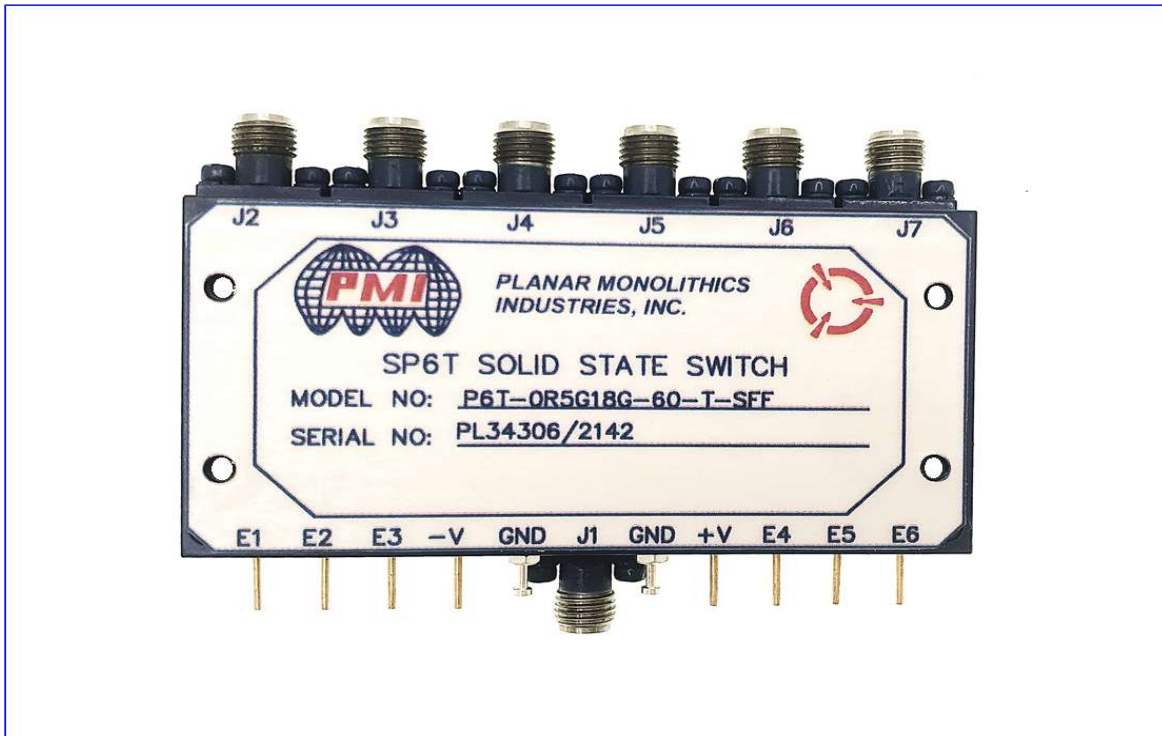




Typical Characteristics ON P6T-0R5G18G-60-T-SFF

THE MODEL P6T-0R5G18G-60-T-SFF IS AN ABSORPTIVE, SINGLE POLE, SIX THROW PIN DIODE SWITCH THAT OPERATES OVER THE 0.5 GHz TO 18 GHz FREQUENCY RANGE. THIS MODEL INCORPORATES A TTL COMPATIBLE DRIVER FOR EASY SYTEM INTEGRATION.



October 21, 2021



TABLE OF CONTENTS

1.	Product Feature: -----	3
2.	Test Data Summary: -----	4
3.	Test Data: -----	
	a. Insertion Loss: -----	5
	b. VSWR: -----	6
	c. Isolation: -----	8
4.	High Power Testing: -----	10
5.	Switching Speed: -----	11



Typical Characteristics ON P6T-0R5G18G-60-T-SFF

Outline Drawing

DESCRIPTION

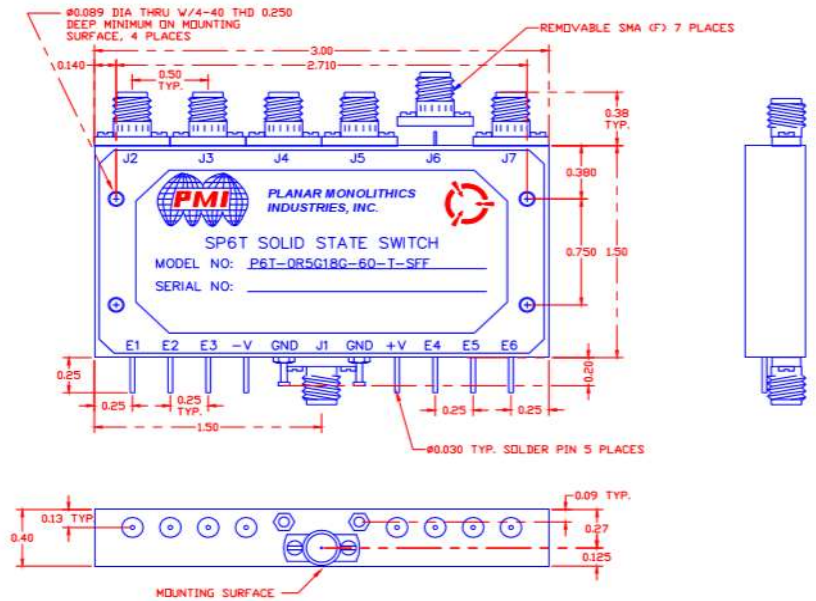
PMI MODEL P6T-0R5G18G-60-T-SFF IS AN ABSORPTIVE, SINGLE POLE, SIX THROW PIN DIODE SWITCH THAT OPERATES OVER THE 0.5 GHz TO 18 GHz FREQUENCY RANGE. THIS MODEL INCORPORATES A TTL COMPATIBLE DRIVER FOR EASY SYSTEM INTEGRATION.

SPECIFICATIONS

- FREQUENCY RANGE: 0.5 TO 18 GHz
- ISOLATION: 60 dB MIN
- INSERTION LOSS: 4.25 dB MAX
- VSWR IN / OUT: 2.0 : 1 MAX
- INPUT POWER: +20 dBm CW MAX
- RF SWITCHING SPEED: RISE: 10ns TYP, 15ns MAX
FALL: 10ns TYP, 15ns MAX
DELAY ON: 75ns TYP, 100ns MAX
DELAY OFF: 75ns TYP, 100ns MAX
- DC VOLTAGE: +5 V @ 300 mA MAX
-5 V @ 100 mA MAX
- CONTROL SIGNAL: TTL LOGIC: "0"=ON, "1"=OFF
- CONNECTORS IN/OUT: SMA FEMALE
- CONTROL CONNECTORS: SOLDER PINS
- FINISH: PAINTED BLUE

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	PRELIMINARY RELEASE	11/9/2012	

MECHANICAL OUTLINE



ENVIRONMENTAL RATINGS

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

NOTE: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

CONFIDENTIAL & PROPRIETARY

PLANAR MONOLITHICS INDUSTRIES, INC.

