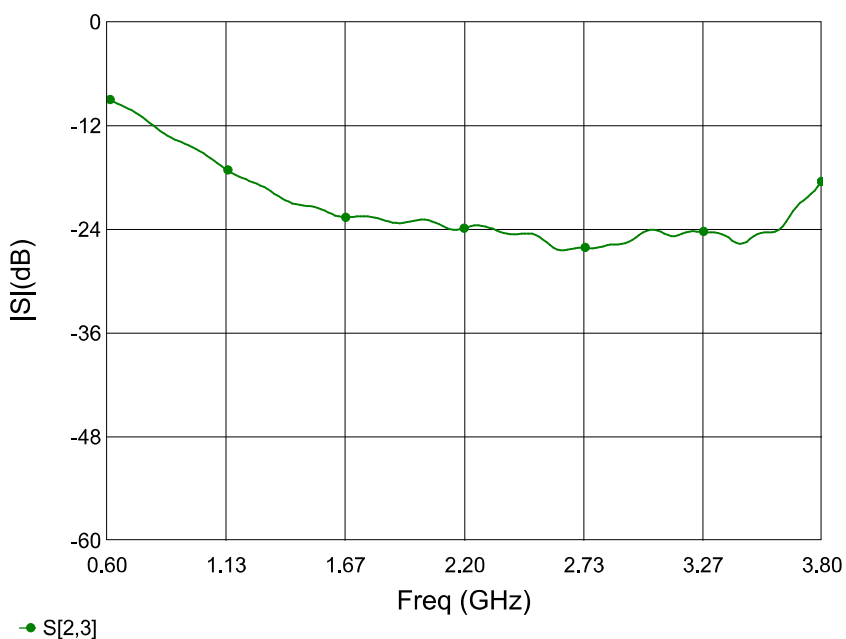


Figure 5. MPD0938W2 Isolation



# MPD0938W2

## Power Splitters/Combiners



### Outline Drawing

Figure 6. MPD0938W2 Outline Drawing

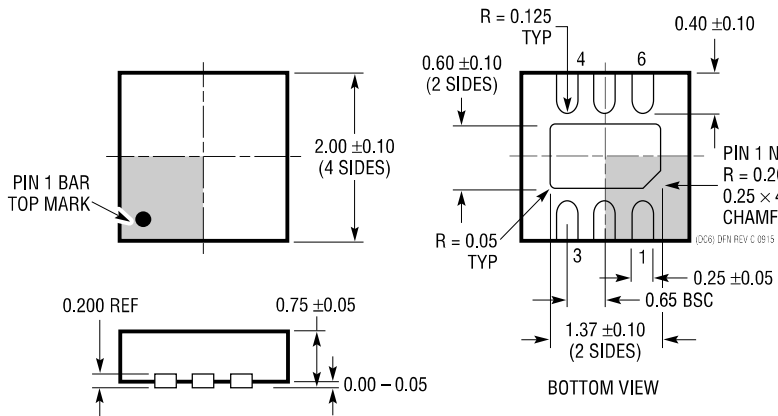
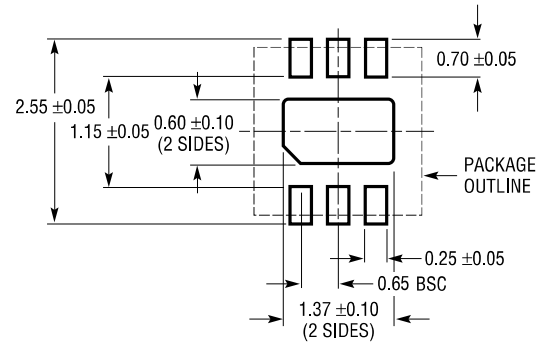


Figure 7. MPD0938W2 Recommended PCB Layout



All Use For RF & Microwave

Shenzhen Megsine technology co., ltd [www.megsine.com](http://www.megsine.com) [sales@megsine.com](mailto:sales@megsine.com) may contain us for future information  
Ju 09, 2021

