

REVISIONS				
Revision	ECN No.	Date	Name	Signature
2	Released	12/05/05	SMT-II-120505	

**SPECIFICATION FOR WIRELESS APPLICATION:**

SMT Series Surface Mount Circulator

P/N # JCM0824T0849S10R-IMD (0.824~0.849GHz)

P/N # JCM0869T0894S10R-IMD (0.869~0.894GHz)

P/N # JCM0898T0915S10R-IMD (0.898~0.915GHz)

P/N # JCM0920T0960S10R-IMD (0.920~0.960GHz)

**P/N # JCM0925T0960S10R-IMD (0.925~0.960GHz)**



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	Date	Name	Signature	Title:
DRAFT	08/01/03	Q.WANG		<b>LOW INTERMODULATION SMT-II SERIES SURACE MOUNT CIRCULATOR</b>
APPD EE	23/12/05	J. ZHU		
APPD ED	23/12/05	J. ZHU		
PROJ ENGR	23/12/05	J. ZHU		
<b>Classification</b>	<b>Size</b>	<b>Rev</b>	<b>DWG. No.</b>	<b>SH-SC20A</b>
A / Paten Pending	II-A	2	CAGE Code: SMT-II-A	Sheet 1 of 5

# 1 SCOPE

This General Specification (GS) defines the technical specifications, mechanical specification, assembly recommendation and packaging for the SMT-II LOW INTERMODULATION SURFACE MOUNT CIRCULATOR ---

P/N # JCM0807T0902S10R (0.807~0.902GHz)

P/N # JCM0824T0849S10R (0.824~0.849GHz)

P/N # JCM0869T0894S10R (0.869~0.894GHz)

P/N # JCM0898T0915S10R (0.898~0.915GHz)

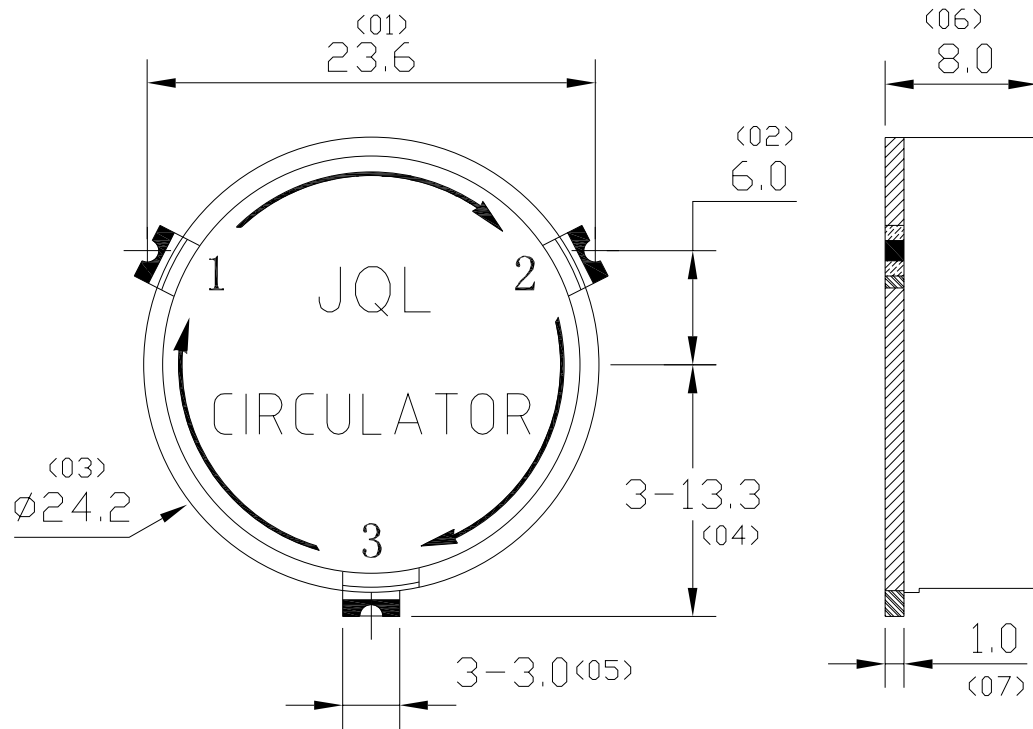
# 2 TECHNICAL SEPCIFICATIONS

SPECIFICATION / NARROW BANDS	MIN	TYP	MAX	UNITS
JCM0824T0849S10R-IMD	824		849	MHz
JCM0869T0894S10R -IMD	869		894	MHz
JCM0898T0915S10R -IMD	898		915	MHz
JCM0920T0960S10R -IMD	920		960	MHz
JCM0925T0960S10R -IMD	925		960	MHz
Nominal Impedence		50		Ohms
Isolation	22	23		dB
Insertion Loss		0.30	0.35	dB
Forward Power	100			Watts
Return Loss (all ports)	20	23		dB
3 <sup>rd</sup> Intermodulation *		-85	-80	dBc
Direction of Circulation		Clockwise		
Temperature Range	-30		+75	Celsius

Notes:

\* Two tone intermod levels is measured with 2x 30W tones,  $\Delta f$  is 15MHz.