7311-F GROVE ROAD
FREDERICK, MARYLAND 21704 USA
TEL: 301-662-5019 FAX: 301-662-1731
WEBSITE: www.pmi-rf.com
E-MAIL: sales@pmi-rf.com
ISO 9001 CERTIFIED



ALL DIMENSIONS ARE IN INCHES
TOLERANCES:
X.XX ±0.020
X.XXX ±0.010

APPROVALS		DATE	TITLE			REV.
DRAWN	<i>KM</i>	11/9/12	PRODUCT FEATURE			A1
CHECKED			SIZE	FSOM NO.	DWG NO.	
ISSUED			A	05XQ0	27041600	
			SCALE	N: S	SHEET	1 OF 1



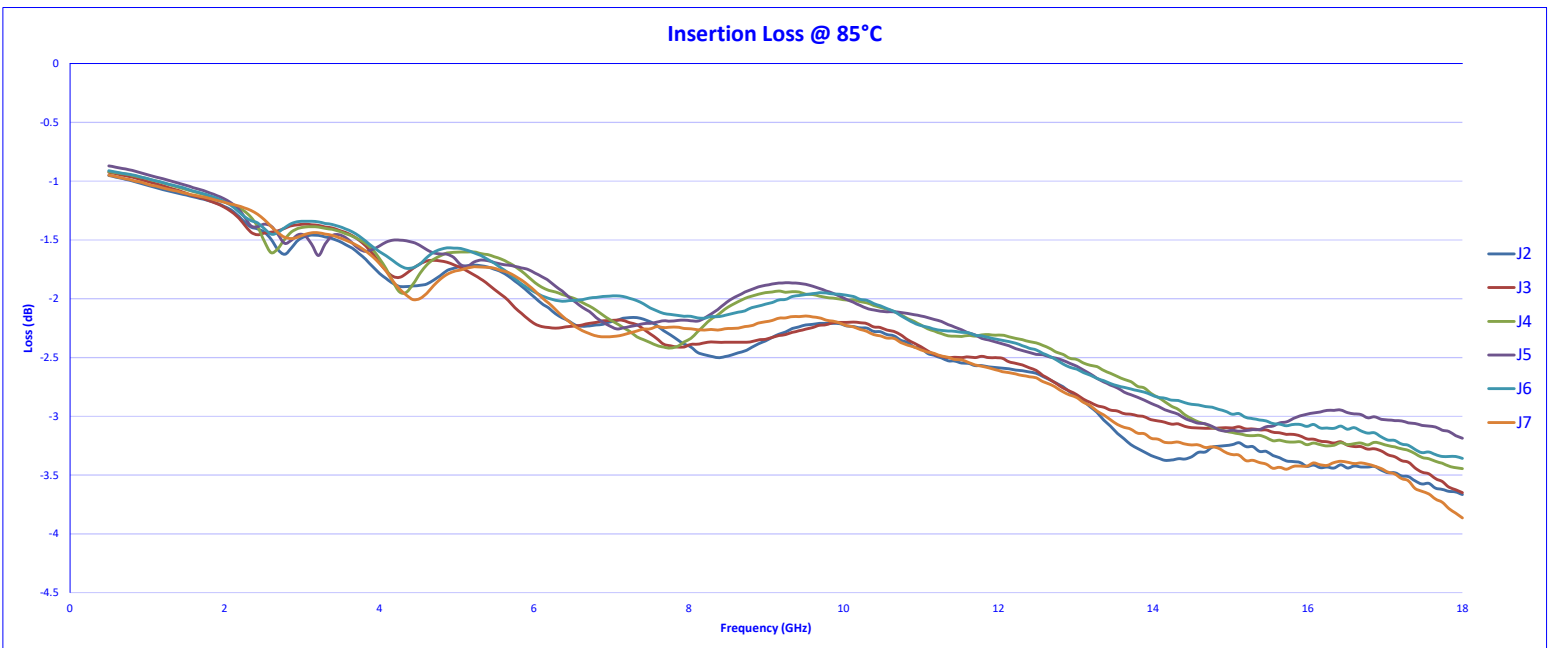
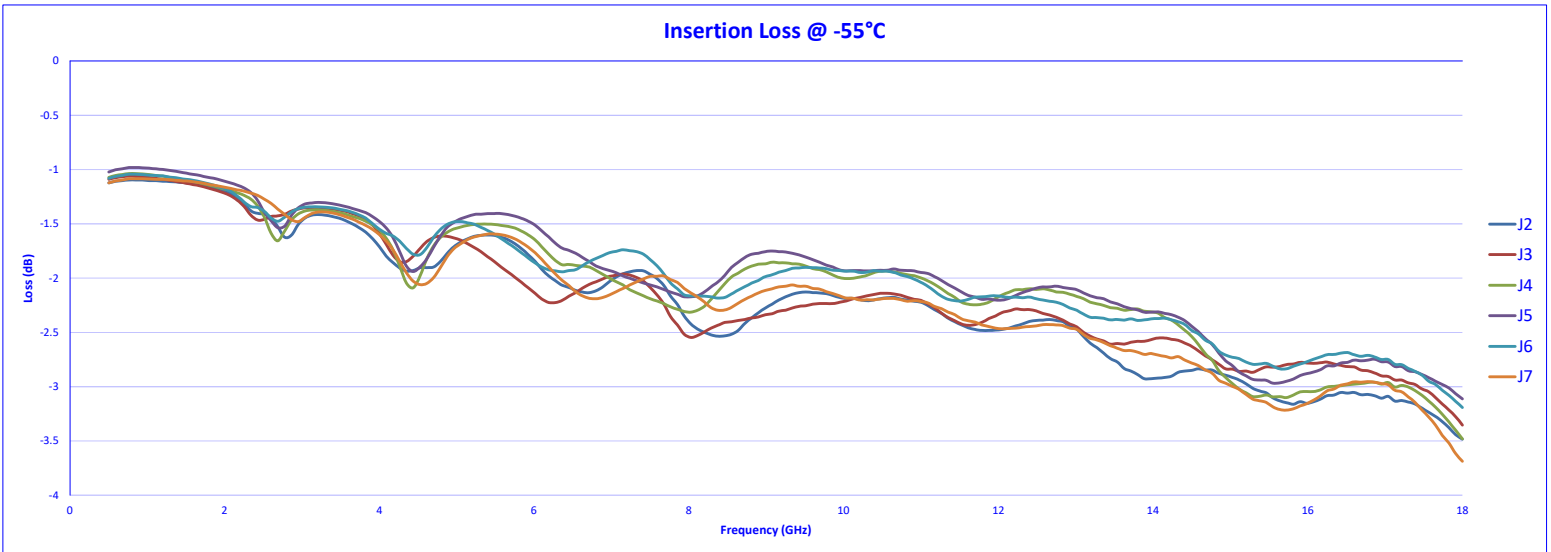
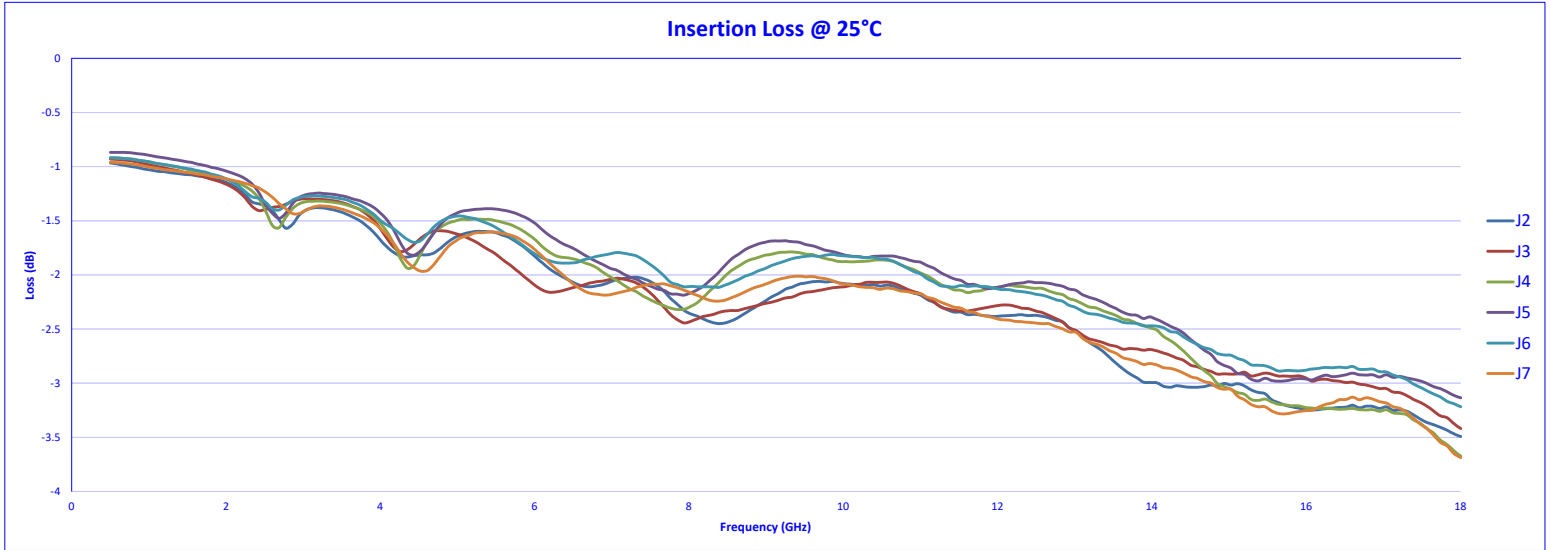
Typical Characteristics ON P6T-0R5G18G-60-T-SFF

