

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

SPECIFICATION FOR:
SMT Series Surface Mount Circulator

P/N # JCM2000T2100S6R (2.0~2.1GHz)	P/N # JCM2100T2200S6R (2.1~2.2GHz)
P/N # JCM2200T2300S6R (2.2~2.3GHz)	P/N # JCM2300T2400S6R (2.3~2.4GHz)
P/N # JCM2300T2500S6R (2.3~2.5GHz)	P/N # JCM2400T2500S6R (2.4~2.5GHz)
P/N # JCM2496T2572S6R (2.496~2.572GHz)	P/N # JCM2500T2600S6R (2.500~2.600GHz)
P/N # JCM2570T2620S6R (2.570~2.620GHz)	P/N # JCM2614T2690S6R (2.614~2.690GHz)
P/N # JCM2496T2690S6R (2.496~2.690GHz)	P/N # JCM2500T2700S6R (2.500~2.700GHz)



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	Date	Name	Signature	Title:
DRAFT	08/01/03	Q.WANG		LOW INTERMODULATION SMT-II SERIES SURFACE MOUNT CIRCULATOR
APPD EE	23/12/05	J. ZHU		
APPD ED	23/12/05	J. ZHU		
PROJ ENGR	23/12/05	X.PAN		
Classification	Size	Rev	DWG. No.	SH-SC20A
A / Paten Pending	II-B	2	CAGE Code: SMT-II-2.4 -C	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 # JCM2300T2400S6R (2.3~2.4GHz),

P/N # JCM2400T2500S6R (2.4~2.5GHz),

2 TECHNICAL SEPCIFICATIONS

NARROWBAND				
SPECIFICATION	MIN	TYP	MAX	UNITS
JCM2000T2100S6R -Frequency Range	2000		2100	MHz
JCM2100T2200S6R -Frequency Range	2100		2200	MHz
JCM2200T2300S6R -Frequency Range	2200		2300	MHz
JCM2300T2400S6R -Frequency Range	2300		2400	MHz
JCM2400T2500S6R -Frequency Range	2400		2500	MHz
JCM2496T2572S6R -Frequency Range	2496		2572	MHz
JCM2500T2600S6R -Frequency Range	2500		2600	MHz
JCM2570T2620S6R -Frequency Range	2570		2620	MHz
JCM2614T2690S6R -Frequency Range	2614		2690	MHz
Nominal Impedence		50		Ohms
Isolation	20	23		dB
Insertion Loss		0.30	0.35	dB
Insertion Loss Flatness			±0.075	dB
RMS Forward Power	50			Watts
Return Loss (all ports)	20	23		dB
3 rd Intermodulation **		-85	-75	dBc
Direction of Circulation		Clockwise		
Temperature Range	-40		+85	Celsius

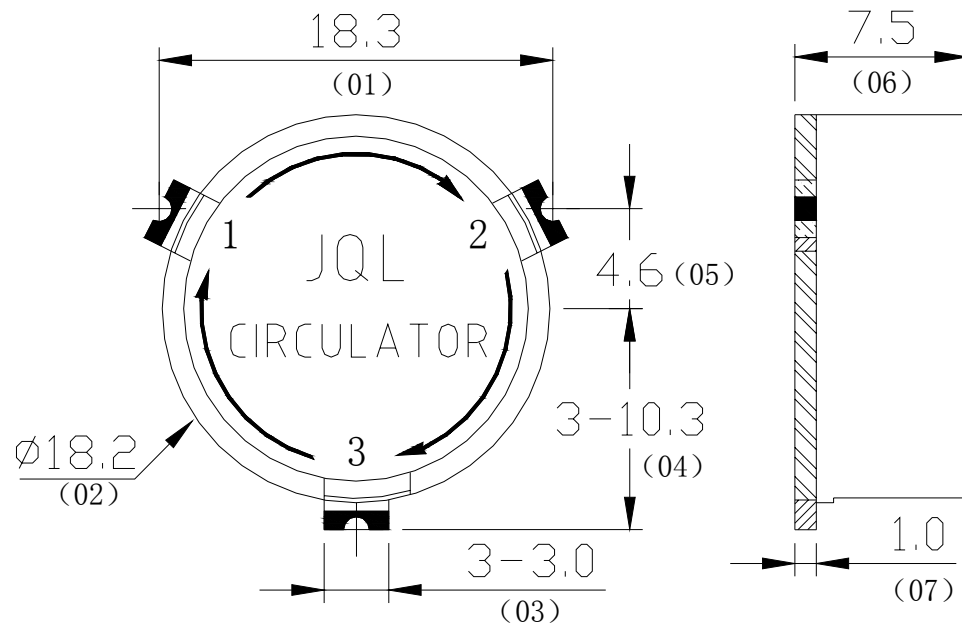
WIDEBAND				
SPECIFICATION	MIN	TYP	MAX	UNITS
JCM2300T2500S6R -Frequency Range	2300		2500	MHz
JCM2496T2690S6R -Frequency Range	2496		2690	MHz
JCM2500T2700S6R -Frequency Range	2500		2700	MHz
Nominal Impedence		50		Ohms
Isolation	20			dB
Insertion Loss		0.35	0.40	dB
Insertion Loss Flatness			±0.075	dB
RMS Forward Power	50			Watts
Return Loss (all ports)	20			dB
3 rd Intermodulation **		-85	-75	dBc
Direction of Circulation		Clockwise		
Temperature Range	-40		+85	Celsius

