



**TEST DATA
ON
16.0 TO 16.5 GHz
1.5dB LOW LOSS
HIGH POWER LIMITER
WITH
RF INPUT POWER HANDLING
OF
160 WATTS PEAK, 40 WATTS AVERAGE
WITH
A 25% DUTY CYCLE AND A 15 μ S PULSE WIDTH
PMI MODEL No:**

LM-161605-10W1

With Option HPR

Serial Numbers: PM506161, PM506162 & PM506163

**DESIGNED & TESTED
BY
BRENT BAKER**

**REPORT BY
P. WOOD**

SEPTEMBER 1, 2005

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ENVIRONMENTAL SPECIFICATIONS

●	OPERATING TEMPERATURE	-55°C TO +85°C
●	STORAGE TEMPERATURE	-65°C TO +125°C
●	HUMIDITY	MIL-STD-202F, METHOD 103B, COND. B
●	SHOCK	MIL-STD-202F, METHOD 213B, COND. B
●	VIBRATION	MIL-STD-202F, METHOD 204B, COND. B
●	ALTITUDE	MIL-STD-202F, METHOD 105C, COND. B
●	TEMPERATURE CYCLE	MIL-STD-202F, METHOD 107D, COND. A

16.0 TO 16.5 GHz, HIGH POWER, MINIATURE, LIMITER PMI MODLE No: LM-161605-10W1-HPR

KEY FEATURES:

- 160 WATTS PEAK
- 1.5dB LOW INSERTION LOSS
- 15 μ S PULSE WIDTH



SPECIFICATIONS:

● FREQUENCY RANGE	16.0 TO 16.5 GHz
● INSERTION LOSS	≤ 1.5 dB
● VSWR (Input & Output Return Loss)	≥ 17 dB (1.32:1)
● RF INPUT POWER	160 WATTS PEAK 40 WATTS AVERAGE
● PULSE WIDTH	≤ 15.0 μ S
● DUTY CYCLE	$\leq 25\%$
● RF LEAKAGE	13dBm MAXIMUM
● LIMITING THRESHOLD	+5dBm TYPICAL
● RECOVERY TIME	≤ 1.0 μ S
● CONNECTORS	SMA FEMALE (Input & Output)
● SIZE	1.00" X 1.00" X 0.500"
● WEIGHT	1.5 oz. MAXIMUM

DESCRIPTION:
 PLANAR MONOLITHICS INDUSTRIES MODEL NUMBER
 LM-161605-10W1 OPTION: HPR IS A HIGH POWER LIMITER THAT
 WORKS FROM 16 GHz TO 16.5 GHz THAT HANDLES 40 WATTS PEAK
 POWER WITH A PULSE WIDTH OF 15 uSEC

REV.	DATE	DESCRIPTION
1	11/05/08	ORIGINAL JOB: # P505020NPE

SPECIFICATIONS:

- FREQUENCY: 16 TO 16.5 GHz
- INSERTION LOSS: 1.0 dB (GOAL). 1.5 dB MAXIMUM
- PEAK POWER: 40 WATTS
- PULSE WIDTH: 15 uS
- DUTY CYCLE: 25%
- VSWR: 17 dB
- RECOVERY TIME: 1 uS
- CONNECTORS: SMA FEMALE (INPUT AND OUTPUT)
- SIZE: 1.00 X 1.00 X .500 (H)
- WEIGHT: 1.5 OZ. MAXIMUM