Technical Specifications

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	TEST RESULTS			QA QC
			+25°C	-55°C	+85°C	
1	Frequency Range	0.5 GHz to 18 GHz	0.5 GHz to 18 GHz	0.5 GHz to 18 GHz	0.5 GHz to 18 GHz	
2	Isolation	60 dB Min.	64.1 dB	63.9 dB	63.9 dB	
3	Insertion Loss	4.25 dB Max.	3.7 dB	3.7 dB	3.9 dB	
4	VSWR: In/Out	2:1 Max.	1.8:1 In 1.82:1 Out	1.88:1 In 1.87:1 Out	1.8:1 In 1.83:1 Out	
5	Input Power	20 dBm CW Max.	20 dBm CW			
6	RF Switching Speed	Rise:15 ns Max. 10 ns Typ. Fall:15 ns Max. 10 ns Typ. Delay On:100 ns Max. 75 ns Typ. Delay Off:100 ns Max. 75 ns Typ.	10.6 ns 4.1 ns 45.4 ns 30.6 ns			
7	DC Supply	+5VDC @ 300 mA Max. -5VDC @ 100 mA Max.	+5VDC @ 268 mA -5VDC @ 91 mA.	+5VDC @ 268 mA -5VDC @ 91 mA	+5VDC @ 270 mA -5VDC @ 96 mA	
8	Control Signal	TTL LOGIC "0" : Insertion Loss "1" : Isolation E1 : J1-J2 E2 : J1-J3 E3 : J1-J4 E4 : J1-J5 E5 : J1-J6 E6 : J1-J7	PASS			

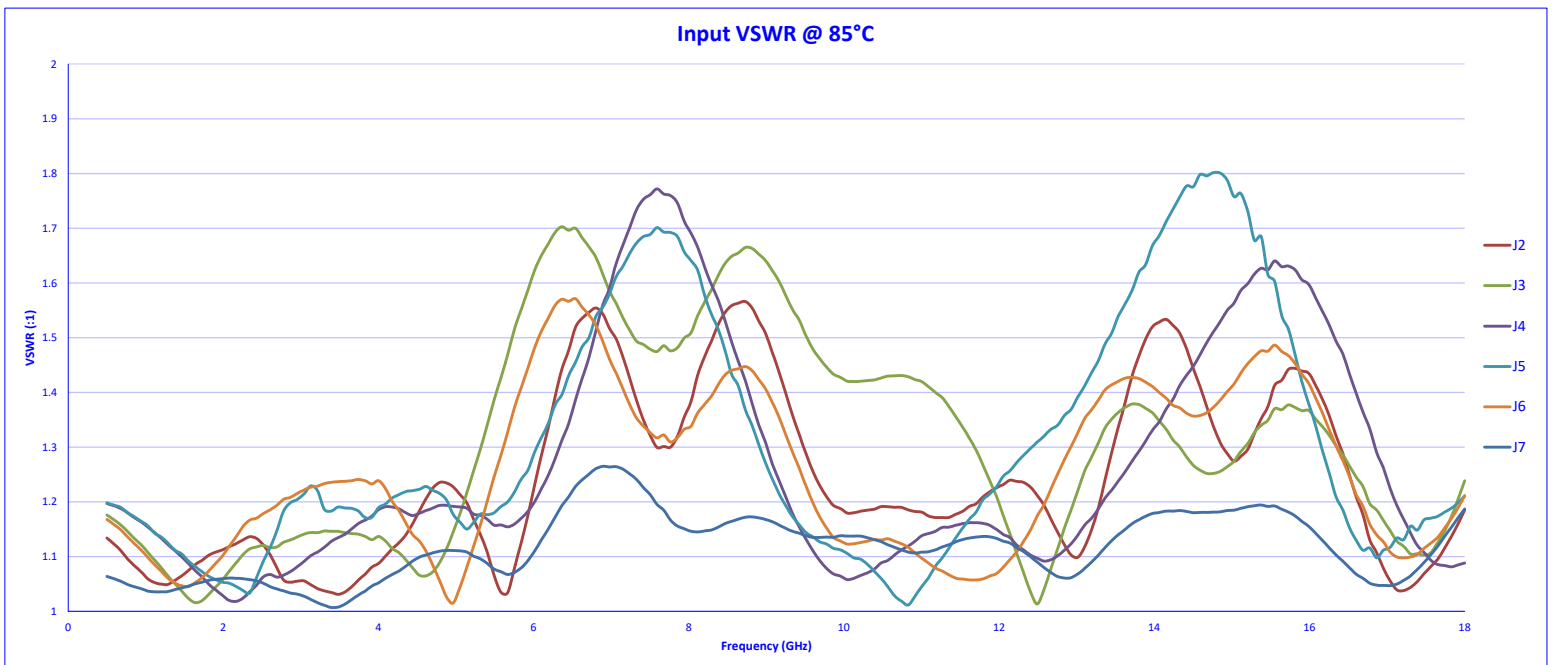
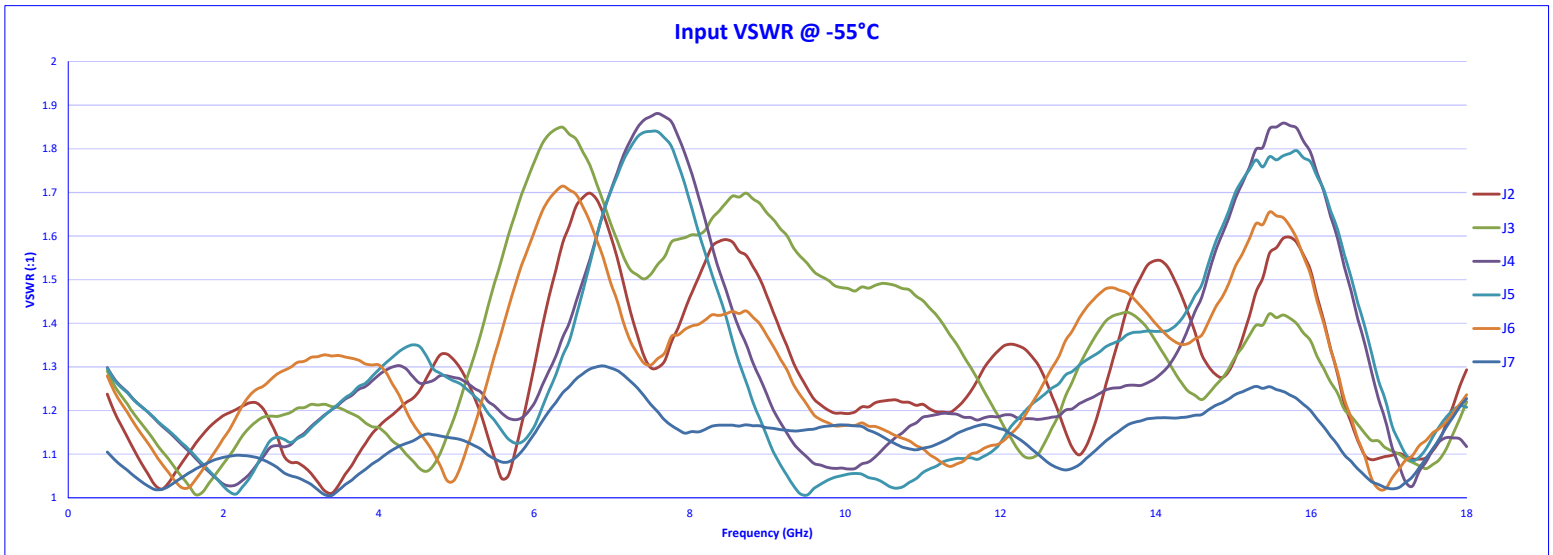
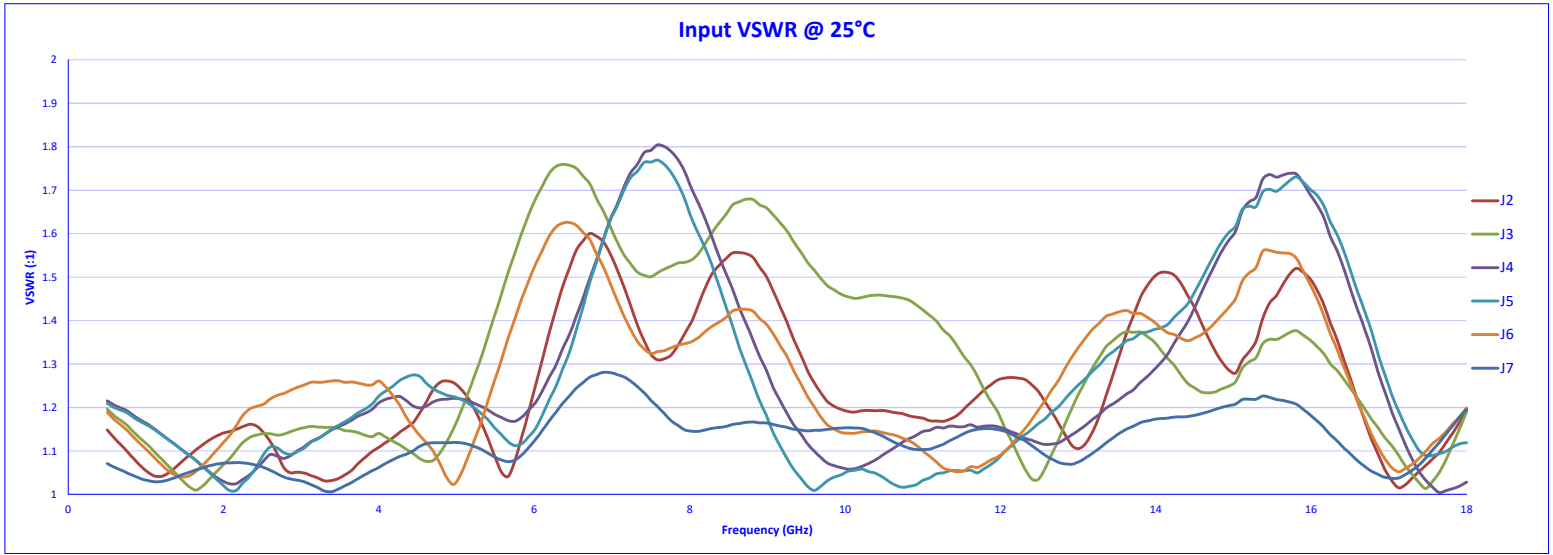