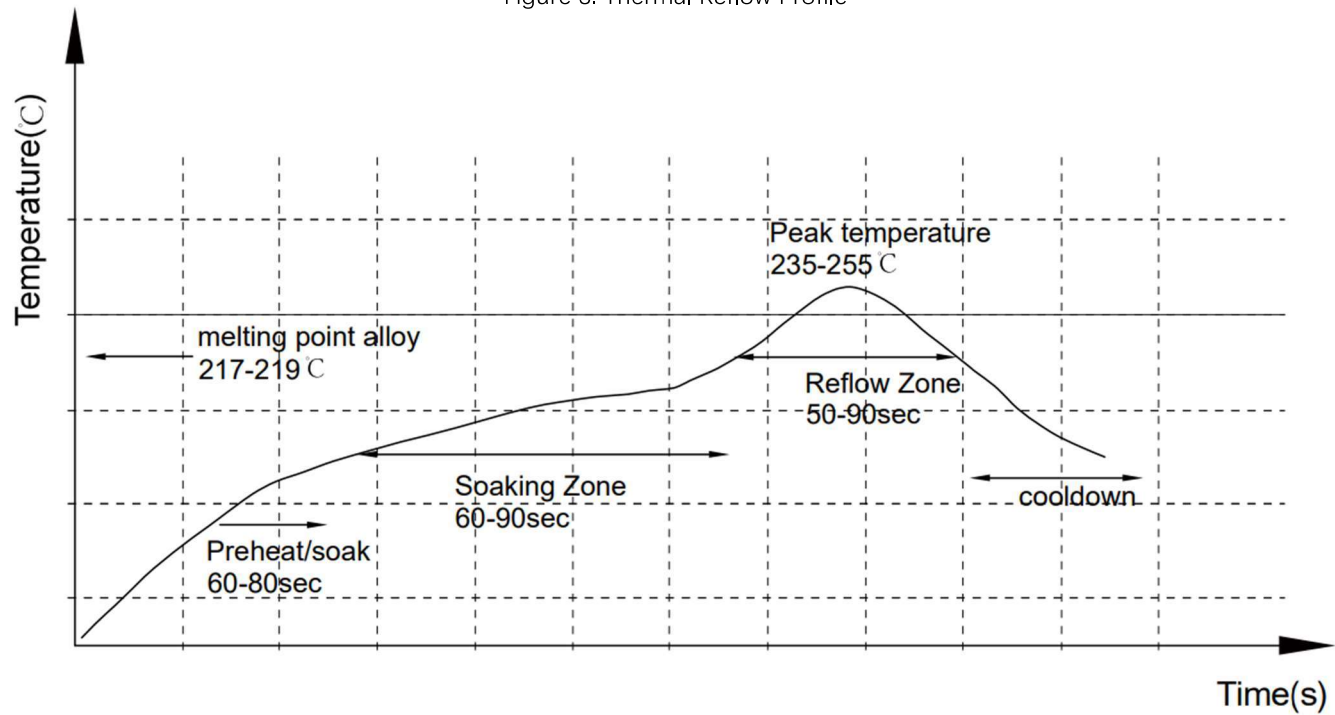
# MPD0938W2

## Power Splitters/Combiners



### REFLOW PROFILE

Figure 8. Thermal Reflow Profile



|                 | Ramp Up    | Pre-Heating  | Peak       | Soaking     |
|-----------------|------------|--------------|------------|-------------|
| Temperature(°C) | T1:160±5°C | T2:180±5°C   | T4:260±5°C | T3:230±5°C  |
| Time(sec)       | t1:60±5sec | t2:100±15sec | t3:30±5sec | t4:60±10sec |

### Packaging and Ordering Information

| Device    | Package | Reel | Shipping         |
|-----------|---------|------|------------------|
| MPD0938W2 | DFN 2*2 | 7 "  | 4000/Tape & Reel |

# MPD0938W2

## Power Splitters/Combiners



| Revision | Description | Date      |
|----------|-------------|-----------|
| Rev0     | Preliminary | 2022/9/15 |
|          |             |           |
|          |             |           |
|          |             |           |
|          |             |           |
|          |             |           |
|          |             |           |

*All Use For RF & Microwave*

Shenzhen Megsine technology co., ltd [www.megsine.com](http://www.megsine.com) [sales@megsine.com](mailto:sales@megsine.com) may contain us for future information  
Ju 09, 2021