

## THz CHIP LIST 太赫兹芯片系列

——BY CHIP FUNCTION 按芯片功能分类

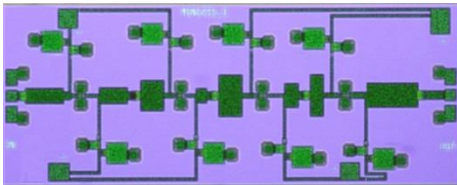
VERSION:20250715FUNCTIONLIST

## ➤ Key Feature特点:

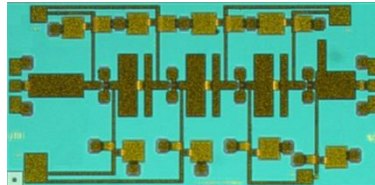
1. Made in China 中国制造
2. Chip or Packaged module available 可提供芯片或者模块
3. Datasheet on request 可提供产品说明书
4. No free samples 没有免费的样品
5. Customized Chip on request 可按需定制芯片

## ➤ Product Picture产品图

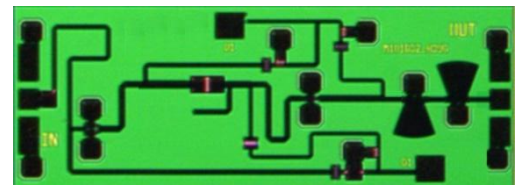
[PA Chip功放芯片](#)



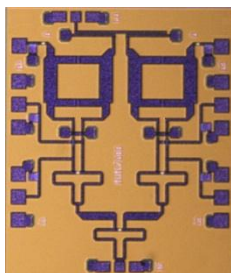
[LNA Chip低噪放](#)



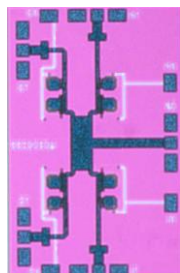
[AMC Chip倍频器芯片](#)



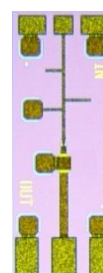
[Mixer Chip混频器芯片](#)



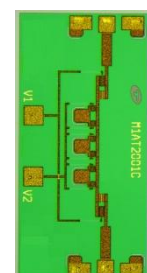
[Switch Chip开关芯片](#)



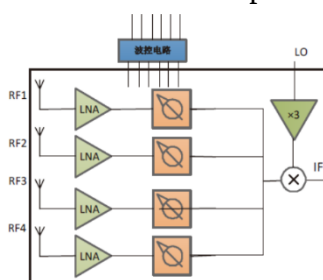
[Detector Chip检波器芯片](#)



[Attenuator Chip衰减器芯片](#)



Multifunctional Chip多功能芯片



## 1. PA Chip 功率放大器芯片

| PN<br>产品号  | Freq(GHz)<br>工作频率 (GHz) | Specs<br>技术指标                                                                                              |
|------------|-------------------------|------------------------------------------------------------------------------------------------------------|
| MKR-020PA  | DC-20                   | 1.III/IV Materials<br>2.Small signal gain : 12dB<br>3.P <sub>sat</sub> :19dBm<br>4.P <sub>1dB</sub> :18dBm |
| MKR-027PA  | DC-27                   | 1.III/IV Materials<br>2.Small signal gain : 16dB<br>3.P <sub>sat</sub> :24dBm<br>4.P <sub>1dB</sub> :23dBm |
| MKR-045PA  | DC-45                   | 1.III/IV Materials<br>2.Small signal gain : 16dB<br>3.P <sub>sat</sub> :24dBm<br>4.P <sub>1dB</sub> :22dBm |
| MKR-050PA  | DC-50                   | 1.III/IV Materials<br>2.Small signal gain : 12dB<br>3.P <sub>sat</sub> :18dBm<br>4.P <sub>1dB</sub> :16dBm |
| MKR-067PA  | DC-67                   | 1.III/IV Materials<br>2.Small signal gain : 12dB<br>3.P <sub>sat</sub> :18dBm<br>4.P <sub>1dB</sub> :16dBm |
| MKR-075PA  | DC-75                   | 1.III/IV Materials<br>2.Small signal gain : 12dB<br>3.P <sub>sat</sub> :NA<br>4.P <sub>1dB</sub> :15dBm    |
| MKR-0125PA | DC-125                  | 1.III/IV Materials<br>2.Small signal gain : 10dB<br>3.P <sub>sat</sub> :12dBm<br>4.P <sub>1dB</sub> :10dBm |

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|           |       |                             |
|-----------|-------|-----------------------------|
| MKR-6PA   | 6-27  | 1.III/IV Materials          |
|           |       | 2.Small signal gain : 23dB  |
|           |       | 3.P <sub>sat</sub> :21dBm   |
|           |       | 4.P <sub>1dB</sub> :19dBm   |
| MKR-14PA  | 14-22 | 1.III/IV Materials          |
|           |       | 2.Small signal gain : 31dB  |
|           |       | 3.P <sub>sat</sub> :30dBm   |
|           |       | 4.PAE:40%                   |
| MKR-15PA  | 15-43 | 1.III/IV Materials          |
|           |       | 2.Small signal gain : 20dB  |
|           |       | 3.P <sub>sat</sub> :30dBm   |
|           |       | 4.P <sub>1dB</sub> :29.5dBm |
| MKR-17PA2 | 17-27 | 1.III/IV Materials          |
|           |       | 2.Small signal gain : 23dB  |
|           |       | 3.P <sub>sat</sub> :25dBm   |
|           |       | 4.P <sub>1dB</sub> :24.5dBm |
| MKR-17PA3 | 17-27 | 1.III/IV Materials          |
|           |       | 2.Small signal gain : 22dB  |
|           |       | 3.P <sub>sat</sub> :27dBm   |
|           |       | 4.P <sub>1dB</sub> :26.5dBm |
| MKR-17PA4 | 17-27 | 1.III/IV Materials          |
|           |       | 2.Small signal gain : 19dB  |
|           |       | 3.P <sub>sat</sub> :29dBm   |
|           |       | 4.P <sub>1dB</sub> :28.5dBm |
| MKR-17PA5 | 17-45 | 1.III/IV Materials          |
|           |       | 2.Small signal gain : 23dB  |
|           |       | 3.P <sub>sat</sub> :18dBm   |
|           |       | 4.NF: 2.8dB                 |
| MKR-20PA  | 20-50 | 1.III/IV Materials          |
|           |       | 2.Small signal gain : 26dB  |
|           |       | 3.P <sub>sat</sub> :24dBm   |
|           |       | 4.P <sub>1dB</sub> :23dBm   |
| MKR-24PA1 | 24-31 | 1.III/IV Materials          |