Typical Characteristics ON P6T-0R5G18G-60-T-SFF



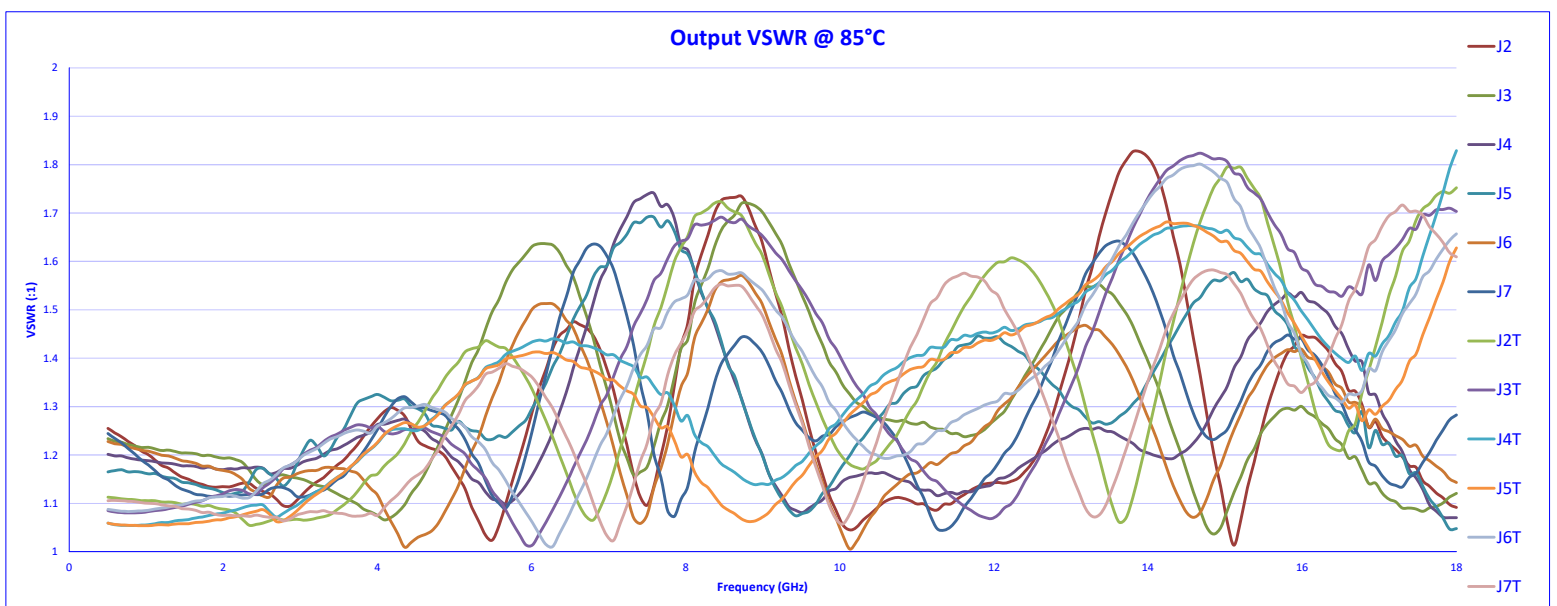
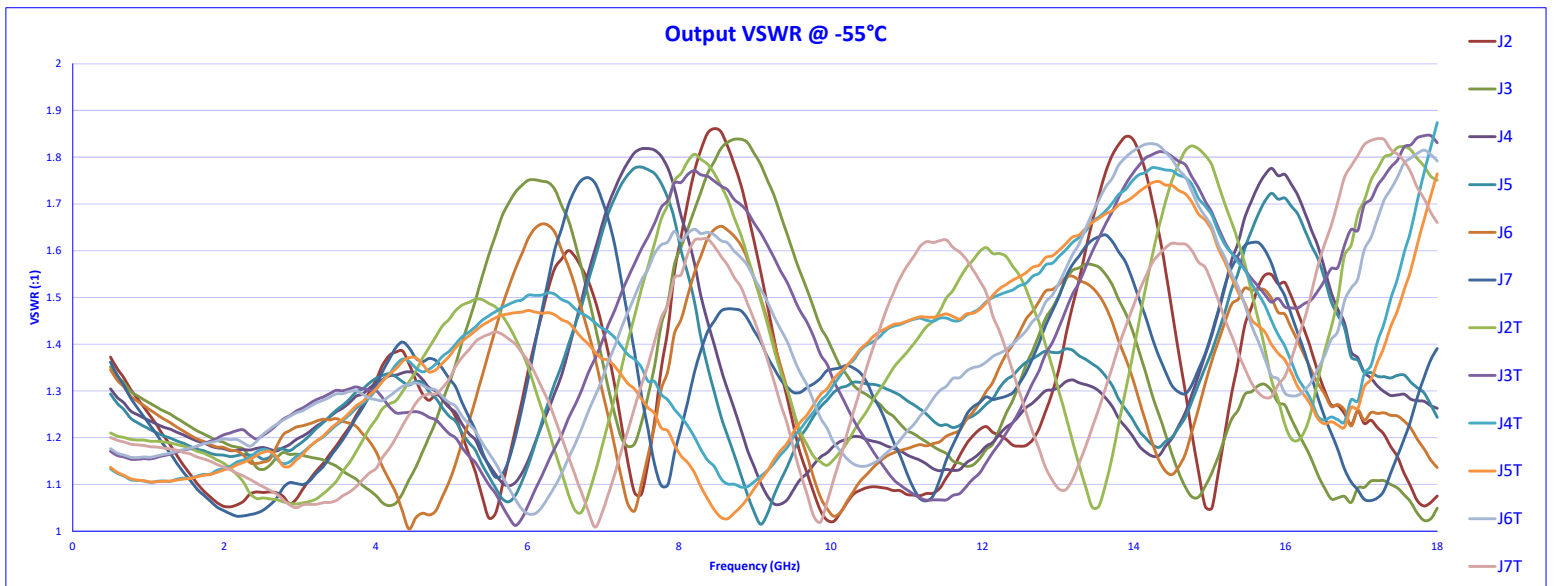
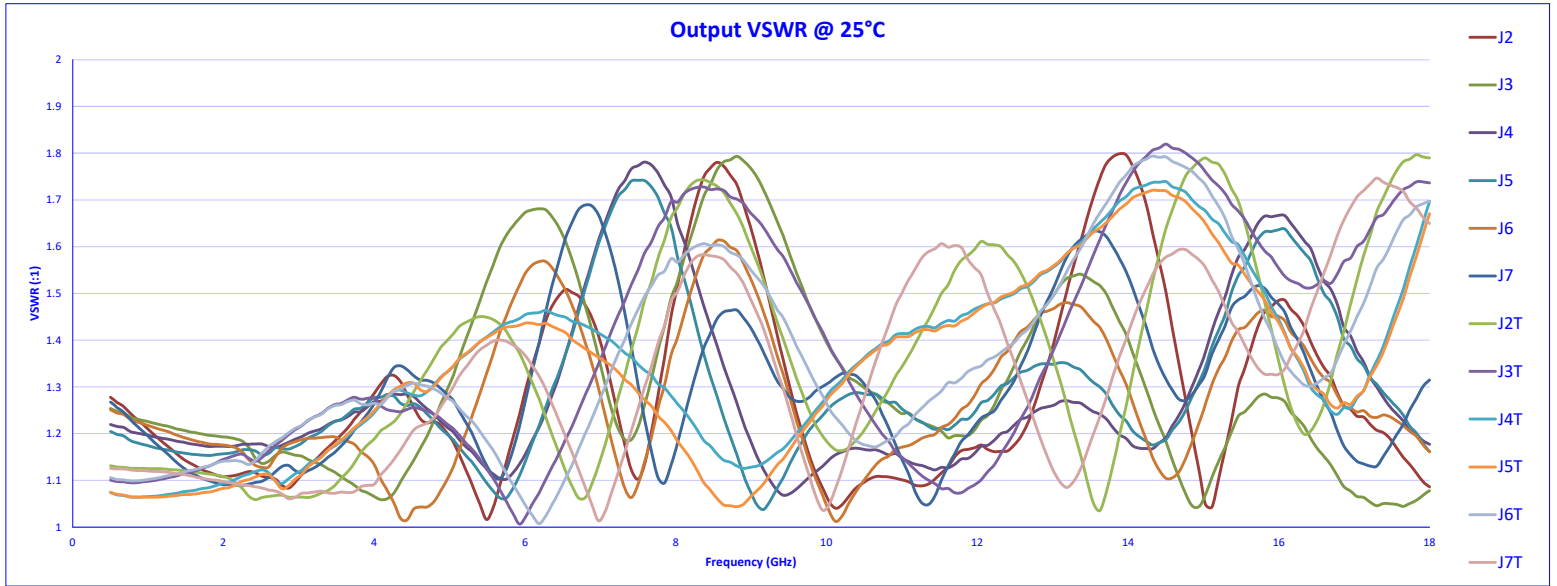