ENVIRONMENTAL RATINGS

- TEMPERATURE: -55°C TO +85°C (OPERATING)
-65°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
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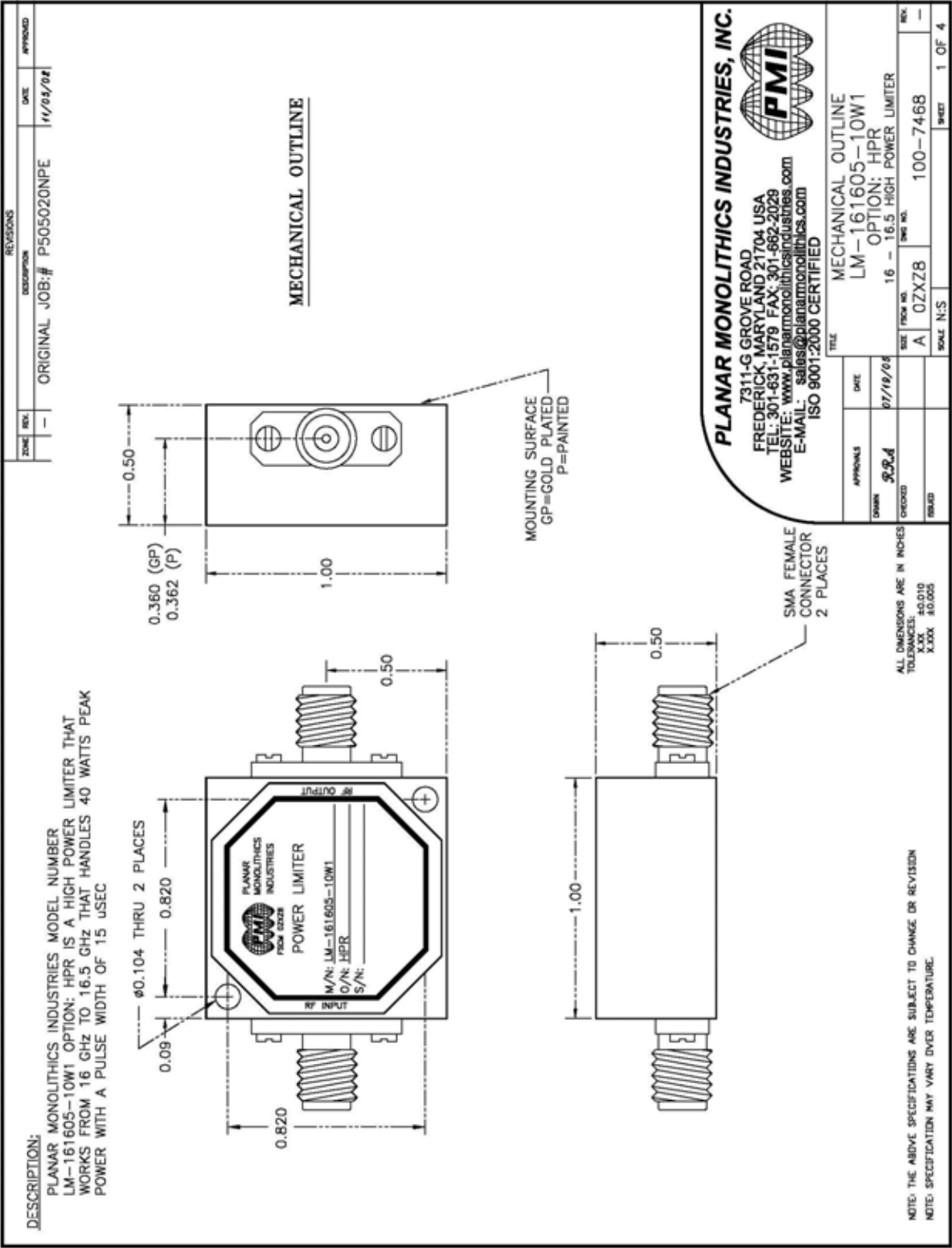