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|-----------|-------|----------------------------------|
|           |       | 2.Small signal gain : 20dB       |
|           |       | 3.P <sub>sat</sub> :21dBm        |
|           |       | 4.P <sub>1dB</sub> :20dBm        |
| MKR-24PA2 | 24-31 | 1.III/IV Materials               |
|           |       | 2.Small signal gain : 22dB       |
|           |       | 3.P <sub>sat</sub> :27dBm        |
|           |       | 4.P <sub>1dB</sub> :26.5dBm      |
| MKR-30PA  | 30-75 | 1.III/IV Materials               |
|           |       | 2.Small signal gain : 20dB       |
|           |       | 3.P <sub>sat</sub> :21dBm        |
|           |       | 4.P <sub>1dB</sub> :20dBm        |
| MKR-34PA  | 34-64 | 1.III/IV Materials               |
|           |       | 2.Small signal gain : 19dB       |
|           |       | 3.P <sub>sat</sub> :27dBm        |
|           |       | 4.PAE:17%                        |
| MKR-36PA  | 36-42 | 1.III/IV Materials               |
|           |       | 2.Small signal gain : 22dB       |
|           |       | 3.P <sub>sat</sub> :40dBm@28%PAE |
|           |       | 4.P <sub>1dB</sub> :38dBm        |
| MKR-37PA  | 37-43 | 1.III/IV Materials               |
|           |       | 2.Small signal gain : 20dB       |
|           |       | 3.P <sub>sat</sub> :27dBm@25%PAE |
|           |       | 4.Power gain:18dBm               |
| MKR-37PA1 | 37-43 | 1.III/IV Materials               |
|           |       | 2.Small signal gain : 20dB       |
|           |       | 3.P <sub>sat</sub> :30dBm@22%PAE |
|           |       | 4.P <sub>1dB</sub> :29.5dBm      |
| MKR-50PA  | 50-90 | 1.III/IV Materials               |
|           |       | 2.Small signal gain : 21dB       |
|           |       | 3.P <sub>sat</sub> :20dBm        |
|           |       | 4.P <sub>1dB</sub> :19dBm        |
| MKR-70PA  | 70-90 | 1.III/IV Materials               |
|           |       | 2.Small signal gain : 23dB       |

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|-----------|---------|-----------------------------|
|           |         | 3.P <sub>sat</sub> :17dBm   |
|           |         | 4.P <sub>1dB</sub> :16dBm   |
| MKR-71PA1 | 71-76   | 1.III/IV Materials          |
|           |         | 2.Small signal gain : 22dB  |
|           |         | 3.P <sub>sat</sub> :27dBm   |
|           |         | 4.P <sub>1dB</sub> :NA      |
| MKR-75PA  | 75-110  | 1.III/IV Materials          |
|           |         | 2.Small signal gain : 15dB  |
|           |         | 3.P <sub>sat</sub> :16dBm   |
|           |         | 4.P <sub>1dB</sub> :15dBm   |
| MKR-75PA3 | 75-145  | 1.III/IV Materials          |
|           |         | 2.Small signal gain : 15dB  |
|           |         | 3.P <sub>sat</sub> :12dBm   |
|           |         | 4.Power gain:10dB           |
| MKR-81PA  | 81-86   | 1.III/IV Materials          |
|           |         | 2.Small signal gain : 16dB  |
|           |         | 3.P <sub>sat</sub> :27dBm   |
|           |         | 4.PAE:13%                   |
| MKR-88PA1 | 88-100  | 1.III/IV Materials          |
|           |         | 2.Small signal gain : 16dB  |
|           |         | 3.P <sub>sat</sub> :22dBm   |
|           |         | 4.P <sub>1dB</sub> :21dBm   |
| MKR-92PA2 | 92-96   | 1.III/IV Materials          |
|           |         | 2.Small signal gain : 14dB  |
|           |         | 3.P <sub>sat</sub> :25dBm   |
|           |         | 4. Power gain:15dB          |
| MKR-92PA3 | 92-96   | 1.III/IV Materials          |
|           |         | 2.Small signal gain : 14dB  |
|           |         | 3.P <sub>sat</sub> :25.5dBm |
|           |         | 4. Power gain:15dB          |
| MKR-100PA | 100-115 | 1.III/IV Materials          |
|           |         | 2.Small signal gain : 17dB  |