Typical Characteristics ON P6T-0R5G18G-60-T-SFF



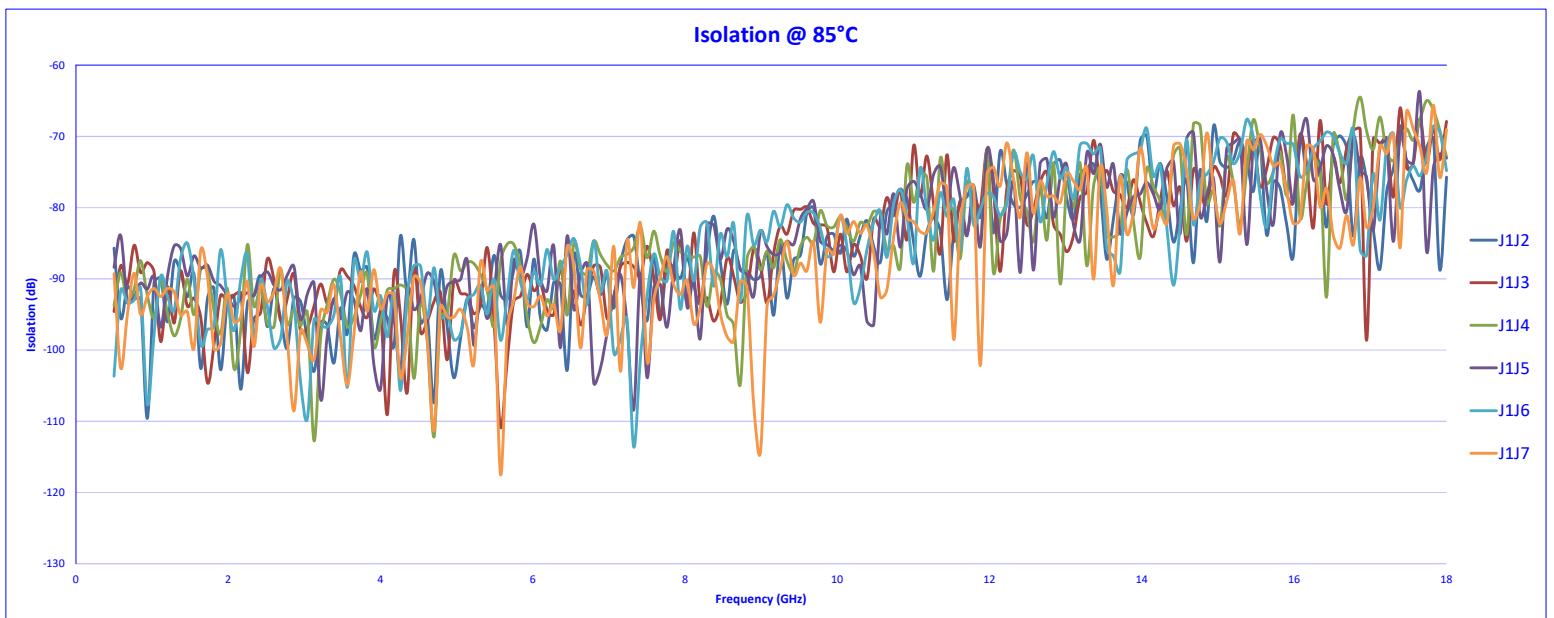
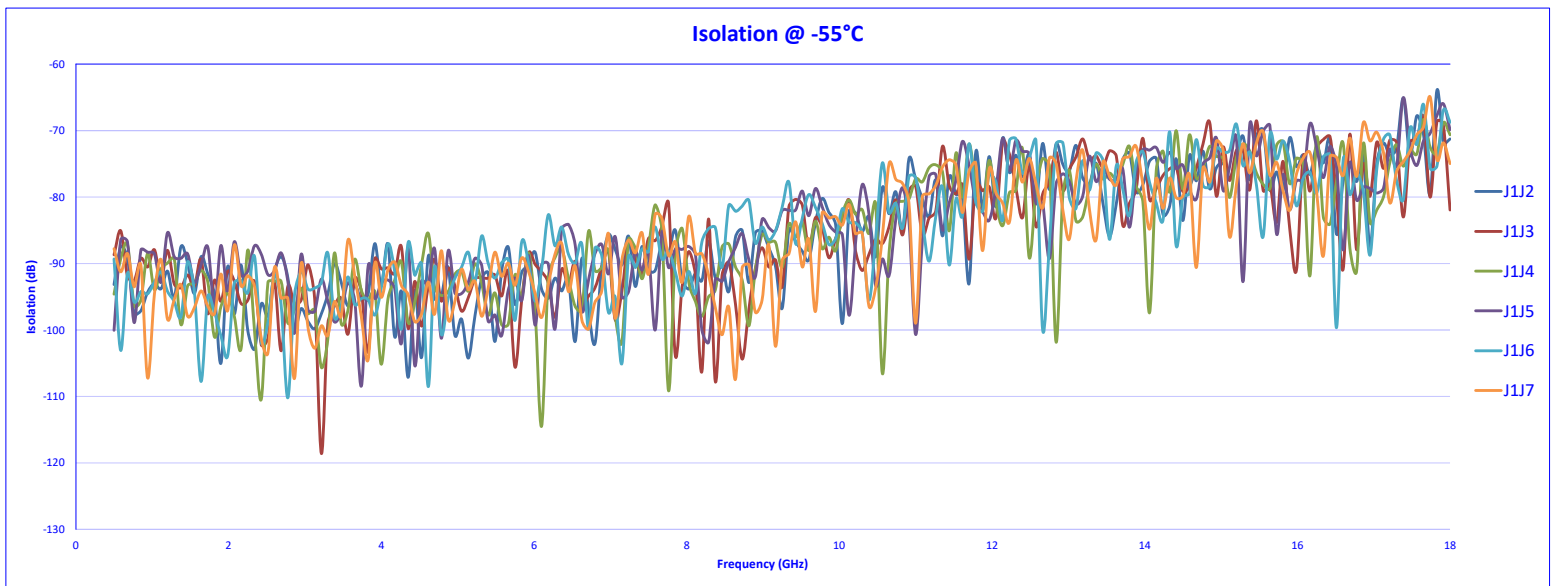
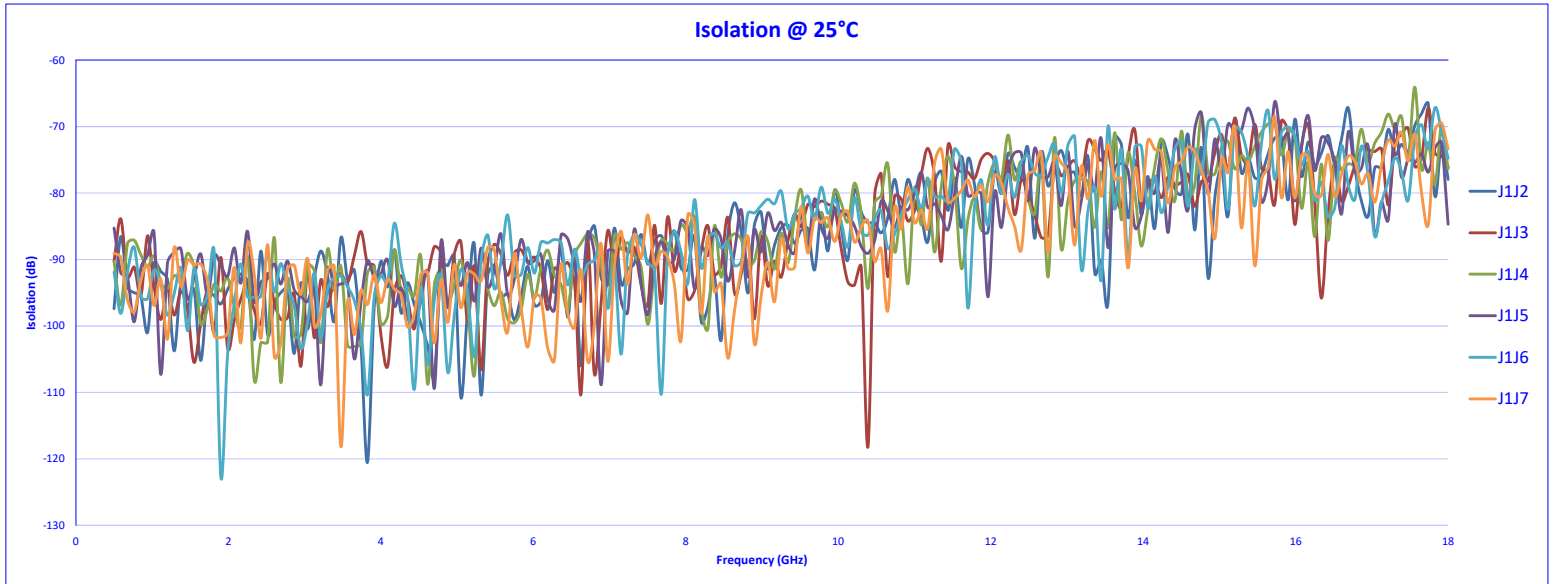


