

MP5 RED



AMERICAN MICROWAVE CORPORATION
7311C GROVE ROAD, FREDERICK MD. 21701
TEL: (301)662-4700 FAX: (301)662-4938

DATE: 2/2/99

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 807150E MODEL NO: MSR-8DR-04T SERIAL NO: 8MS90101
 CUSTOMER: SELETRON TECHNICIAN: pk
 SPECIFICATION: 2SF SIC FREQUENCY RANGE: 24.88-25.48 GHz

+5V It 400mA
I-5mA

RETURN LOSS						
INSERTION LOSS	INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J9-J1 3.41 dB	13.43 dB	1.54 :1	22.23 dB	1.17 :1		
J9-J2 4.40 dB	10.61 dB	1.84 :1	14.82 dB	1.44 :1		
J9-J3 3.99 dB	11.33 dB	1.74 :1	14.59 dB	1.46 :1		
J9-J4 4.91 dB	9.57 dB	2.00 :1	15.92 dB	1.38 :1		
J9-J5 4.54 dB	9.67 dB	1.98 :1	14.09 dB	1.49 :1		
J9-J6 4.50 dB	10.30 dB	1.88 :1	13.67 dB	1.52 :1		
J9-J7 4.43 dB	10.98 dB	1.79 :1	17.10 dB	1.32 :1		
J9-J8 3.48 dB	11.79 dB	1.69 :1	15.49 dB	1.40 :1		

SWITCHING SPEED				
ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
J9-J1 50 dB		< 1 μs		< 1 μs
J9-J2 50 dB		< 1 μs		< 1 μs
J9-J3 50 dB		< 1 μs		< 1 μs
J9-J4 50 dB		< 1 μs		< 1 μs
J9-J5 50 dB		< 1 μs		< 1 μs
J9-J6 50 dB		< 1 μs		< 1 μs
J9-J7 50 dB		< 1 μs		< 1 μs
J9-J8 50 dB		< 1 μs		< 1 μs

NOTE: Any additional Test Data on Back

TEST: pk
 QA/QC: 02 RMC
 DATE: 2-23-99



DATE: 2/2/99

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 807150E MODEL NO: MSR-BDR-04T SERIAL NO: BMS90102

CUSTOMER: SELETRON TECHNICIAN: pk

SPECIFICATION: 25F SIC FREQUENCY RANGE: 24.88-25.48 GHz

+5V I+10mA
I-10mA

RETURN LOSS						
INSERTION LOSS	INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J9-J1 4.39 dB	11.81 dB	1. :1	15.18 dB	1. :1		
J9-J2 4.01 dB	18.05 dB	1. :1	19.44 dB	1. :1		
J9-J3 3.89 dB	14.52 dB	1. :1	13.16 dB	1. :1		
J9-J4 3.56 dB	13.01 dB	1. :1	15.85 dB	1. :1		
J9-J5 3.43 dB	17.07 dB	1. :1	13.51 dB	1. :1		
J9-J6 4.15 dB	15.76 dB	1. :1	15.34 dB	1. :1		
J9-J7 3.30 dB	18.89 dB	1. :1	14.37 dB	1. :1		
J9-J8 4.69 dB	10.68 dB	1. :1	12.89 dB	1. :1		

SWITCHING SPEED				
ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
J9-J1 50 dB		< 1 μS		< 1 μS
J9-J2 50 dB		< 1 μS		< 1 μS
J9-J3 50 dB		< 1 μS		< 1 μS
J9-J4 50 dB		< 1 μS		< 1 μS
J9-J5 50 dB		< 1 μS		< 1 μS
J9-J6 50 dB		< 1 μS		< 1 μS
J9-J7 50 dB		< 1 μS		< 1 μS
J9-J8 50 dB		< 1 μS		< 1 μS

NOTE: Any additional Test Data on Back

TEST: pk

QA/QC: 02 RMC

DATE: 2-23-99



DATE: 2/2/99

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 807150 E MODEL NO: MSR-8DR-04T SERIAL NO: 8M590105

CUSTOMER: SELETRON TECHNICIAN: PK

SPECIFICATION: 25F SIC FREQUENCY RANGE: 24.88-25.48 GHz

RETURN LOSS						
INSERTION LOSS	INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J9-J1 4.35 dB	10.41 dB	1.86:1	24.04 dB	1.13:1		
J9-J2 3.58 dB	11.52 dB	1.72:1	13.41 dB	1.54:1		
J9-J3 3.62 dB	12.02 dB	1.67:1	13.01 dB	1.58:1		
J9-J4 3.71 dB	12.60 dB	1.61:1	11.77 dB	1.70:1		
J9-J5 3.91 dB	11.45 dB	1.73:1	10.51 dB	1.85:1		
J9-J6 3.99 dB	10.08 dB	1.91:1	9.04 dB	2.09:1		
J9-J7 3.75 dB	12.67 dB	1.61:1	12.79 dB	1.60:1		
J9-J8 3.97 dB	10.02 dB	1.92:1	13.08 dB	1.57:1		

