

SPECIFICATION SHEET

# SKYFR-000829: 1850—1995 MHz Single Junction Robust Lead Circulator

## Applications

- Wireless infrastructure
- Power amplifiers



## Features

- Small surface mount package
- Operating frequency range: 1850 to 1990 MHz
- BeO free
- RoHS compliant
- Tape & Reel

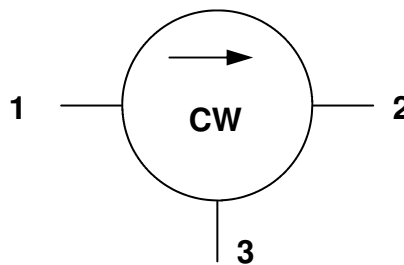
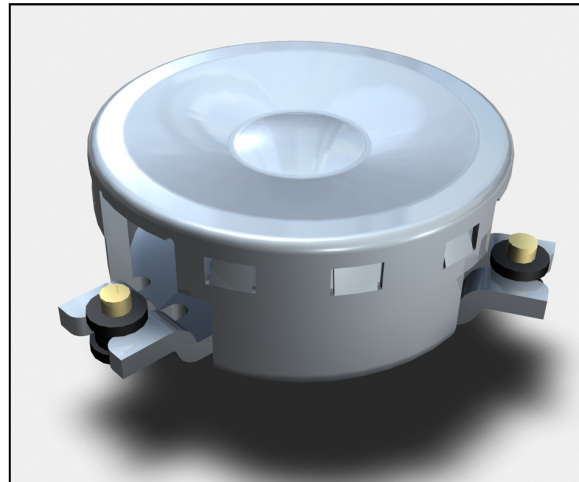


Figure 1. Block Diagram

Table 1. Absolute Maximum Ratings

| Parameter                   | Symbol     | Test Condition | Min | Max  | Units |
|-----------------------------|------------|----------------|-----|------|-------|
| Average power               | $P_{AVG}$  |                |     | 80   | W     |
| Peak power                  | $P_{PK}$   |                |     | 500  | W     |
| Operating temperature range | $T_{OP}$   |                | -40 | +85  | °C    |
| Storage temperature range   | $T_{STOR}$ |                | -55 | +125 | °C    |

**Note:** Exceeding any of the limits listed here may result in permanent damage to the device or may reduce device reliability.

**Table 2. Electrical Specifications (Note 1)**

| Parameter                           | Symbol | Test Condition                | Min  | Typical | Max  | Units |
|-------------------------------------|--------|-------------------------------|------|---------|------|-------|
| Frequency range                     | f      |                               | 1850 |         | 1995 | MHz   |
| Impedance                           |        |                               |      | 50      |      | Ω     |
| Insertion loss                      | IL     |                               |      |         | 0.30 | dB    |
| Isolation                           | ISO    |                               | 20   |         |      | dB    |
| Return loss                         | RL     |                               | 20   |         |      | dB    |
| Intermodulation distortion (Note 2) | IMD    | 2 x 5W CW tones, 1MHz spacing | 60   |         |      | dBc   |

**Note 1:** Performance is guaranteed under the conditions listed in this table and over the operating temperature range.

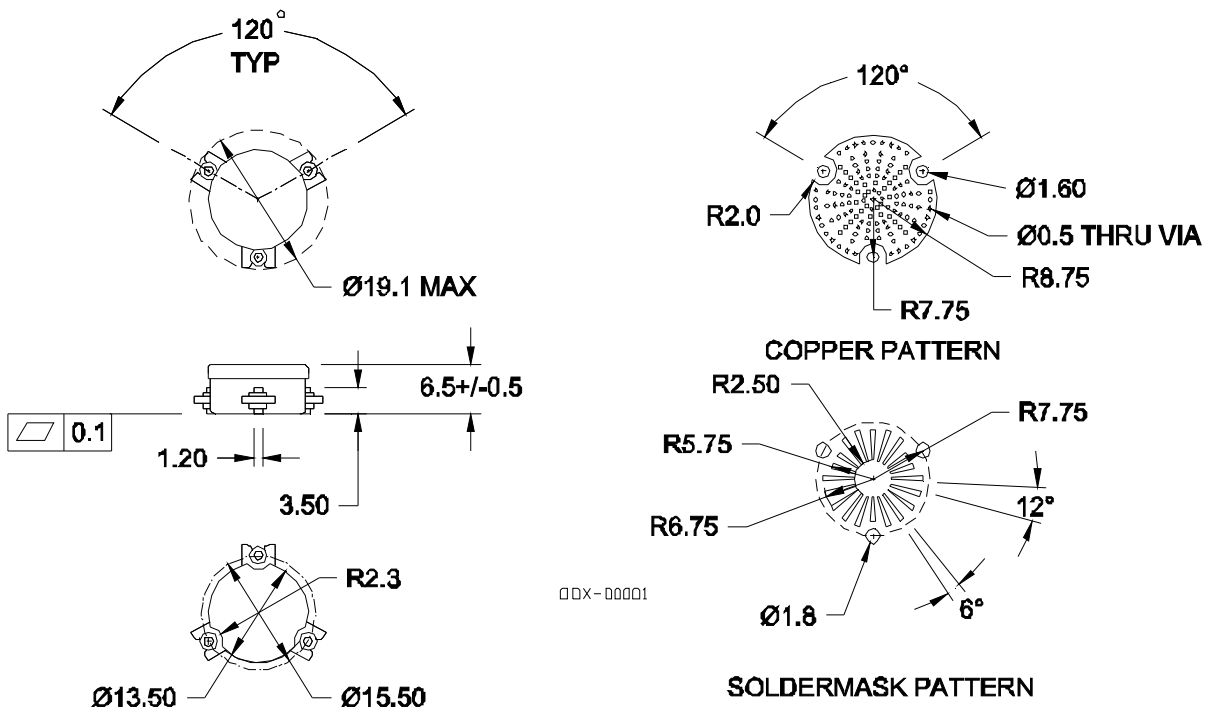
**Note 2:** See Skyworks Application Note, *Intermodulation Distortion Measurements of Ferrites*, document number 201537 for further details.