Notes:

* Peak Power spike is no more than 5 micro seconds.

** Two tone intermod levels is measured with 2x 20W tones, Δf is 15MHz.

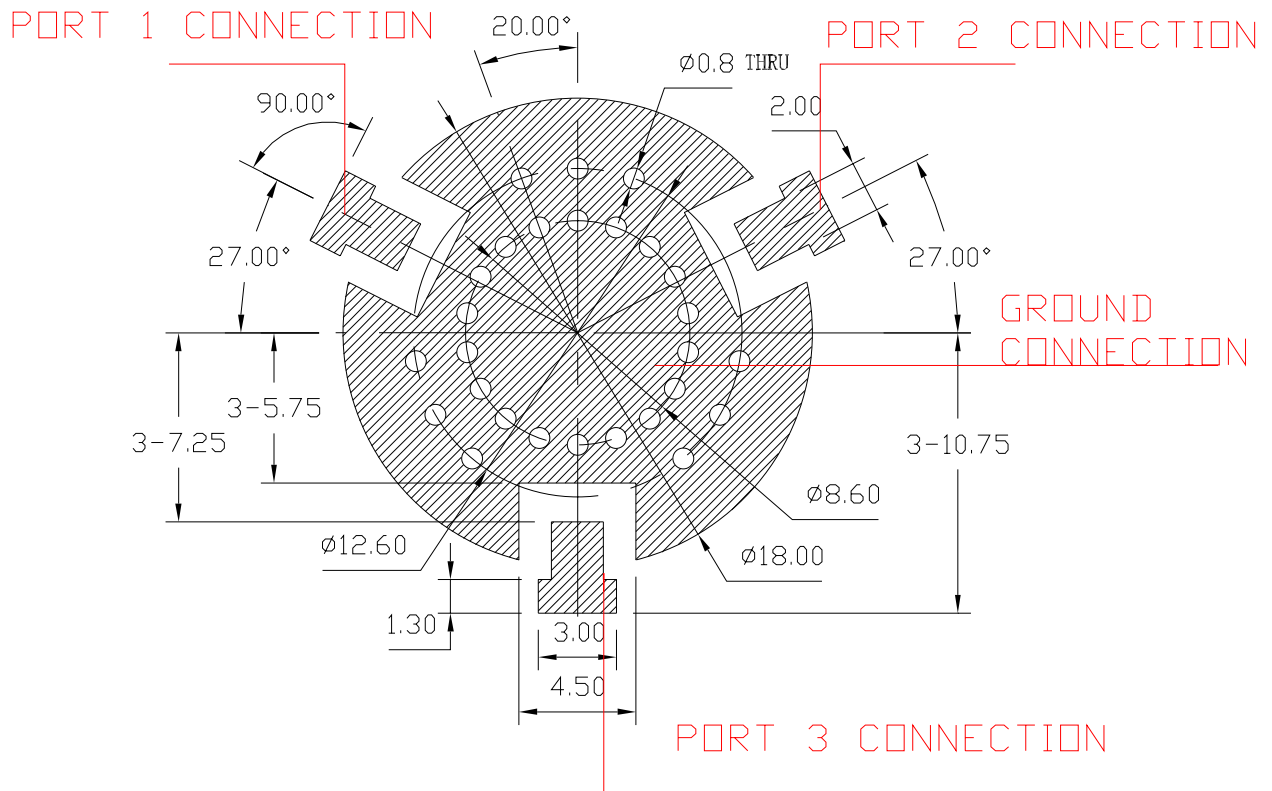
3 OUTLINE DRAWINGS



Units: mm

	mm	inch
Diameter	18.2	0.72
Height	7.5	0.30
Thickness of PCB (Bottom)	1.0	0.04
Tolerance	± 0.1	± 0.01

4 PCB LAYOUT RECOMMENDATION



Notes:

- * Ground Connection: At least 20% 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, Please see the reflow profile for the details
- *****Custom PCB Layout is optional at the additional cost

5 REFLOW PROFILE

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

Suggested Reflow Profile for JQL SMT Circulators