SWITCHING SPEED				
ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
J9-J1 50 dB		< 1 μs		< 1 μs
J9-J2 50 dB		< 1 μs		< 1 μs
J9-J3 50 dB		< 1 μs		< 1 μs
J9-J4 50 dB		< 1 μs		< 1 μs
J9-J5 50 dB		< 1 μs		< 1 μs
J9-J6 50 dB		< 1 μs		< 1 μs
J9-J7 50 dB		< 1 μs		< 1 μs
J9-J8 50 dB		< 1 μs		< 1 μs

NOTE: Any additional Test Data on Back

TEST: PK
 QA/QC: 03
 DATE: 2/24/99

series



AMERICAN MICROWAVE CORPORATION
7311C GROVE ROAD, FREDERICK MD. 21701
TEL: (301)662-4700 FAX: (301)662-4938

FORM: SW-01/0698

DATE: 2/2/99

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 807150E MODEL NO: MSR-8DR-04T SERIAL NO: 8M590106

CUSTOMER: SELETRON TECHNICIAN: PK

SPECIFICATION: 25F, SIC FREQUENCY RANGE: 24.88-25.48 GHz.

TSV I1 5mA
I2 20mA

RETURN LOSS						
INSERTION LOSS	INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J9-J1 4.96 dB	10.45 dB	1. :1	12.91 dB	1. :1		
J9-J2 3.83 dB	13.24 dB	1. :1	22.15 dB	1. :1		
J9-J3 3.56 dB	11.42 dB	1. :1	13.98 dB	1. :1		
J9-J4 3.69 dB	11.69 dB	1. :1	17.28 dB	1. :1		
J9-J5 4.32 dB	11.34 dB	1. :1	12.11 dB	1. :1		
J9-J6 3.78 dB	13.68 dB	1. :1	25.65 dB	1. :1		
J9-J7 3.96 dB	13.61 dB	1. :1	19.04 dB	1. :1		
J9-J8 4.75 dB	11.61 dB	1. :1	14.87 dB	1. :1		

SWITCHING SPEED				
ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
J9-J1 50 dB	100	20 <1 μS	180	150 <1 μS
J9-J2 50 dB	80	60 <1 μS	200	150 <1 μS
J9-J3 50 dB	100	60 <1 μS	200	170 <1 μS
J9-J4 50 dB	100	70 <1 μS	150	140 <1 μS
J9-J5 50 dB	100	80 <1 μS	170	140 <1 μS
J9-J6 50 dB	100	90 <1 μS	220	160 <1 μS
J9-J7 50 dB	130	100 <1 μS	150	100 <1 μS
J9-J8 50 dB	100	60 <1 μS	100	50 <1 μS

NOTE: Any additional Test Data on Back

TEST: PK
QA/QC: _____
DATE: _____



DATE: 2/2/99

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 807150 E MODEL NO: MSR-BDR-04T SERIAL NO: 8M590107

CUSTOMER: SELETRON TECHNICIAN: PK

SPECIFICATION: 25F SIC FREQUENCY RANGE: 24.88-25.48 GHz

$\pm 5V$ I_T 400 mA
 I 5 mA

RETURN LOSS						
INSERTION LOSS	INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J9-J1 3.21 dB	12.85 dB	1.59 : 1	14.21 dB	1.48 : 1		
J9-J2 3.98 dB	14.28 dB	1.48 : 1	13.57 dB	1.53 : 1		
J9-J3 4.45 dB	11.39 dB	1.74 : 1	11.59 dB	1.71 : 1		
J9-J4 4.88 dB	10.69 dB	1.83 : 1	13.82 dB	1.51 : 1		
J9-J5 4.84 dB	11.15 dB	1.77 : 1	14.64 dB	1.46 : 1		
J9-J6 4.79 dB	10.34 dB	1.87 : 1	18.03 dB	1.29 : 1		
J9-J7 4.54 dB	10.53 dB	1.85 : 1	12.59 dB	1.61 : 1		
J9-J8 3.26 dB	13.69 dB	1.52 : 1	17.87 dB	1.29 : 1		

SWITCHING SPEED				
ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
J9-J1 50 dB		< 1 μ S		< 1 μ S
J9-J2 50 dB		< 1 μ S		
J9-J3 50 dB		< 1 μ S		
J9-J4 50 dB		< 1 μ S		
J9-J5 50 dB		< 1 μ S		
J9-J6 50 dB		< 1 μ S		
J9-J7 50 dB		< 1 μ S		
J9-J8 50 dB		< 1 μ S		

NOTE: Any additional Test Data on Back

TEST: PK
QA/QC: 02 RMC
DATE: 2-23-99



DATE: 2/2/99

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 807150E MODEL NO: MSR-8DR-04T SERIAL NO: 8MS90108