|           |         |                            |
|-----------|---------|----------------------------|
|           |         | 3.P <sub>sat</sub> :17dBm  |
|           |         | 4.P <sub>1dB</sub> :16dBm  |
| MKR-110PA | 110-150 | 1.III/IV Materials         |
|           |         | 2.Small signal gain : 19dB |
|           |         | 3.P <sub>sat</sub> :15dBm  |
|           |         | 4.PAE:6%                   |
| MKR-195PA | 195-220 | 1.III/IV Materials         |
|           |         | 2.Small signal gain : 20dB |
|           |         | 3.P <sub>sat</sub> :12dBm  |
|           |         | 4.P <sub>1dB</sub> :10dBm  |
| MKR-210PA | 210-230 | 1.III/IV Materials         |
|           |         | 2.Small signal gain : 20dB |
|           |         | 3.P <sub>sat</sub> :16dBm  |
|           |         | 4.P <sub>1dB</sub> :NA     |
| MKR-215PA | 215-230 | 1.III/IV Materials         |
|           |         | 2.Small signal gain : 20dB |
|           |         | 3.P <sub>sat</sub> :13dBm  |
|           |         | 4.P <sub>1dB</sub> :10dBm  |
| MKR-330PA | 330-355 | 1.III/IV Materials         |
|           |         | 2.Small signal gain : 10dB |
|           |         | 3.P <sub>sat</sub> :5dBm   |
|           |         | 4.P <sub>1dB</sub> :NA     |

## 2. GaN PA Chip 氮化镓功率放大器芯片

| PN<br>产品号 | Freq(GHz)<br>工作频率 | Psat (dBm)<br>饱和输出 | Small Signal<br>Gain Typ (dB)<br>增益 | Voltage(V)<br>工作电压 | PAE(%)<br>效率 |
|-----------|-------------------|--------------------|-------------------------------------|--------------------|--------------|
| MKR-022PA | DC-22             | 34                 | 11                                  | 15                 | 23           |
| MKR-2PA   | 2-27              | 36                 | 19                                  | 18                 | 18           |
| MKR-14PA  | 14-22             | 30                 | 31                                  | -                  | -            |

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|              |         |      |      |    |    |
|--------------|---------|------|------|----|----|
| MKR-17PA     | 17-27   | 43   | 27   | 22 | 25 |
| MKR-17PA1    | 17-21   | 41   | 27   | 28 | 28 |
| MKR-18PA     | 18-40   | 38   | 22   | 18 | 17 |
| MKR-18PA2    | 18-40   | 40.5 | 21   | 18 | 15 |
| MKR-18PA3    | 18-45   | 20   | 38.5 | 18 | 10 |
| MKR-18PA4    | 18-26.5 | 45   | 24   | 24 | 26 |
| MKR-18PA5    | 18-26.5 | 41   | 25   | 22 | 26 |
| MKR-18PA6    | 18-26.5 | 43   | 27   | 22 | 25 |
| MKR-24PA     | 24-28   | 41   | 28   | 22 | 33 |
| MKR-25PA     | 25-27   | 44   | 26   | 22 | 32 |
| MKR-27PA     | 27-31   | 43   | 23   | 22 | 28 |
| MKR-27PA2    | 27-31   | 42   | 23   | 22 | 30 |
| MKR-31PA     | 31-37   | 41   | 21   | 22 | 26 |
| MKR-33PA     | 33-37   | 45   | 23   | 28 | 22 |
| MKR-35PA     | 35-60   | 36   | 20   | 18 | 13 |
| MKR-37PA2    | 37-43   | 42.5 | 24   | 20 | 26 |
| MKR-46PA     | 46-53   | 39   | 20   | 18 | 26 |
| MKR-46PA2    | 46-53   | 41.5 | 18   | 18 | 24 |
| MKR-4752-P37 | 47-52   | 37.5 | 15   | 20 | 24 |
| MKR-50PA2    | 50-63   | 37   | 18   | 18 | 20 |
| MKR-57PA     | 57-64   | 34   | 21   | 18 | 24 |

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|               |         |      |     |    |     |
|---------------|---------|------|-----|----|-----|
| MKR-57PA1     | 57-64   | 37   | 20  | 18 | 21  |
| MKR-57PA2     | 57-64   | 40   | 18  | 18 | 19  |
| MKR-60PA      | 60-87   | 29   | 23  | 16 | 10  |
| MKR-6090-P33  | 60-90   | 33.4 | 6.4 | 20 | 8   |
| MKR-60110-P22 | 60-110  | 22   | 19  | 8  | -   |
| MKR-66PA      | 66-75   | 34.5 | 20  | 18 | 20  |
| MKR-67PA      | 67-120  | 22   | 18  | 15 | 6   |
| MKR-71PA2     | 71-76   | 33   | 20  | 18 | 18  |
| MKR-75PA2     | 75-110  | 28   | 20  | 15 | 7   |
| MKR-75PA4     | 75-110  | 23   | 17  | 10 | 9   |
| MKR-76PA      | 76-81   | 33   | 20  | 18 | 20  |
| MKR-80130-P26 | 80-130  | 26   | 22  | 8  | 4.3 |
| MKR-80140-P20 | 80-140  | 20   | 18  | 8  | -   |
| MKR-80140-P23 | 80-140  | 23   | 17  | 10 | 8   |
| MKR-88PA2     | 88-115  | 24   | 18  | 16 | 8   |
| MKR-90PA      | 90-98   | 34   | 21  | 18 | 10  |
| MKR-90PA2     | 90-98   | 29   | 20  | 18 | 11  |
| MKR-90PA3     | 90-98   | 26.5 | 18  | 18 | 12  |
| MKR-92PA      | 92-96   | 36   | 19  | 18 | 9   |
| MKR-110PA1    | 110-170 | 19   | 22  | 10 | 5   |
| MKR-9296-P30  | 92-96   | 30   | 12  | 15 | 15  |

|                |         |      |    |    |     |
|----------------|---------|------|----|----|-----|
| MKR-9296-P33   | 92-96   | 33   | 10 | 15 | 14  |
| MKR-75110-P24  | 75-110  | 24.2 | 17 | 15 | 6.5 |
| MKR-75110-P28  | 75-110  | 28.2 | 15 | 15 | -   |
| MKR-75110-P30  | 75-110  | 29   | 15 | 15 | 6   |
| MKR-110170-P20 | 110-170 | 18   | 17 | 8  | -   |
| MKR-130152-P25 | 130-152 | 24   | 18 | 8  | 2.5 |
| MKR-182222-P19 | 182-222 | 19   | 18 | 8  | 3   |
| MKR-200PA      | 200-230 | 20   | 15 | 12 | 3   |