Typical Characteristics ON P6T-0R5G18G-60-T-SFF



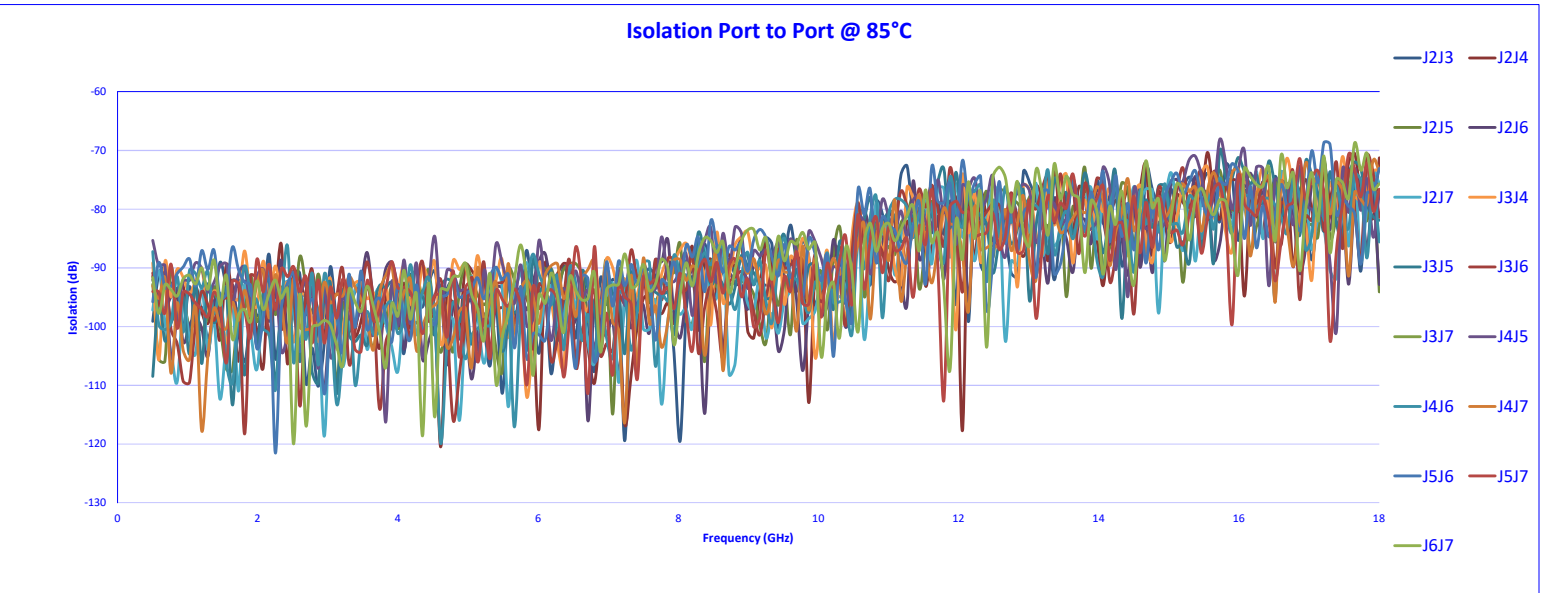
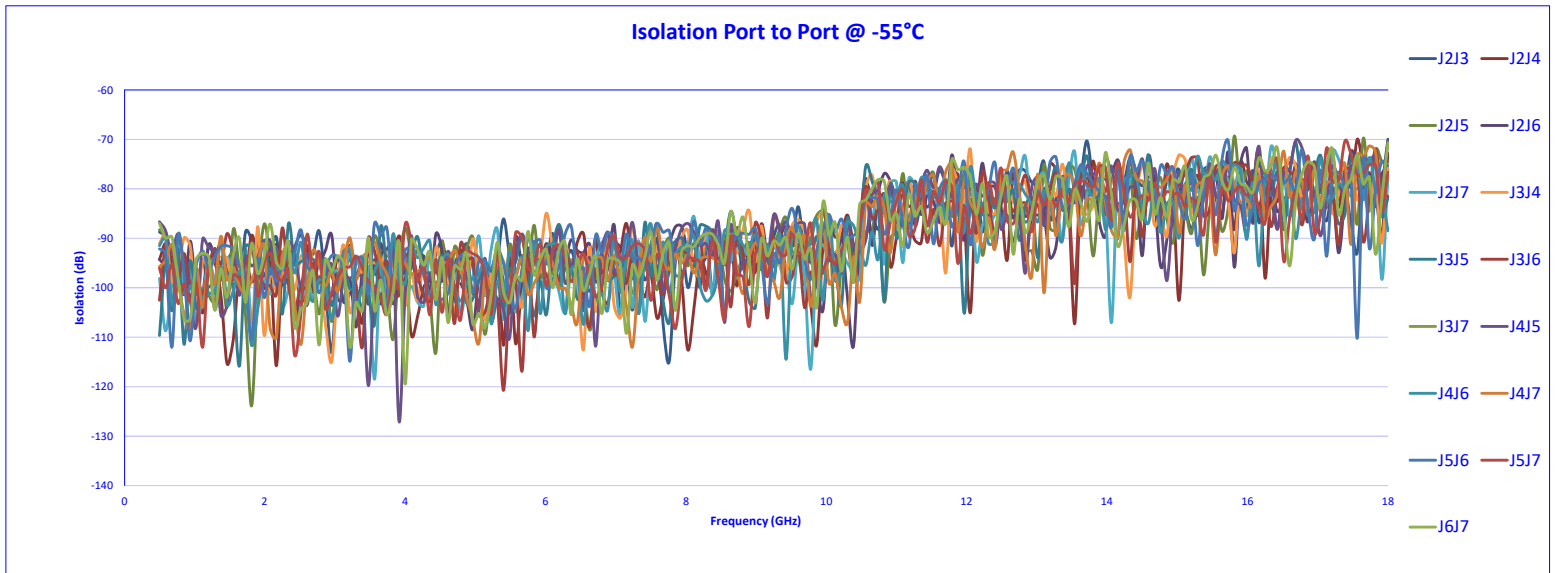
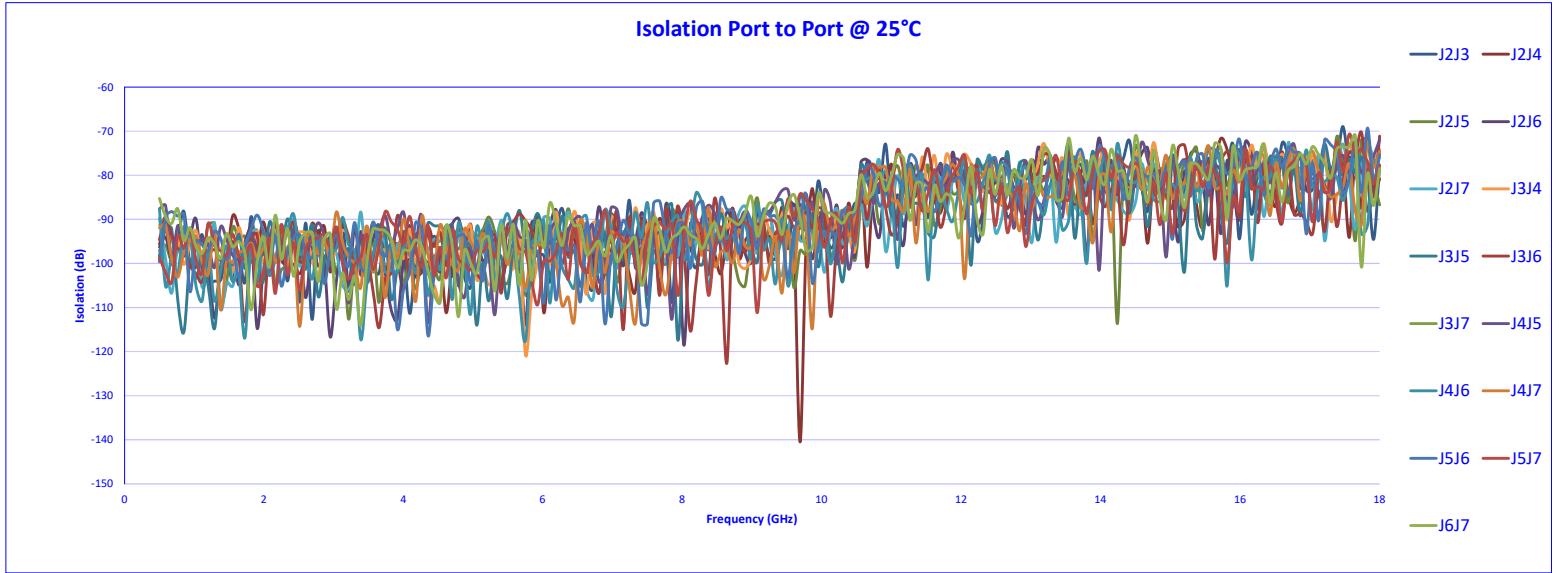