CUSTOMER: SELECTRON TECHNICIAN: pk

SPECIFICATION: Z5F SIC FREQUENCY RANGE: 24.88-25.48 GHz

+5V I+ 400mA
I- 5mA

RETURN LOSS						
INSERTION LOSS	INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J9-J1 3.40 dB	12.51 dB	1.62 : 1	13.28 dB	1.55 : 1		
J9-J2 4.15 dB	12.07 dB	1.66 : 1	15.59 dB	1.40 : 1		
J9-J3 4.79 dB	10.94 dB	1.79 : 1	13.82 dB	1.51 : 1		
J9-J4 4.58 dB	10.55 dB	1.84 : 1	13.31 dB	1.55 : 1		
J9-J5 4.92 dB	9.92 dB	1.94 : 1	15.85 dB	1.38 : 1		
J9-J6 4.05 dB	12.65 dB	1.61 : 1	17.75 dB	1.30 : 1		
J9-J7 4.08 dB	12.04 dB	1.67 : 1	15.68 dB	1.39 : 1		
J9-J8 3.99 dB	15.48 dB	1.40 : 1	11.69 dB	1.70 : 1		

SWITCHING SPEED				
ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
J9-J1 50 dB		< 1 μs		< 1 μs
J9-J2 50 dB		< 1 μs		< 1 μs
J9-J3 50 dB		< 1 μs		< 1 μs
J9-J4 50 dB		< 1 μs		< 1 μs
J9-J5 50 dB		< 1 μs		< 1 μs
J9-J6 50 dB		< 1 μs		< 1 μs
J9-J7 50 dB		< 1 μs		< 1 μs
J9-J8 50 dB		< 1 μs		< 1 μs

NOTE: Any additional Test Data on Back

TEST: pk

QA/QC: 02 RMC

DATE: 2-23-99



DATE: 2/2/99

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 807150E MODEL NO: MSR-BDR-04T SERIAL NO: BMS90109

CUSTOMER: SELETRON TECHNICIAN: pk

SPECIFICATION: 25F SIC FREQUENCY RANGE: 24.88-25.48 GHz

RETURN LOSS

INSERTION LOSS	INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J9-J1 4.36 dB	11.04 dB	1.78 :1	21.20 dB	1.19 :1		
J9-J2 3.80 dB	10.03 dB	1.92 :1	15.59 dB	1.40 :1		
J9-J3 3.68 dB	9.56 dB	2.00 :1	13.36 dB	1.55 :1		
J9-J4 3.76 dB	9.85 dB	1.95 :1	11.22 dB	1.76 :1		
J9-J5 4.08 dB	10.39 dB	1.87 :1	16.84 dB	1.34 :1		
J9-J6 3.72 dB	10.19 dB	1.90 :1	18.61 dB	1.27 :1		
J9-J7 3.96 dB	10.53 dB	1.85 :1	18.66 dB	1.26 :1		
J9-J8 4.07 dB	11.01 dB	1.78 :1	17.72 dB	1.30 :1		

SWITCHING SPEED

ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
J9-J1 50 dB		< 1 μs		< 1 μs
J9-J2 50 dB		< 1 μs		< 1 μs
J9-J3 50 dB		< 1 μs		< 1 μs
J9-J4 50 dB		< 1 μs		< 1 μs
J9-J5 50 dB		< 1 μs		< 1 μs
J9-J6 50 dB		< 1 μs		< 1 μs
J9-J7 50 dB		< 1 μs		< 1 μs
J9-J8 50 dB		< 1 μs		< 1 μs

NOTE: Any additional Test Data on Back

TEST: pk
 QA/QC: pk
 DATE: 2/24/99



DATE: 2/2/99

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 807150 E MODEL NO: MSR-BDR-04T SERIAL NO: 8MS90110

CUSTOMER: SELETRON TECHNICIAN: PK

SPECIFICATION: 2SF SIC FREQUENCY RANGE: 24.88-25.48 GHz.

RETURN LOSS

INSERTION LOSS	INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J9-J1 4.55 dB	11.42 dB	1.73:1	17.54 dB	1.71:1		
J9-J2 3.85 dB	14.47 dB	1.47:1	18.47 dB	1.27:1		
J9-J3 3.27 dB	11.89 dB	1.68:1	12.47 dB	1.62:1		
J9-J4 3.65 dB	10.85 dB	1.80:1	13.62 dB	1.53:1		
J9-J5 3.54 dB	11.73 dB	1.70:1	15.09 dB	1.43:1		
J9-J6 3.75 dB	11.00 dB	1.78:1	16.02 dB	1.38:1		
J9-J7 3.89 dB	11.86 dB	1.69:1	15.90 dB	1.39:1		
J9-J8 3.92 dB	13.56 dB	1.53:1	20.69 dB	1.20:1		

SWITCHING SPEED

ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
J9-J1 50 dB		< 1 μs		< 1 μs
J9-J2 50 dB		< 1 μs		< 1 μs
J9-J3 50 dB		< 1 μs		< 1 μs
J9-J4 50 dB		< 1 μs		< 1 μs
J9-J5 50 dB		< 1 μs		< 1 μs
J9-J6 50 dB		< 1 μs		< 1 μs
J9-J7 50 dB		< 1 μs		< 1 μs
J9-J8 50 dB		< 1 μs		< 1 μs

NOTE: Any additional Test Data on Back

TEST: _____
 QA/QC: 03 PWS
 DATE: 2/24/99