### 3. LNA Chip低噪声放大器芯片

| PN<br>产品序列号     | Freq(GHz)<br>工作频率 (GHz) | Specs<br>性能指标                   |
|-----------------|-------------------------|---------------------------------|
| NEW<br>MKR-2LNA | 2-20                    | 1.III/IV Materials              |
|                 |                         | 2.Small signal gain: 19dB       |
|                 |                         | 3.NF:2.5dB                      |
|                 |                         | 4.P <sub>1dB</sub> :16dBm@10GHz |
| MKR-17LNA1      | 17-23                   | 1.III/IV Materials              |
|                 |                         | 2.Small signal gain: 28dB       |
|                 |                         | 3.NF:1.2dB                      |
|                 |                         | 4.P <sub>1dB</sub> :4dBm        |
| MKR-17LNA2      | 17-45                   | 1.III/IV Materials              |
|                 |                         | 2.Small signal gain: 23dB       |
|                 |                         | 3.NF:2.3dB                      |
|                 |                         | 4.P <sub>1dB</sub> :13dBm       |
| MKR-22LNA       | 22-32                   | 1.III/IV Materials              |
|                 |                         | 2.Small signal gain: 28dB       |

|            |       |                           |
|------------|-------|---------------------------|
|            |       | 3.NF:1.4dB                |
|            |       | 4.P <sub>1dB</sub> :5dBm  |
| MKR-24LNA  | 24-43 | 1.III/IV Materials        |
|            |       | 2.Small signal gain: 25dB |
|            |       | 3.NF:1.7dB                |
|            |       | 4.P <sub>1dB</sub> :6dBm  |
| MKR-32LNA  | 32-52 | 1.III/IV Materials        |
|            |       | 2.Small signal gain: 29dB |
|            |       | 3.NF:1.8dB                |
|            |       | 4.P <sub>1dB</sub> :4dBm  |
| MKR-37LNA1 | 37-43 | 1.III/IV Materials        |
|            |       | 2.Small signal gain: 24dB |
|            |       | 3.NF:2.2dB                |
|            |       | 4.P <sub>1dB</sub> :4dBm  |
| MKR-37LNA2 | 37-43 | 1.III/IV Materials        |
|            |       | 2.Small signal gain: 22dB |
|            |       | 3.NF:2.2dB                |
|            |       | 4.P <sub>1dB</sub> :15dBm |
| MKR-37LNA3 | 37-43 | 1.III/IV Materials        |
|            |       | 2.Small signal gain: 25dB |
|            |       | 3.NF:1.8dB                |
|            |       | 4.P <sub>1dB</sub> :4dBm  |
| MKR-40LNA  | 40-53 | 1.III/IV Materials        |
|            |       | 2.Small signal gain: 21dB |
|            |       | 3.NF:1.9dB                |
|            |       | 4.P <sub>1dB</sub> :4dBm  |
| MKR-47LNA1 | 47-53 | 1.III/IV Materials        |
|            |       | 2.Small signal gain: 21dB |
|            |       | 3.NF:2.5dB                |
|            |       | 4.P <sub>1dB</sub> :5dBm  |
| MKR-47LNA2 | 47-75 | 1.III/IV Materials        |
|            |       | 2.Small signal gain: 20dB |
|            |       | 3.NF:1.8dB                |

|           |        |                            |
|-----------|--------|----------------------------|
|           |        | 4.P <sub>1dB</sub> :0dBm   |
| MKR-50LNA | 50-75  | 1.III/IV Materials         |
|           |        | 2.Small signal gain: 21dB  |
|           |        | 3.NF:3dB                   |
|           |        | 4.P <sub>1dB</sub> :7dBm   |
| MKR-60LNA | 60-90  | 1.III/IV Materials         |
|           |        | 2.Small signal gain: 21dB  |
|           |        | 3.NF:3.2dB                 |
|           |        | 4.P <sub>1dB</sub> :10dBm  |
| MKR-65LNA | 65-110 | 1.III/IV Materials         |
|           |        | 2.Small signal gain: 20dB  |
|           |        | 3.NF:2.3dB                 |
|           |        | 4.P <sub>1dB</sub> :0dBm   |
| MKR-66LNA | 66-86  | 1.III/IV Materials         |
|           |        | 2.Small signal gain: 21dB  |
|           |        | 3.NF:3.6dB                 |
|           |        | 4.OP <sub>1dB</sub> :14dBm |
| MKR-70LNA | 70-90  | 1.III/IV Materials         |
|           |        | 2.Small signal gain: 25dB  |
|           |        | 3.NF:2.9dB                 |
|           |        | 4.P <sub>1dB</sub> :9dBm   |
| MKR-75LNA | 75-110 | 1.III/IV Materials         |
|           |        | 2.Small signal gain: 22dB  |
|           |        | 3.NF:3.6dB                 |
|           |        | 4.P <sub>1dB</sub> :0dBm   |
| MKR-90LNA | 90-110 | 1.III/IV Materials         |
|           |        | 2.Small signal gain: 23dB  |
|           |        | 3.NF:3.6dB                 |
|           |        | 4.P <sub>1dB</sub> :0dBm   |
| MKR-92LNA | 92-96  | 1.III/IV Materials         |
|           |        | 2.Small signal gain: 19dB  |
|           |        | 3.NF:4dB                   |
|           |        | 4.P <sub>1dB</sub> :11dBm  |