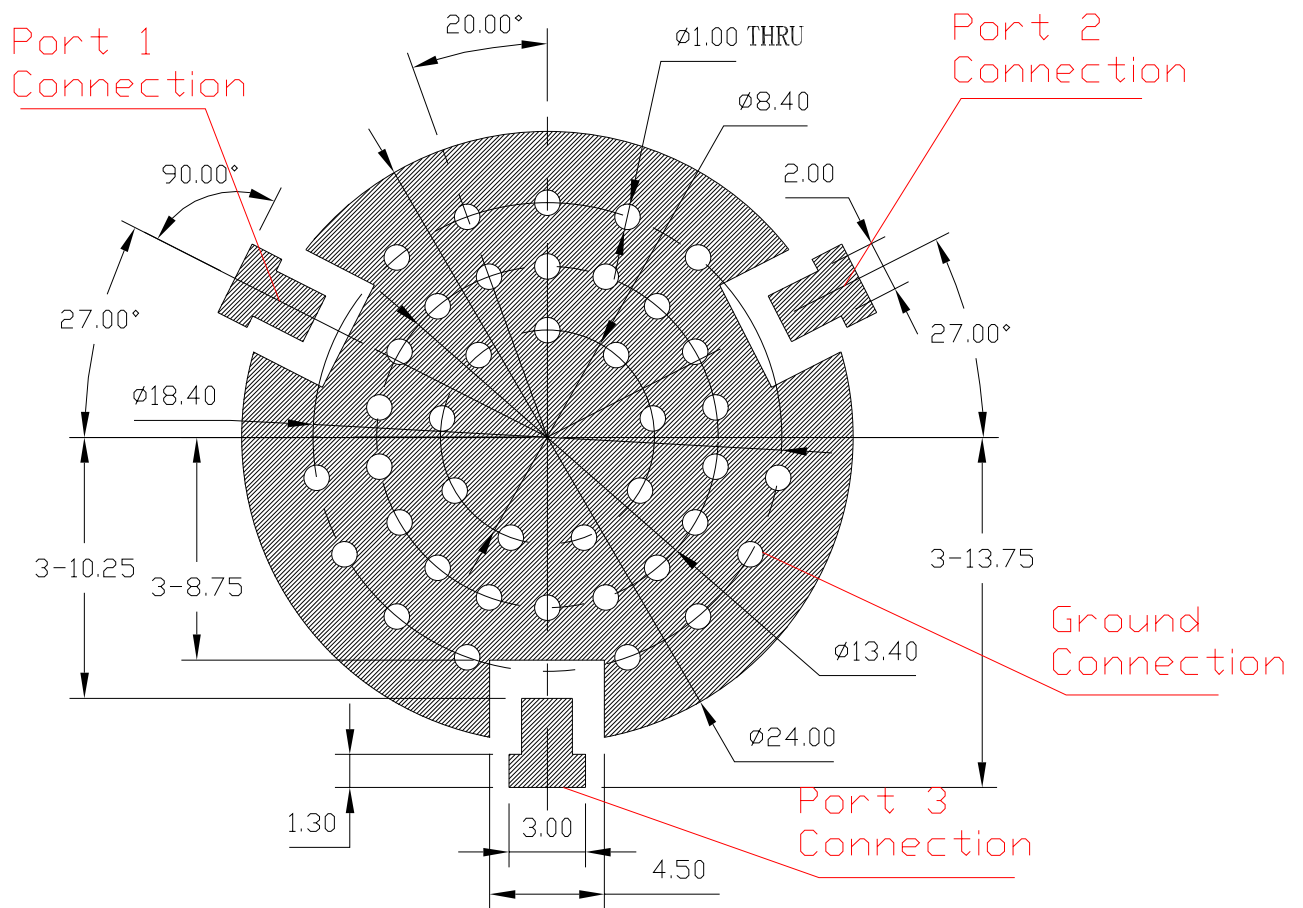
### 3 OUTLINE DRAWINGS



Units: mm

	mm	inch
<b>Diameter</b>	24.2	0.95
<b>Height</b>	8.0	0.31
<b>Thickness of PCB (Bottom)</b>	1.0	0.04
<b>Tolerance</b>	$\pm 0.1$	$\pm 0.01$

## 4 PCB LAYOUT RECOMMENDATION



### Notes:

- \* Ground Connection: At least 10% of recommended ground connection area must be soldered
- \*\* Thru hole is recommended, however the size of thru hole is not required.
- \*\*\*SMT-II Series Circulator was primary design for automotive reflowing assembly process
- \*\*\*\*\*Custom PCB Layout is optional at the additional cost

## 5 REFLOW PROFILE

<b>Average Ramp-Up Rate</b>	<b>2°C/Sec Max</b>
<b>Preheat 25°C~150°C</b>	<b>200 Secs</b>
<b>Peak Temperature</b>	<b>245°C ± 5°C</b>
<b>Time within 5°C of actual Peak Temperature</b>	<b>8 Secs Max</b>
<b>Average Ramp-Down Rate</b>	<b>4°C/Sec Max</b>
<b>Time 25°C to Peak Temperature</b>	<b>300 Secs</b>

**Suggested Reflow Profile for JQL SMT Circulators**