**Table 3. Plating Specification**

| Section | Base Material | Plating |
|---------|---------------|---------|
| Pins    | Bronze        | Gold    |
| Housing | Steel         | Silver  |

**Table 4. Ordering Information**

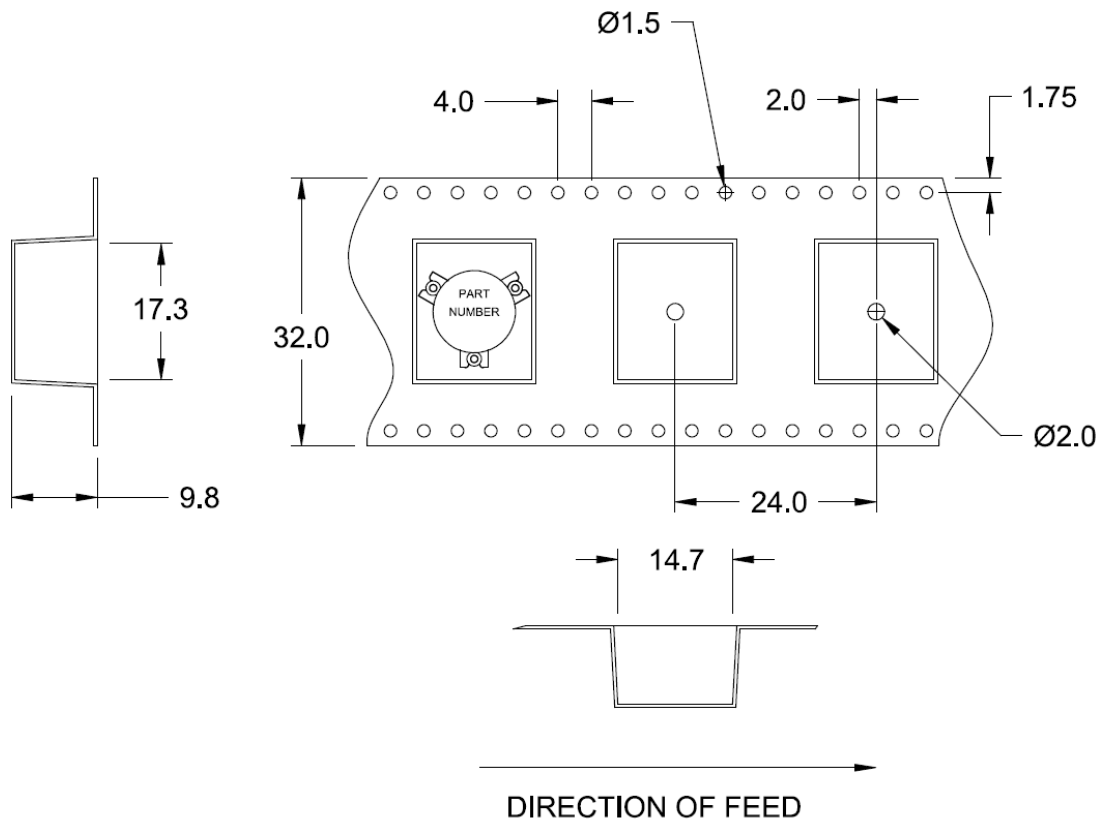
| Manufacturing Part Number | Evaluation Board Part Number |
|---------------------------|------------------------------|
| SKYFR-000829              | MAFX-000015-RL00FR           |



All dimensions in millimeters.  
 Tolerance: ±0.2mm unless otherwise specified.  
 Coplanarity specification: 0.1mm maximum.  
 Model number, lot code and part designation printed on top side of device.

Figure 2. Package Dimensions and Recommended PCB Layout

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All dimensions in millimeters.  
 Tolerance:  $\pm 0.2\text{mm}$  unless otherwise specified.  
 Carrier tape: Black conductive polycarbonate or polystyrene.  
 Reel size: 13"  
 Quantity per reel: 200

**Figure 3. Tape and Reel Dimensions**

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