|                      |         |                           |
|----------------------|---------|---------------------------|
| MKR-100LNA           | 100-160 | 1.III/IV Materials        |
|                      |         | 2.Small signal gain: 20dB |
|                      |         | 3.NF:4.5dB                |
|                      |         | 4.P <sub>1dB</sub> :0dBm  |
| MKR-110LNA           | 110-170 | 1.III/IV Materials        |
|                      |         | 2.Small signal gain: 18dB |
|                      |         | 3.NF:3.5dB                |
|                      |         | 4.P <sub>1dB</sub> :0dBm  |
| MKR-120LNA           | 120-200 | 1.III/IV Materials        |
|                      |         | 2.Small signal gain: 20dB |
|                      |         | 3.NF:3.5dB                |
|                      |         | 4.P <sub>1dB</sub> :0dBm  |
| NEW<br>MKR-140220LNA | 140-220 | 1.III/IV Materials        |
|                      |         | 2.Small signal gain: 20dB |
|                      |         | 3.NF:5.0dB                |
|                      |         | 4.P <sub>1dB</sub> :0dBm  |
| NEW<br>MKR-160LNA    | 160-195 | 1.III/IV Materials        |
|                      |         | 2.Small signal gain: 18dB |
|                      |         | 3.NF:5.0dB                |
|                      |         | 4.P <sub>1dB</sub> :NA    |
| MKR-195LNA           | 195-230 | 1.III/IV Materials        |
|                      |         | 2.Small signal gain: 24dB |
|                      |         | 3.NF:5.8dB                |
|                      |         | 4.P <sub>1dB</sub> :NA    |
| MKR-210LNA           | 210-270 | 1.III/IV Materials        |
|                      |         | 2.Small signal gain: 20dB |
|                      |         | 3.NF:6.5dB                |
|                      |         | 4.P <sub>1dB</sub> :NA    |

#### 4. Switch PIN/FET/SMT Chip开关芯片

| PN<br>产品序列号 | Freq(GHz)<br>工作频率 (GHz) | Specs<br>性能指标      |
|-------------|-------------------------|--------------------|
| MKR-070SWS  | DC-70                   | 1.PIN Switch/SPST  |
|             |                         | 2.S21:0.8dB        |
|             |                         | 3.Isolation:30dB   |
|             |                         | 4.S11:-15dB        |
| MKR-070SWD  | DC-70                   | 1.PIN Switch/SPDT  |
|             |                         | 2.S21:1.0dB        |
|             |                         | 3.Isolation:30dB   |
|             |                         | 4.S11:-18dB        |
| MKR-070SW3  | DC-70                   | 1.PIN Switch/SP3T  |
|             |                         | 2.S21:1.2dB        |
|             |                         | 3.Isolation:30dB   |
|             |                         | 4.S11:-15dB        |
| MKR-070SW4  | DC-70                   | 1.FET Switch/SP4T  |
|             |                         | 2.S21:1.8dB        |
|             |                         | 3.Isolation:25dB   |
|             |                         | 4.S11:-18dB        |
| MKR-040SW4  | 0.05-40                 | 1.FET Switch/SP4T  |
|             |                         | 2.S21:3dB          |
|             |                         | 3.Isolation:30dB   |
|             |                         | 4.S11:-10dB        |
| MKR-050SW4  | 0.05-50                 | 1. PET Switch/SP4T |
|             |                         | 2.S21:0.7dB        |
|             |                         | 3.Isolation:30dB   |
|             |                         | 4.S11:-15dB        |
| MKR-24SW4   | 24-34                   | 1.FET Switch/SP4T  |
|             |                         | 2.S21:1.6dB        |
|             |                         | 3.Isolation:28dB   |
|             |                         | 4.S11:-15dB        |
| MKR-30SW4   | 30-40                   | 1.FET Switch/SP4T  |

NEW

NEW

NEW

NEW

|            |        |                    |
|------------|--------|--------------------|
|            |        | 2.S21:1.6dB        |
|            |        | 3.Isolation:27.5dB |
|            |        | 4.S11:-28dB        |
| MKR-32SWD  | 32-38  | 1.FET Switch/SPDT  |
|            |        | 2.S21:1dB          |
|            |        | 3.Isolation:20dB   |
|            |        | 4.S11:-20dB        |
| MKR-32SWD2 | 32-38  | 1.FET Switch/SPDT  |
|            |        | 2.S21:1.3dB        |
|            |        | 3.Isolation:16dB   |
|            |        | 4.S11:-15dB        |
| MKR-50SWD  | 50-145 | 1. FET Switch/SPDT |
|            |        | 2.S21:3dB          |
|            |        | 3.Isolation:25dB   |
|            |        | 4.S11:-12dB        |
| MKR-50SWD1 | 50-110 | 1. FET Switch/SPDT |
|            |        | 2.S21:2.5dB        |
|            |        | 3.Isolation:35dB   |
|            |        | 4.S11:-15dB        |
| MKR-70SWS  | 70-110 | 1. FET Switch/SPST |
|            |        | 2.S21:1.6dB        |
|            |        | 3.Isolation:26dB   |
|            |        | 4.S11:-15dB        |
| MKR-70SWD  | 70-100 | 1.FET Switch/SP4T  |
|            |        | 2.S21:1.0dB        |
|            |        | 3.Isolation:22dB   |
|            |        | 4.S11:-15dB        |
| MKR-70SW4  | 70-95  | 1.FET Switch/SP4T  |
|            |        | 2.S21:3.5dB        |
|            |        | 3.Isolation:29dB   |
|            |        | 4.S11:-15dB        |
| MKR-80SWD  | 80-100 | 1. FET Switch/SPDT |
|            |        | 2.S21:1.9dB        |

