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MACOM Technology Solutions Inc.
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Cage Code: 55NN2

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Revision History

See Agile for Approvers and Approval Dates

Rev.	Description of Change
A	Initial Release or {add brief summary of changes}

PRODUCTION RELEASE

TITLE:

Product Specification,MACS-007802-0M1JD7

DOCUMENT NO:

PS-MACS-007802-0M1JD7

REV: A

SHEET 1 of 2

The MACS-007802-0M1JD7 is a RoHS Compliant K-Band Stereo Doppler Transceiver consisting of a Gunn Diode oscillator and two Schottky Diode mixers assembled into a diecast waveguide package. It is designed for commercial applications, for ground speed sensing.

ELECTRICAL SPECIFICATIONS

Center Frequency:	24.300 GHz \pm 5 MHz
Power Output:	2.0 mW \pm 0.2 mW @ +25°C
Operating Voltage:	+5.0 Vdc
Operating Current:	100 mA @ +25°C 110 mA @ -30°C
Mixer Noise: (3)	5.0 millivolts maximum
Mixer Phase:	90° \pm 15°
Mixer Sensitivity: (3)	-93 dBc minimum
Mixer Load Resistor: (not supplied)	1000 ohms
Operating Temperature:	-30°C to +85°C
Frequency Temperature Coefficient:	1 MHz/°C maximum
Schottky Diode Output Polarity:	Negative

MECHANICAL SPECIFICATIONS

Outline Drawing:	See MACS-007802-0M1JD7
D.C. Bias (Gunn):	Via Molex P/N 50556-50501 Connector
Mixer Outputs:	Via Molex P/N 50556-50501 Connector
RF Output:	WR-42 waveguide mates with UG-595/U flange

NOTES

1. Maximum solder temperature to pins is 250°C max for a 5 second duration.
2. Units are extremely ESD sensitive. Parts should only be handled in an appropriate ESD protected manner.
Failure to do so may void manufacturer warranty.
3. As measured at the output of a standard low noise amplifier with a voltage gain of 60 dB. Amplifier bandwidth is 10 Hz to 1000 Hz.

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Revision History

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Rev.	Description of Change
A	Initial Release

PRODUCTION RELEASE

TITLE:

Product Specification,MACS-007802-0M1JD8

DOCUMENT NO:

PS-MACS-007802-0M1JD8

REV: A

SHEET 1 of 2

The MACS-007802-0M1JD8 is a RoHS Compliant K-Band Stereo Doppler Transceiver consisting of a Gunn Diode oscillator and two Schottky Diode mixers assembled into a diecast waveguide package. It is designed for commercial applications, for ground speed sensing.