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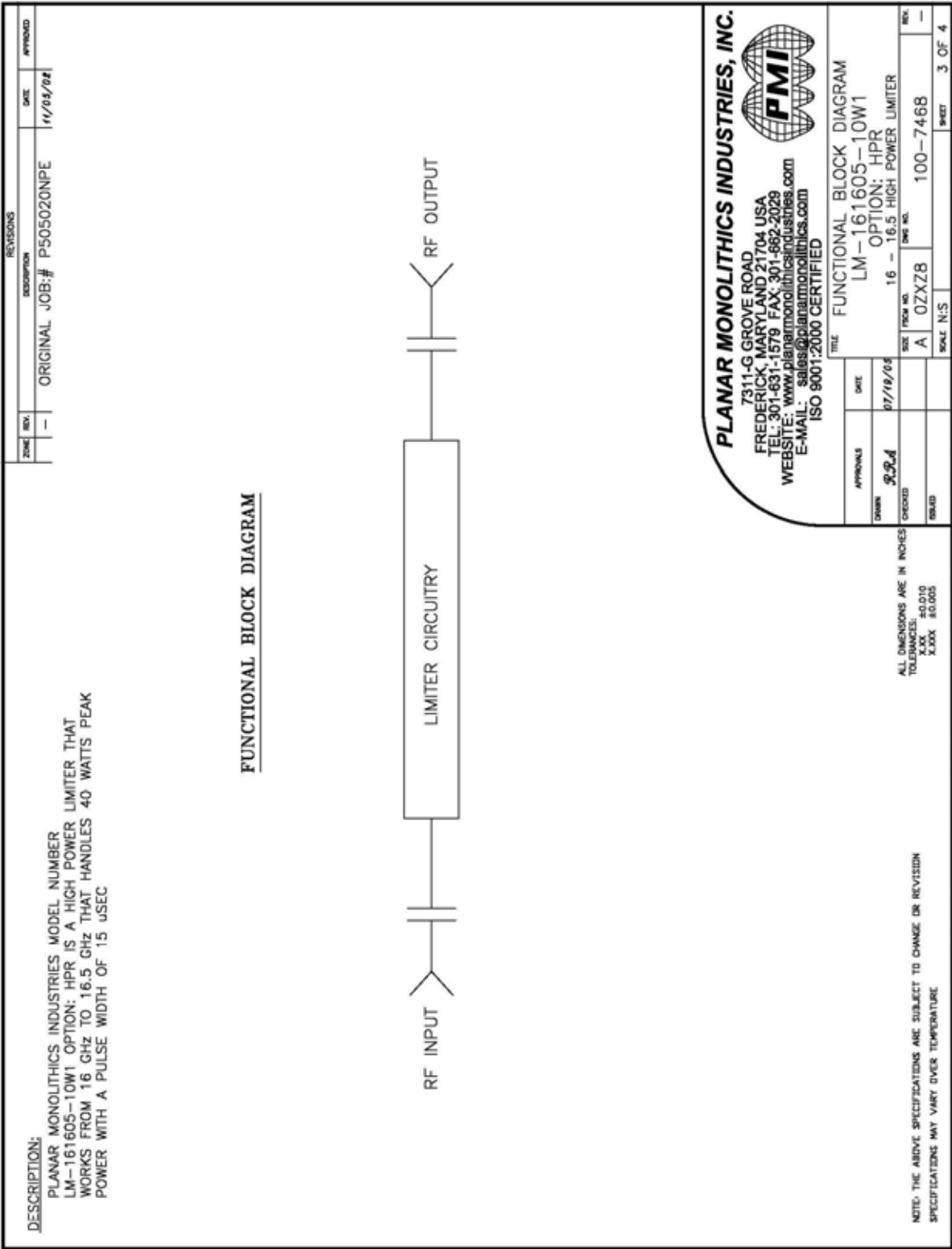
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MECHANICAL OUTLINE