|              |         |                   |
|--------------|---------|-------------------|
|              |         | 3.Isolation:13dB  |
|              |         | 4.S11:-18dB       |
| MKR-200SWS   | 200-260 | 1.FET Switch/SPST |
|              |         | 2.S21:3dB         |
|              |         | 3.Isolation:30dB  |
|              |         | 4.S11:-15dB       |
| MKR-20SW-SMT | 20-32   | 1.FET Switch/SP4T |
|              |         | 2.S21:2.2dB       |
|              |         | 3.Isolation:30dB  |
|              |         | 4.S11:-10dB       |
| MKR-30SW-SMT | 30-40   | 1.FET Switch/SP4T |
|              |         | 2.S21:2.8dB       |
|              |         | 3.Isolation:30dB  |
|              |         | 4.S11:-10dB       |
| MKR-05SW-SMT | 0.05-30 | 1.FET Switch/SP4T |
|              |         | 2.S21:2.4dB       |
|              |         | 3.Isolation:25dB  |
|              |         | 4.S11:-10dB       |

## 5. Zero Bias Detector Chip 零偏置检波器芯片

| PN<br>产品序列号    | Freq(GHz)<br>工作频率 (GHz) | Specs<br>性能指标                 |
|----------------|-------------------------|-------------------------------|
| MKR-0110ZBD    | DC-110                  | 1.Sensitivity:600V/W          |
|                |                         | 2.Dynamic Range:-50 to -20dBm |
|                |                         | 3.S11:-15dB                   |
| NEW MKR-004ZBD | DC-4                    | 1.Sensitivity:2000V/W         |
|                |                         | 2.Dynamic Range:-50 to -20dBm |
|                |                         | 3.S11:NA                      |

NEW

|            |         |                               |
|------------|---------|-------------------------------|
| MKR-4ZBD   | 4-16    | 1.Sensitivity:2500V/W         |
|            |         | 2.Dynamic Range:-50 to -20dBm |
|            |         | 3.S11:NA                      |
| MKR-15ZBD  | 15-55   | 1.Sensitivity:3000V/W         |
|            |         | 2.Dynamic Range:-50 to -20dBm |
|            |         | 3.S11:NA                      |
| MKR-50ZBD  | 50-75   | 1.Sensitivity:4500V/W         |
|            |         | 2.Dynamic Range:-50 to -20dBm |
|            |         | 3.S11:-10dB                   |
| MKR-70ZBD  | 70-130  | 1.Sensitivity:3000V/W         |
|            |         | 2.Dynamic Range:-50 to -20dBm |
|            |         | 3.S11:-10dB                   |
| MKR-90ZBD  | 90-170  | 1.Sensitivity:2500V/W         |
|            |         | 2.Dynamic Range:-50 to -20dBm |
|            |         | 3.S11:-10dB                   |
| MKR-210ZBD | 210-320 | 1.Sensitivity:2000V/W         |
|            |         | 2.Dynamic Range:-50 to -20dBm |
|            |         | 3.S11:-5dB                    |

NEW

## 6. AMC Chip放大倍频链芯片

| PN<br>产品序列号 | Freq(GHz)<br>工作频率 (GHz) | Specs<br>性能指标                                     |
|-------------|-------------------------|---------------------------------------------------|
| MKR-20AMC   | 20-40(x2)               | 1.Pin:15dBm<br>2.Pout:4dBm<br>3.Harmonic:20dBc    |
| MKR-30AMC   | 30-53(x3)               | 1.Pin:15dBm<br>2.Pout:-2dBm<br>3.Harmonic:20dBc   |
| MKR-50AMC   | 50-75(x2)               | 1.Pin:15dBm<br>2.Pout:3dBm<br>3.Harmonic:20dBc    |
| MKR-60AMC   | 60-90(x2)               | 1.Pin:16dBm<br>2.Pout:4dBm<br>3.Harmonic:30dBc    |
| MKR-65AMC   | 65-150(x2)              | 1.Pin:15dBm<br>2.Pout:4dBm<br>3.Harmonic:NA       |
| MKR-67AMC   | 67-110(x3)              | 1.Pin:16dBm<br>2.Pout:0dBm<br>3.Harmonic:25dBc    |
| MKR-70AMC2  | 70-90(x8)               | 1.Pin:3-7dBm<br>2.Pout:2dBm<br>3.Harmonic:20dBc   |
| MKR-70AMC   | 70-90(x8)               | 1.Pin:3-7dBm<br>2.Pout:11dBm<br>3.Harmonic:20dBc  |
| MKR-70AMC29 | 70-90(x9)               | 1.Pin:14-17dBm<br>2.Pout:2dBm<br>3.Harmonic:25dBc |
| MKR-75AMC   | 75-110(x6)              | 1.Pin:16-19dBm<br>2.Pout:7dBm<br>3.Harmonic:20dBc |

NEW

|            |             |                          |
|------------|-------------|--------------------------|
| MKR-75AMC3 | 75-110(x3)  | 1.Pin:16dBm              |
|            |             | 2.Pout:0dBm              |
|            |             | 3. Conversion loss: 16dB |
| MKR-80AMC3 | 80-95(x8)   | 1.Pin:3-7dBm             |
|            |             | 2.Pout:3dBm              |
|            |             | 3.Harmonic:15dBc         |
| MKR-80AMC  | 80-95(x8)   | 1.Pin:3-7dBm             |
|            |             | 2.Pout:12dBm             |
|            |             | 3.Harmonic:15dBc         |
| MKR-80AMC2 | 80-100(x9)  | 1.Pin:14-17dBm           |
|            |             | 2.Pout:2dBm              |
|            |             | 3.Harmonic:30dBc         |
| MKR-85AMC  | 85-105(x9)  | 1.Pin:14-17dBm           |
|            |             | 2.Pout:0dBm              |
|            |             | 3.Harmonic:30dBc         |
| MKR-90AMC  | 90-170(x2)  | 1.Pin:15dBm              |
|            |             | 2.Pout:4dBm              |
|            |             | 3.Harmonic:NA            |
| MKR-110AMC | 110-170(x3) | 1.Pin:15dBm              |
|            |             | 2. Conversion loss:17dB  |
|            |             | 3.Harmonic:NA            |
| MKR-170AMC | 170-220(x2) | 1.Pin:15dBm              |
|            |             | 2. Pout:1dBm             |
|            |             | 3.Harmonic:NA            |
| MKR-195AMC | 195-225(x2) | 1.Pin:12dBm              |
|            |             | 2.Pout:12dBm             |
|            |             | 3.Harmonic:NA            |