ELECTRICAL SPECIFICATIONS

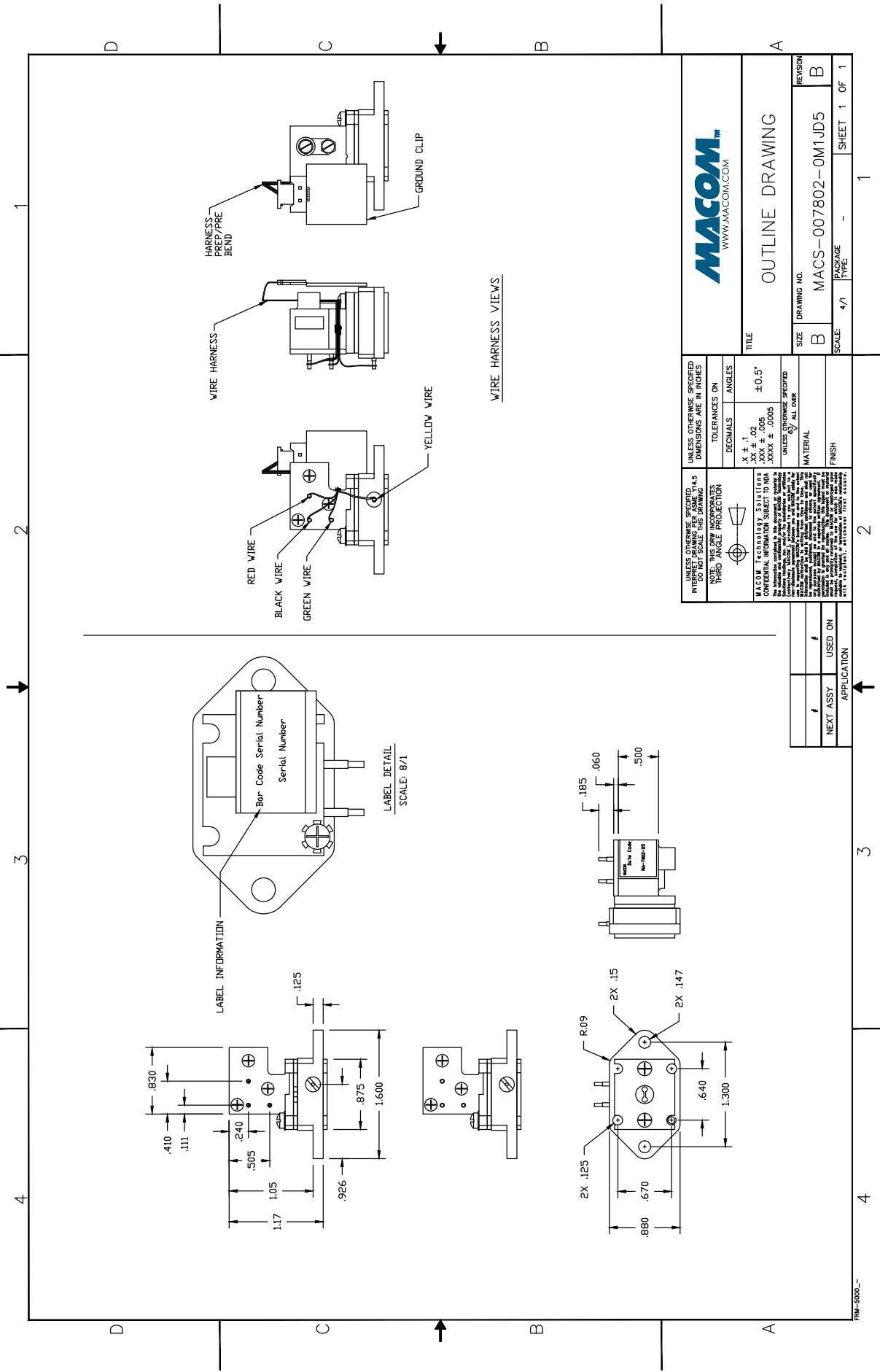
Center Frequency:	24.125 GHz \pm 5 MHz
Power Output:	0.25 mW \pm 0.05 mW @ +25°C
Operating Voltage:	+5.0 \pm .15Vdc
Operating Current:	100 mA @ +25°C 110 mA @ -30°C
Mixer Noise: (3)	5.0 millivolts maximum
Mixer Phase:	60° minimum --105° maximum
Mixer Diode Forward Bias:	+5.0VDC in series with a 100K Ω Resistor
Mixer Sensitivity: (3)	-70 dBc minimum
Mixer Load Resistor: (not supplied)	1000 ohms
Operating Temperature:	-30°C to +85°C
Frequency Temperature Coefficient:	1 MHz/°C maximum
Schottky Diode Output Polarity:	Negative




MECHANICAL SPECIFICATIONS

Outline Drawing:	See MACS-007802-0M1JD8
D.C. Bias (Gunn):	Via Molex P/N 50556-50501 Connector
Mixer Outputs:	Via Molex P/N 50556-50501 Connector
RF Output:	WR-42 waveguide mates with UG-595/U flange

