

## Applications

Automotive, recreational, military, marine, aviation, surveying

## Typical Electrical Properties

| Characteristics        | Specification      | Unit     | Conditions                       |
|------------------------|--------------------|----------|----------------------------------|
| Center Frequency $f_0$ | 1580.0 $\pm$ 3.0 * | MHz      | With 50x50mm Square ground Plane |
| Bandwidth              | 6.0 min            | MHz      | Return Loss $\leq$ -10dB         |
| Gain at Zenith         | +1 tpy             | dBi      | @1580.0 MHz*                     |
| Gain at 10° elevation  | -5.5 tpy           | dBi      | @1580.0 MHz*                     |
| Impedance              | 50                 | $\Omega$ |                                  |
| Axial ratio            | 3 max              | dB       | @1580.0MHz                       |

※ MCV Standard spec

\*: MA1802XXP: XX=80 MA180280P  $f_0 = 1580$  MHz

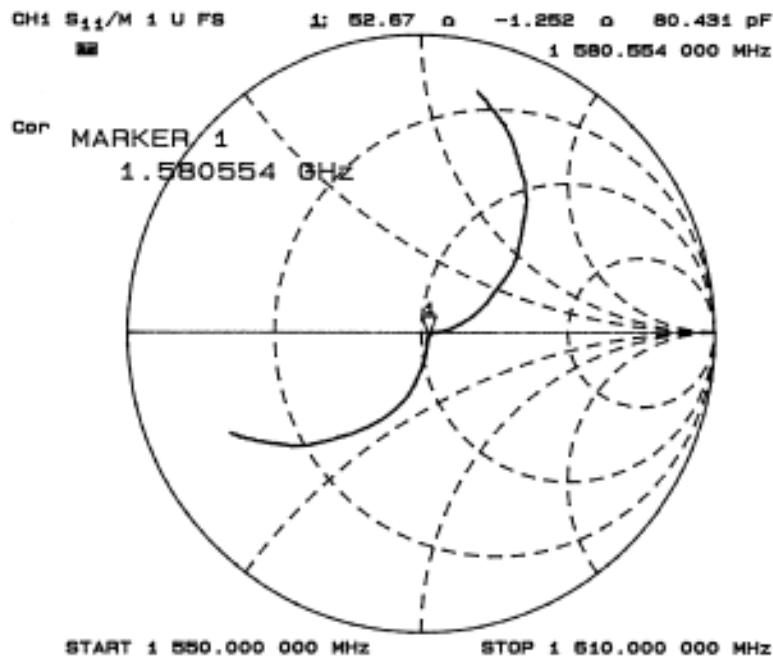
| MCV Part No. | XX | $f_0$ (MHz) | MCV Part No. | XX | $f_0$ (MHz) |
|--------------|----|-------------|--------------|----|-------------|
| MA180276P    | 76 | 1576        | MA180286P    | 86 | 1586        |
| MA180277P    | 77 | 1577        | MA180287P    | 87 | 1587        |
| MA180278P    | 78 | 1578        | MA180288P    | 88 | 1588        |
| MA180279P    | 79 | 1579        | MA180289P    | 89 | 1589        |
| MA180280P    | 80 | 1580        | MA180290P    | 90 | 1590        |
| MA180281P    | 81 | 1581        | MA180291P    | 91 | 1591        |
| MA180282P    | 82 | 1582        | MA180292P    | 92 | 1592        |
| MA180283P    | 83 | 1583        | MA180293P    | 93 | 1593        |
| MA180284P    | 84 | 1584        | MA180294P    | 94 | 1594        |
| MA180285P    | 85 | 1585        | MA180295P    | 95 | 1595        |

## Material Properties

| Properties   | Specification     | Conditions     |
|--|-------------------|----------------|
| Dielectric Constant, <b>K</b>                            | 37 $\pm$ 2.5      |                |
| Quality Factor, <b>Q</b> (=1/tan )                       | $\geq$ 5000@9GHz  |                |
| Temperature Coefficient of Resonant Frequency , $\tau f$ | 0 $\pm$ 20 ppm/°C | -40°C to +85°C |



## Input Impedance on a Smith Chart



## Center Frequency vs. Ground plane