FUNCTIONAL BLOCK DIAGRAM



TEST DATA AS PREPARED FOR THE CUSTOMER

LM-0518-10-1W-SHS-1-M-DTA



PLANAR MONOLITHICS INDUSTRIES
7311G GROVE ROAD, FREDERICK, MD 21704
TEL: 301-431-1579 FAX: 301-462-4938
WEBSITE: WWW.PLANARMONOLITHICS.COM
EMAIL: SALES@PLANARMONOLITHICS.COM
ISO 9001:2000 CERTIFIED

**SUMMARY TEST DATA
ON
LIMITER**

CUSTOMER: AETHERCOMM INC.
MODEL NO: LM-161605-10W-1
OPTION NO: HPR
SERIAL NO: PM506163

JOB NO: P505020NPE
TESTED BY: B. Baker E
TEMPERATURE: Room Temperature
DATE: 07/18/05

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	OPERATING FREQUENCY RANGE:	15.3 TO 17.3 GHz MINIMUM	15.3 TO 17.3 GHz	pass
2	INPUT RETURN LOSS: 16 TO 16.5 GHz @ 0 dBm INPUT	17 dB MINIMUM	19.3 dB	pass
3	OUTPUT RETURN LOSS: 16 TO 16.5 GHz @ 0 dBm INPUT	17 dB MINIMUM	22.1 dB	pass
4	INSERTION LOSS: 16 TO 16.5 GHz @ 0 dBm INPUT	1.5 dB MAXIMUM	1.4 dB	pass
5	LIMITING THRESHOLD:	+ 5 dBm TYPICAL	+ 5 dBm	pass
6	RF LEAKAGE: Pin <= 160 WATTS PULSE WIDTH <= 15 μ SEC DUTY CYCLE <= 25 %	+ 13 dBm MAXIMUM	NOT TESTED	
7	RECOVERY TIME:	1 μ SEC MAXIMUM	NOT TESTED	

TESTED WITH: Hewlett Packard 8720C Network Analyzer

QA/QC APPROVAL: _____

03

DATED: _____

7/22/05



PT66-LM-PW-0905

TEST DATA AS PREPARED FOR THE CUSTOMER

LM-0518-10-1W-SHS-1-M-DTA



PLANAR MONOLITHICS INDUSTRIES
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**SUMMARY TEST DATA
ON
LIMITER**

CUSTOMER: AETHERCOMM INC.
MODEL NO: LM-161605-10W-1
OPTION NO: 1172
SERIAL NO: PM506161

JOB NO: P505020NPE
TESTED BY: B. Baker ^E
TEMPERATURE: Room Temperature ^{#28}
DATE: 07/18/05

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	OPERATING FREQUENCY RANGE:	15.3 TO 17.3 GHz MINIMUM	15.3 TO 17.3 GHz	pass
2	INPUT RETURN LOSS: 16 TO 16.5 GHz @ 0 dBm INPUT	17 dB MINIMUM	25.6 dB	pass
3	OUTPUT RETURN LOSS: 16 TO 16.5 GHz @ 0 dBm INPUT	17 dB MINIMUM	29 dB	pass
4	INSERTION LOSS: 16 TO 16.5 GHz @ 0 dBm INPUT	1.5 dB MAXIMUM	1.5 dB	pass
5	LIMITING THRESHOLD:	+ 5 dBm TYPICAL	+ 5 dBm	pass
6	RF LEAKAGE: Pin <= 160 WATTS PULSE WIDTH <= 15 μSEC DUTY CYCLE <= 25 %	+ 13 dBm MAXIMUM	NOT TESTED	.
7	RECOVERY TIME:	1 μSEC MAXIMUM	NOT TESTED	-

TESTED WITH: Hewlett Packard 8720C Network Analyzer

QA/QC APPROVAL: _____



DATED: _____

7/20/05

TEST DATA AS PREPARED FOR THE CUSTOMER

LM-0518-10-1W-SHS-1-M-DTA



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**SUMMARY TEST DATA
ON
LIMITER**

CUSTOMER: AETHERCOMM INC.
MODEL NO: LM-161605-10W-1
OPTION NO: HPR
SERIAL NO: PM506162

JOB NO: P505020NPE
TESTED BY: B. Baker ^E
TEMPERATURE: Room Temperature ^{#28}
DATE: 07/18/05

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	OPERATING FREQUENCY RANGE:	15.3 TO 17.3 GHz MINIMUM	15.3 TO 17.3 GHz	pass
2	INPUT RETURN LOSS: 16 TO 16.5 GHz @ 0 dBm INPUT	17 dB MINIMUM	32 dB	pass
3	OUTPUT RETURN LOSS: 16 TO 16.5 GHz @ 0 dBm INPUT	17 dB MINIMUM	25 dB	pass
4	INSERTION LOSS: 16 TO 16.5 GHz @ 0 dBm INPUT	1.5 dB MAXIMUM	1.5 dB	pass
5	LIMITING THRESHOLD:	+ 5 dBm TYPICAL	+ 5 dBm	pass
6	RF LEAKAGE: Pin <= 160 WATTS PULSE WIDTH <= 15 μSEC DUTY CYCLE <= 25 %	+ 13 dBm MAXIMUM	NOT TESTED	
7	RECOVERY TIME:	1 μSEC MAXIMUM	NOT TESTED	

TESTED WITH: Hewlett Packard 8720C Network Analyzer

QA/QC APPROVAL: _____

DATED: _____

7/28/05