NOTES

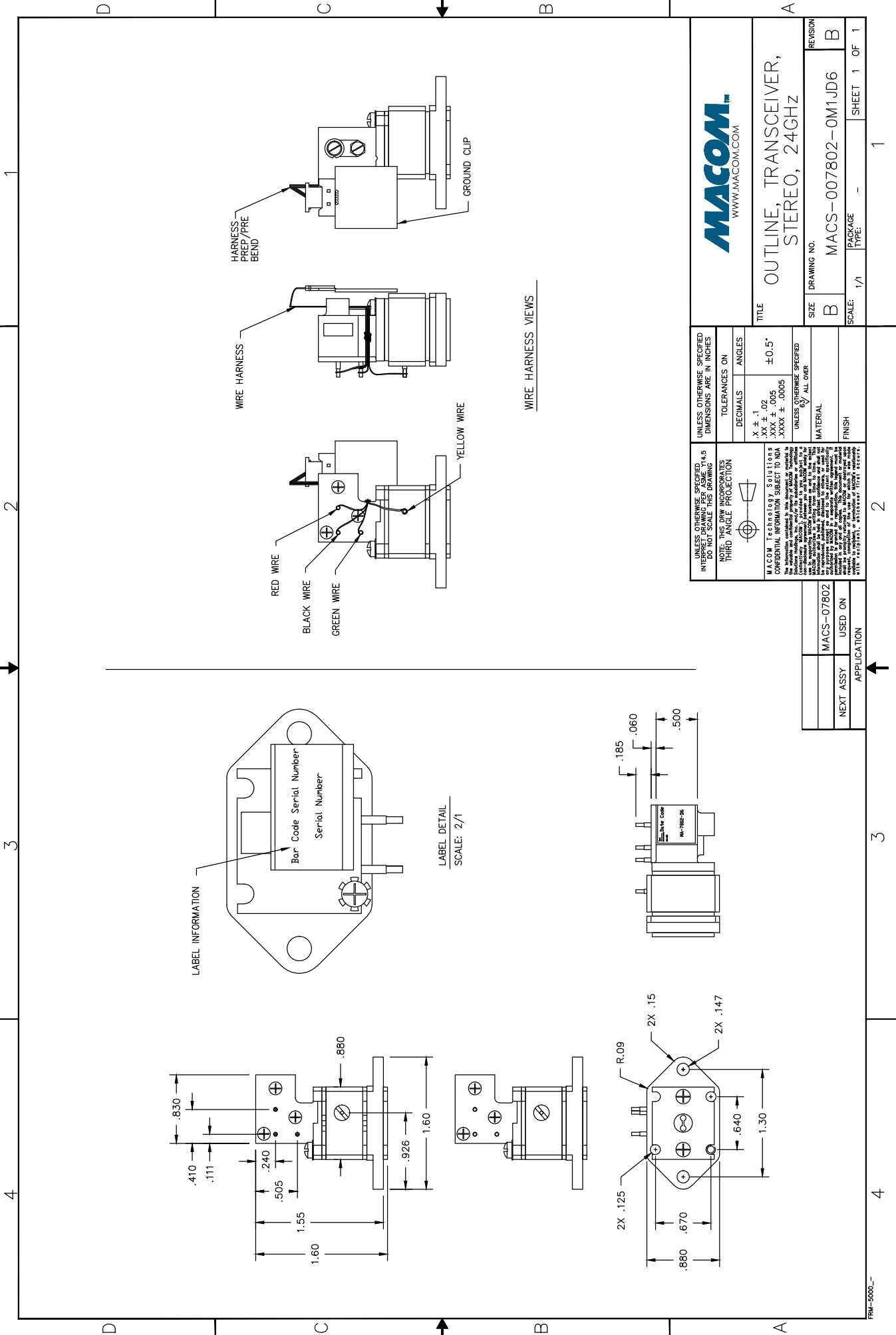
1. Maximum solder temperature to pins is 250°C max for a 5 second duration.
2. Units are extremely ESD sensitive. Parts should only be handled in an appropriate ESD protected manner.
Failure to do so may void manufacturer warranty.
3. As measured at the output of a standard low noise amplifier with a voltage gain of 60 dB. Amplifier bandwidth is 10 Hz to 1000 Hz.