NEW

## 7. Mixer Chip混频器芯片

| PN    | Freq(GHz)  | Specs |
|-------|------------|-------|
| 产品序列号 | 工作频率 (GHz) | 性能指标  |

NEW

|              |         |                                       |
|--------------|---------|---------------------------------------|
| MKR-IQ75MIX  | 75~85   | 1. Fundamental IQ Mixer               |
|              |         | 2. IF:DC-5GHz                         |
|              |         | 3. Conversion Loss:11dB               |
|              |         | 4. LO Power:8dBm                      |
| MKR-IQ200MIX | 200~220 | 1. 2 <sup>nd</sup> -Harmonic-IQ Mixer |
|              |         | 2. IF:DC-6GHz                         |
|              |         | 3. Conversion Loss:23dB               |
|              |         | 4. LO Power:7dBm                      |
| MKR-20MIX    | 20-50   | 1. Fundamental Mixer                  |
|              |         | 2. IF:DC-16GHz                        |
|              |         | 3. Conversion Loss:9dB                |
|              |         | 4. LO Power:8dBm                      |
| MKR-50MIX    | 50-75   | 1. Fundamental Mixer                  |
|              |         | 2. IF:DC-10GHz                        |
|              |         | 3. Conversion Loss:8dB                |
|              |         | 4. LO Power:13dBm                     |
| MKR-60MIX    | 60-150  | 1. 3 <sup>rd</sup> -Harmonic Mixer    |
|              |         | 2. IF:DC-6GHz                         |
|              |         | 3. Conversion Loss:20dB               |
|              |         | 4. LO Power:3dBm                      |
| MKR-70MIX    | 70-90   | 1. Fundamental Mixer                  |
|              |         | 2. IF:DC-12GHz                        |
|              |         | 3. Conversion Loss:8.5dB              |
|              |         | 4. LO Power:0dBm                      |
| MKR-70MIX8   | 70-90   | 1. Fundamental Mixer                  |
|              |         | 2. IF:DC-12GHz                        |
|              |         | 3. Conversion Loss:8.5dB              |
|              |         | 4. LO Power:8dBm                      |
| MKR-70MIX1   | 70-110  | 1. Fundamental Mixer                  |
|              |         | 2. IF:DC-35GHz                        |
|              |         | 3. Conversion Loss:14dB               |
|              |         | 4. LO Power:8dBm                      |

NEW

|             |         |                                    |
|-------------|---------|------------------------------------|
| MKR-70MIX2  | 70-110  | 1. Fundamental Mixer               |
|             |         | 2. IF:DC-35GHz                     |
|             |         | 3. Conversion Loss:12dB            |
|             |         | 4. LO Power:13dBm                  |
| MKR-75MIX   | 75-110  | 1. Fundamental Mixer               |
|             |         | 2. IF:DC-12GHz                     |
|             |         | 3. Conversion Loss:9dB             |
|             |         | 4. LO Power:0dBm                   |
| MKR-75MIX8  | 75-110  | 1. Fundamental Mixer               |
|             |         | 2. IF:DC-12GHz                     |
|             |         | 3. Conversion Loss:9dB             |
|             |         | 4. LO Power:8dBm                   |
| MKR-110MIX  | 110-170 | 1. 2 <sup>nd</sup> -Harmonic Mixer |
|             |         | 2. IF:DC-10GHz                     |
|             |         | 3. Conversion Loss:14dB            |
|             |         | 4. LO Power:13dBm                  |
| MKR-120MIX  | 120-160 | 1. 2 <sup>nd</sup> -Harmonic Mixer |
|             |         | 2. IF:DC-12GHz                     |
|             |         | 3. Conversion Loss:13dB            |
|             |         | 4. LO Power:13dBm                  |
| MKR-175MIX  | 175-200 | 1. 2 <sup>nd</sup> -Harmonic Mixer |
|             |         | 2. IF:DC-12GHz                     |
|             |         | 3. Conversion Loss:14dB            |
|             |         | 4. LO Power:8dBm                   |
| MKR-200MIX  | 200-220 | 1. Fundamental Mixer               |
|             |         | 2. IF:DC-15GHz                     |
|             |         | 3. Conversion Loss:12dB            |
|             |         | 4. LO Power:0dBm                   |
| MKR-200MIX2 | 200-220 | 1. 2 <sup>nd</sup> -Harmonic Mixer |
|             |         | 2. IF: DC-20GHz                    |
|             |         | 3. Conversion Loss:15dB            |
|             |         | 4. LO Power:8dBm                   |
| MKR-200MIX3 | 200-230 | 1. 2 <sup>nd</sup> -Harmonic Mixer |

|             |         |                                    |
|-------------|---------|------------------------------------|
|             |         | 2.IF: DC-34GHz                     |
|             |         | 3.Conversion Loss:15dB             |
|             |         | 4.LO Power:0dBm                    |
| MKR-200MIX4 | 200-230 | 1. 2 <sup>nd</sup> -Harmonic Mixer |
|             |         | 2.IF: DC-34GHz                     |
|             |         | 3.Conversion Loss:13dB             |
|             |         | 4.LO Power:8dBm                    |
| MKR-210MIX  | 210-230 | 1. Fundamental Mixer               |
|             |         | 2.IF:DC-20GHz                      |
|             |         | 3.Conversion Loss:13dB             |
|             |         | 4.LO Power:6dBm                    |