 WWW.MACOM.COM		TITLE	
		OUTLINE DRAWING	
SIZE	B	PACKAGE TYPE	MACS-007802-0M1JD5
SCALE:	4/1	SHEET	1 OF 1
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES		UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES	
TOLERANCES ON DECIMALS		TOLERANCES ON ANGLES	
X ± .1		± 0.5°	
XX ± .02		XX ± .0005	
XXX ± .0005		XXX ± .0005	
UNLESS OTHERWISE SPECIFIED, THIRD ANGLE PROJECTION		UNLESS OTHERWISE SPECIFIED, THIRD ANGLE PROJECTION	
			
UNLESS OTHERWISE SPECIFIED, THIS DRAWING INCORPORATES THE LATEST REVISIONS OF THE FOLLOWING STANDARDS:		UNLESS OTHERWISE SPECIFIED, THIS DRAWING INCORPORATES THE LATEST REVISIONS OF THE FOLLOWING STANDARDS:	
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MATERIAL		FINISH	
REVISION		REVISION	
SIZE	B	PACKAGE TYPE	MACS-007802-0M1JD5
SCALE:	4/1	SHEET	1 OF 1

APPLICATION	
NEXT ASSY	USED ON

FRN-5000-

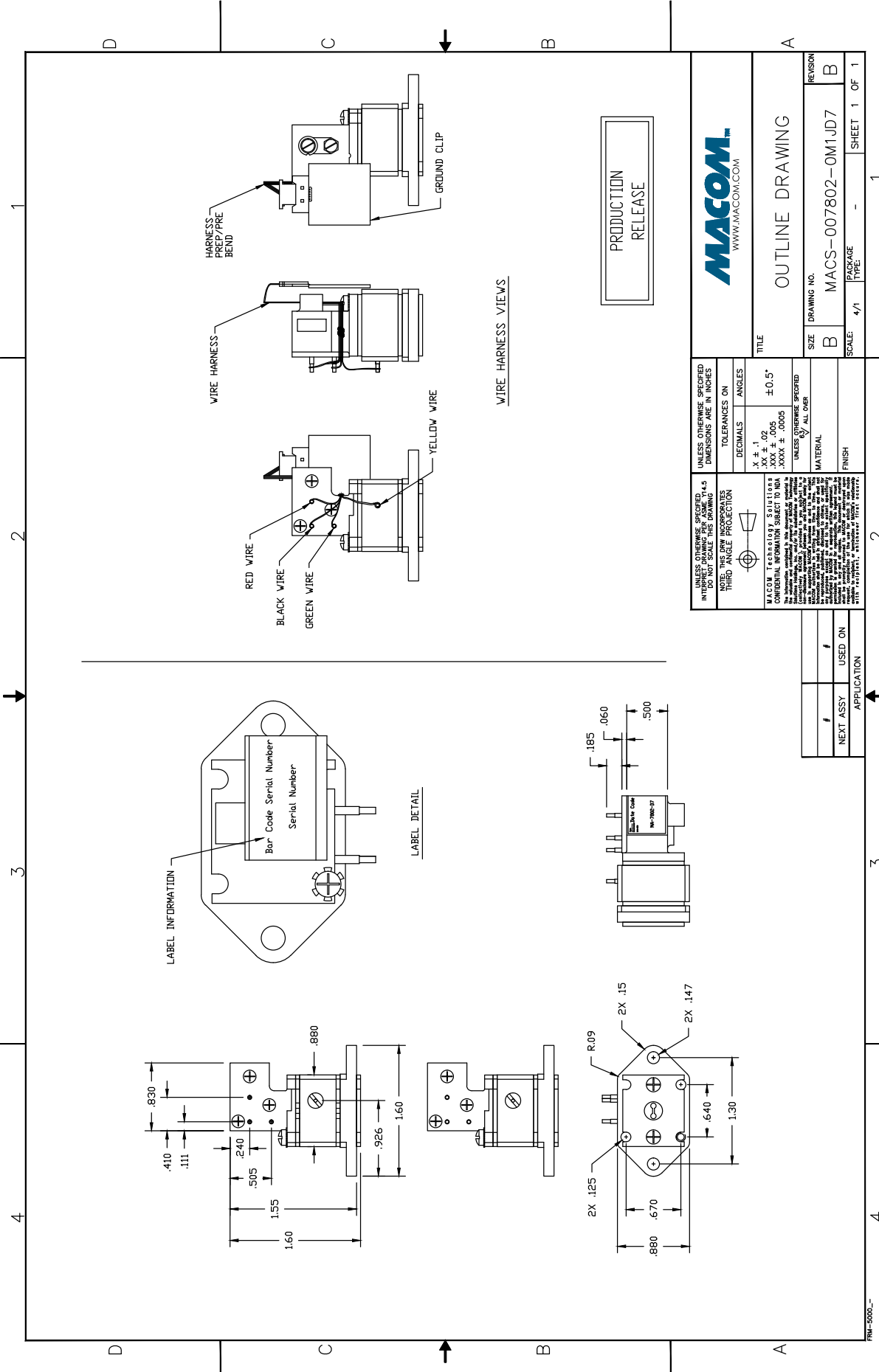


LABEL DETAIL
SCALE: 2/1

WIRE HARNESS VIEWS

 WWW.MACOM.COM		TITLE OUTLINE, TRANSCEIVER, STEREO, 24GHZ	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ON DECIMALS .X ± .1 .XX ± .02 .XXX ± .005 .XXXX ± .0005		TOLERANCES ON ANGLES ±0.5°	
UNLESS OTHERWISE SPECIFIED MATERIAL ✓ ALL OVER		UNLESS OTHERWISE SPECIFIED FINISH	
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SIZE B		DRAWING NO. MACS-007802-0M1JD6	
SCALE: 1/1		PACKAGE TYPE: -	
SHEET 1 OF 1		REVISION B	

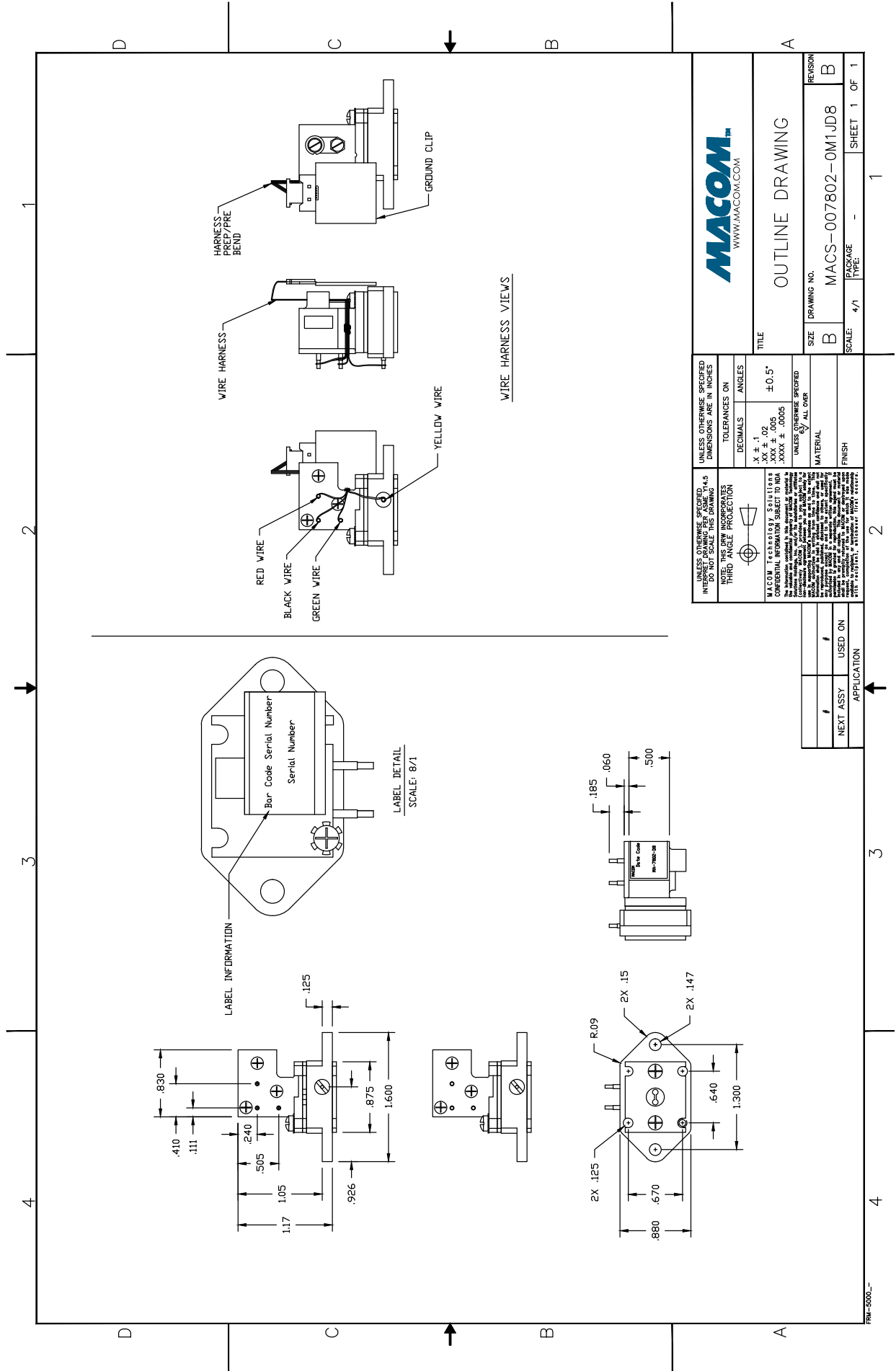
MACS-07802	USED ON
NEXT ASSY	APPLICATION



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		UNLESS OTHERWISE SPECIFIED TOLERANCES ON	
DECIMALS	ANGLES	DECIMALS	ANGLES
.XX ± .00	± 0.5°	.XXX ± .005	± 0.5°
.XXXX ± .0005			
UNLESS OTHERWISE SPECIFIED MATERIAL		UNLESS OTHERWISE SPECIFIED FINISH	

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TITLE OUTLINE DRAWING	
SIZE B	DRAWING NO. MACS-007802-0M1JD7
SCALE 4/1	PACKAGE TYPE -
REVISION B	
SHEET 1 OF 1	

FRM-5000-



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ON DECIMALS		TOLERANCES ON ANGLES	
X.X ± .02		° ± 0.5°	
XXX ± .005			
XXXX ± .0005			
Ø ALL OVER			
UNLESS OTHERWISE SPECIFIED MATERIAL		UNLESS OTHERWISE SPECIFIED FINISH	

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REVISION	DATE	DESCRIPTION
B		MACS-007802-0M1JD8
1		

SCALE	4/1
PACKAGE TYPE	
SHEET	1 OF 1

APPLICATION	
USED ON	
NEXT ASSY	

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OUTLINE DRAWING	
MACS-007802-0M1JD8	



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Rev.	Description of Change
A	Initial Release or {add brief summary of changes}

PRODUCTION RELEASE

TITLE:

Product Specification, MACS-007802-0M1JD5

DOCUMENT NO:

PS-MACS-007802-0M1JD5

REV: A

SHEET 1 of 2

The MACS-007802-0M1JD5 is a RoHS Compliant K-Band Stereo Doppler Transceiver consisting of a Gunn Diode oscillator and two Schottky Diode mixers assembled into a diecast waveguide package. It is designed for commercial applications, for ground speed sensing applications.