## 8. Attenuator chip 衰减器芯片

| PN<br>产品序列号 | Freq(GHz)<br>工作频率 (GHz) | Specs<br>性能指标                              |
|-------------|-------------------------|--------------------------------------------|
| MKR-060ATT  | DC~60                   | 1. Voltage Variable Attenuator             |
|             |                         | 2. Attenuation range:0dB~15dB              |
|             |                         | 3. Insertion loss:3dB                      |
|             |                         | 4. VSWR of on / attenuation state: 1.5/2.5 |
| MKR-50ATT   | 50-75                   | 1.Voltage Variable Attenuator              |
|             |                         | 2. Attenuation range:0dB~27dB              |
|             |                         | 3. Insertion loss:1.4dB                    |
|             |                         | 4. VSWR of on / attenuation state: 1.5/1.5 |
| MKR-70ATT   | 70-110                  | 1. Voltage Variable Attenuator             |
|             |                         | 2. Attenuation range:0dB~20dB              |
|             |                         | 3. Insertion loss:1.4dB                    |
|             |                         | 4. VSWR of on / attenuation state: 1.3/1.5 |
| MKR-110ATT  | 110-140                 | 1. Voltage Variable Attenuator             |
|             |                         | 2. Attenuation range:0dB~20dB              |
|             |                         | 3. Insertion loss:3dB                      |
|             |                         | 4. VSWR of on / attenuation state: 1.8/1.8 |
| MKR-110ATT1 | 110-170                 | 1. Voltage Variable Attenuator             |

|             |         |                                            |
|-------------|---------|--------------------------------------------|
|             |         | 2. Attenuation range:0dB~22dB              |
|             |         | 3. Insertion loss:2dB                      |
|             |         | 4. VSWR of on / attenuation state: 2.0/1.5 |
| MKR-180ATT  | 180-240 | 1. Voltage Variable Attenuator             |
|             |         | 2. Attenuation range:0dB~18dB              |
|             |         | 3. Insertion loss:4.5dB                    |
|             |         | 4. VSWR of on / attenuation state: 1.5/2.2 |
| MKR-70ATT9  | 70-110  | 1. Fixed Attenuator                        |
|             |         | 2. Attenuation:2dB~9dB                     |
|             |         | 3. VSWR_IN/OUT: 1.2/1.2                    |
| MKR-70ATT18 | 70-110  | 1. Fixed Attenuator                        |
|             |         | 2. Attenuation:18dB                        |
|             |         | 3. VSWR_IN/OUT: 1.2/1.2                    |
| MKR-70ATT35 | 70-110  | 1. Fixed Attenuator                        |
|             |         | 2. Attenuation:35dB                        |
|             |         | 3. VSWR_IN/OUT: 1.2/1.2                    |

## 9. Multifunctional Chip多功能芯片

| PN<br>产品序列号   | Freq(GHz)<br>工作频率 (GHz) | Specs<br>性能指标                             |
|---------------|-------------------------|-------------------------------------------|
| MKR-9296BF-4R | 92-96                   | 1. 4-Channel Beamforming Receiver Chip    |
|               |                         | 2. NF: 7dB                                |
|               |                         | 3. Small signal gain: 22dB                |
|               |                         | 4. Phase shift step: 22.5 °@94GHz         |
|               |                         | 5. Phase shift resolution: 5 °            |
| MKR-9296BF-4T | 92-96                   | 1. 4-Channel Beamforming Transmitter Chip |
|               |                         | 2. Psat: 14dBm                            |
|               |                         | 3. Small signal gain: 25dB                |
|               |                         | 4. Phase shift step: 22.5 °@94GHz         |
|               |                         | 5. Phase shift resolution: 5 °            |
| MKR-9498BF-4R | 94-98                   | 1. 4-Channel Beamforming Receiver Chip    |
|               |                         | 2. NF: 7dB                                |

|               |        |                                           |
|---------------|--------|-------------------------------------------|
|               |        | 3. Small signal gain: 22dB                |
|               |        | 4. Phase shift step: 11.25 °@96GHz        |
|               |        | 5. Phase shift resolution: 3 °            |
| MKR-9498BF-4T | 94-98  | 1. 4-Channel Beamforming Transmitter Chip |
|               |        | 2. Psat: 14dBm                            |
|               |        | 3. Small signal gain: 25dB                |
|               |        | 4. Phase shift step: 11.25 °@94GHz        |
|               |        | 5. Phase shift resolution: 3 °            |
| MKR-90100UP3  | 90-100 | 1. Up Converter Multifunction Chip        |
|               |        | 2. LO: 28GHz                              |
|               |        | 3. IF: 6GHz-16GHz                         |
|               |        | 4. Conversion gain:-1dB                   |
| MKR-90100DW3  | 90-100 | 1. Down Converter Multifunction Chip      |
|               |        | 2. LO: 28GHz                              |
|               |        | 3. IF: 6GHz-16GHz                         |
|               |        | 4. Conversion gain:3dB                    |
| MKR-9498DW4   | 94-98  | 1. Down Converter Multifunction Chip      |
|               |        | 2. LO: 20GHz                              |
|               |        | 3. IF: 14GHz-18GHz                        |
|               |        | 4. Conversion gain:-2dB                   |
| MKR-92100UP4  | 94-98  | 1. Up Converter Multifunction Chip        |
|               |        | 2. LO: 20GHz                              |
|               |        | 3. IF: 12GHz-20GHz                        |
|               |        | 4. Conversion gain:-1dB                   |