ELECTRICAL SPECIFICATIONS

Center Frequency:	24.125 GHz \pm 5 MHz
Power Output:	4.0 mW +/- 0.4 mW @ +25°C
Operating Voltage:	+5.0 Vdc
Operating Current:	100 mA @ +25°C 110 mA @ -30°C
Mixer Noise:(3)	5.0 millivolts maximum
Mixer Phase:	90° \pm 15°
Mixer Sensitivity: (3)	-93 dBc minimum
Mixer Load Resistor: (not supplied)	1000 ohms
Operating Temperature:	-30°C to +85°C
Frequency Temperature Coefficient:	1 MHz/°C maximum
Schottky Diode Output Polarity:	Negative

MECHANICAL SPECIFICATIONS

Outline Drawing:	See MACS-007802-0M1JD5
D.C. Bias (Gunn):	Via Molex P/N 50556-50501 Connector
Mixer Outputs:	Via Molex P/N 50556-50501 Connector
RF Output:	WR-42 waveguide mates with UG-595/U flange

NOTES

1. Maximum solder temperature to pins is 250°C max for a 5 second duration.
2. Units are extremely ESD sensitive. Parts should only be handled in an appropriate ESD protected manner.
Failure to do so may void manufacturer warranty.
3. As measured at the output of a standard low noise amplifier with a voltage gain of 60 dB. Amplifier bandwidth is 10 Hz to 1000 Hz.

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Rev.	Description of Change
A	Initial Release

PRODUCTION RELEASE

TITLE: Product Specification,MACS-007802-0M1JD6	
DOCUMENT NO: PS-MACS-007802-0M1JD6	REV: A
SHEET 1 of 2	

The MACS-007802-0M1JD6 is a RoHS Compliant K-Band Stereo Doppler Transceiver consisting of a Gunn Diode oscillator and two Schottky Diode mixers assembled into a diecast waveguide package. It is designed for commercial applications, for ground speed sensing.

ELECTRICAL SPECIFICATIONS

Center Frequency:	24.125 GHz \pm 5 MHz
Power Output:	2.0 mW +/- 0.2 mW @ +25°C
Operating Voltage:	+5.0 Vdc
Operating Current:	100 mA @ +25°C 110 mA @ -30°C
Mixer Noise: (3)	5.0 millivolts maximum
Mixer Phase:	90° +/- 15°
Mixer Sensitivity: (3)	-93 dBc minimum
Mixer Load Resistor: (not supplied)	1000 ohms
Operating Temperature:	-30°C to +85°C
Frequency Temperature Coefficient:	1 MHz/°C maximum
Schottky Diode Output Polarity:	Negative

MECHANICAL SPECIFICATIONS

Outline Drawing:	See MACS07802-0M1JD6
D.C. Bias (Gunn):	Via Molex P/N 50556-50501 Connector
Mixer Outputs:	Via Molex P/N 50556-50501 Connector
RF Output:	WR-42 waveguide mates with UG-595/U flange

NOTES

1. Maximum solder temperature to pins is 250°C max for a 5 second duration.
2. Units are extremely ESD sensitive. Parts should only be handled in an appropriate ESD protected manner.
Failure to do so may void manufacturer warranty.
3. As measured at the output of a standard low noise amplifier with a voltage gain of 60 dB. Amplifier bandwidth is 10 Hz to 1000 Hz.