Typical Characteristics ON P6T-0R5G18G-60-T-SFF





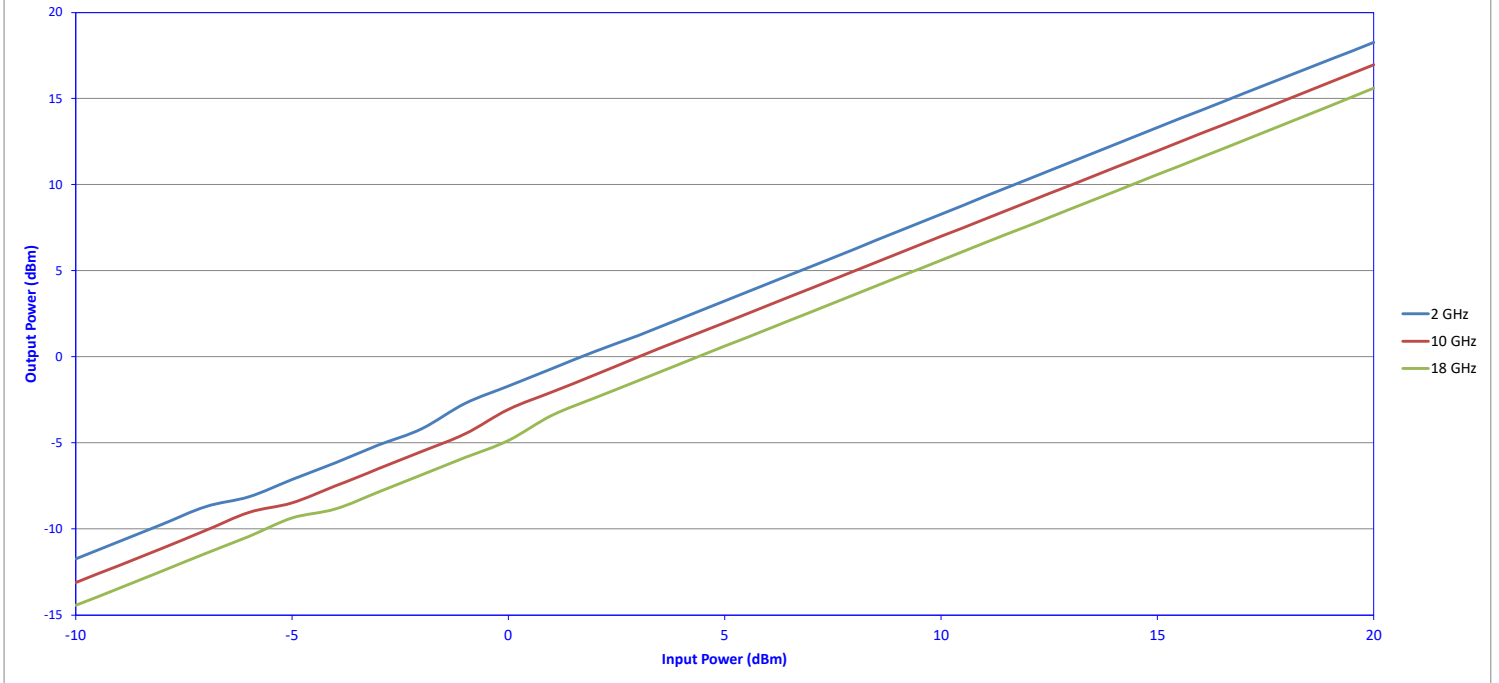
Typical Characteristics ON P6T-0R5G18G-60-T-SFF





Typical Characteristics ON P6T-0R5G18G-60-T-SFF

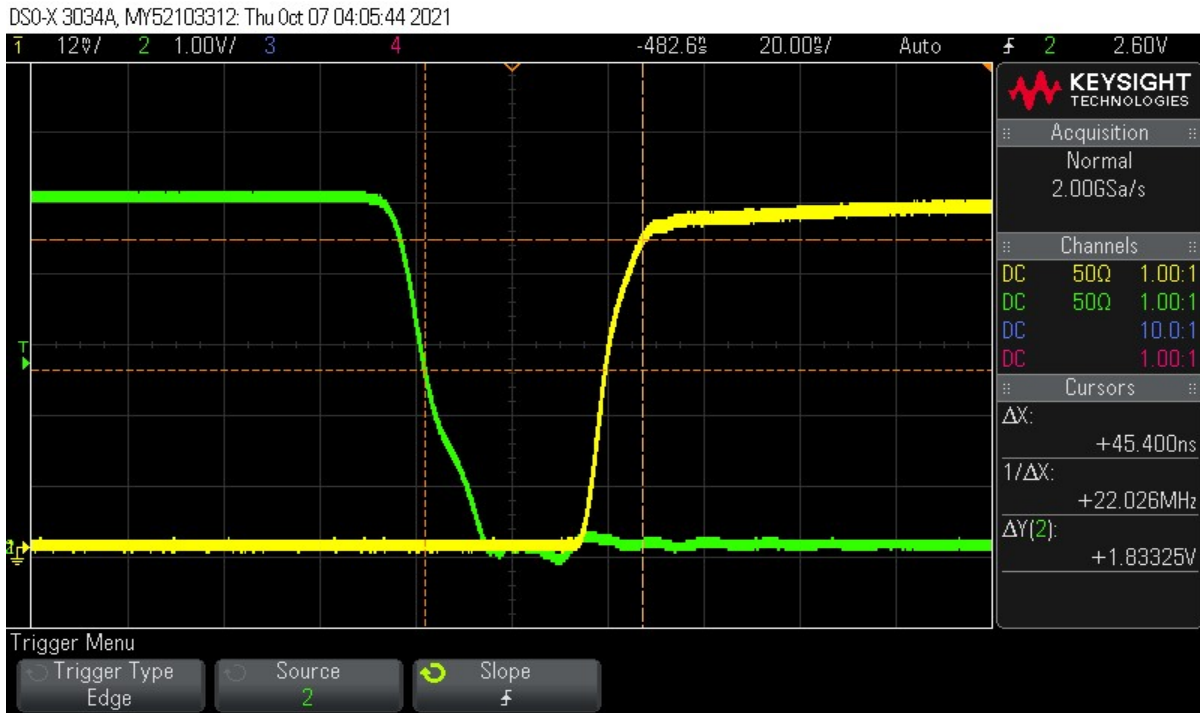
Power Handling



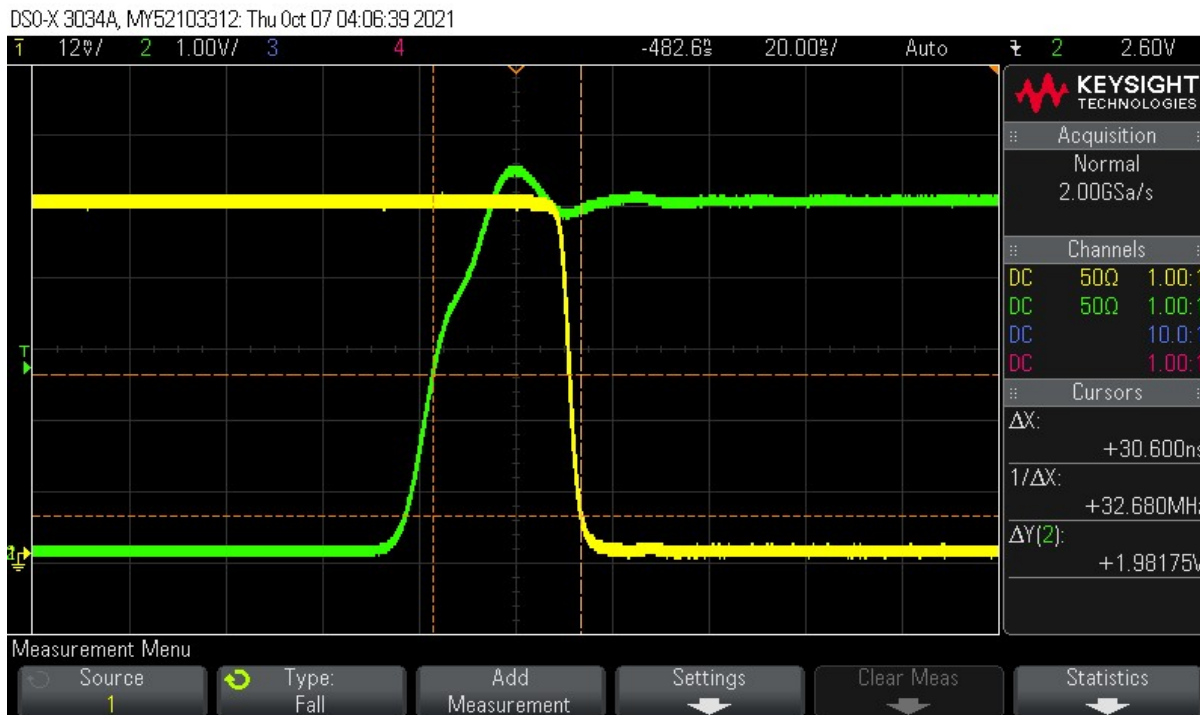


Typical Characteristics ON P6T-0R5G18G-60-T-SFF

Switching Speed ON
20 ns Per Div.
Measured Value (45.4 ns)



Switching Speed OFF
20 ns Per Div.
Measured Value (30.6 ns)



Green Trace = TTL Signal
Yellow Trace = RF Signal

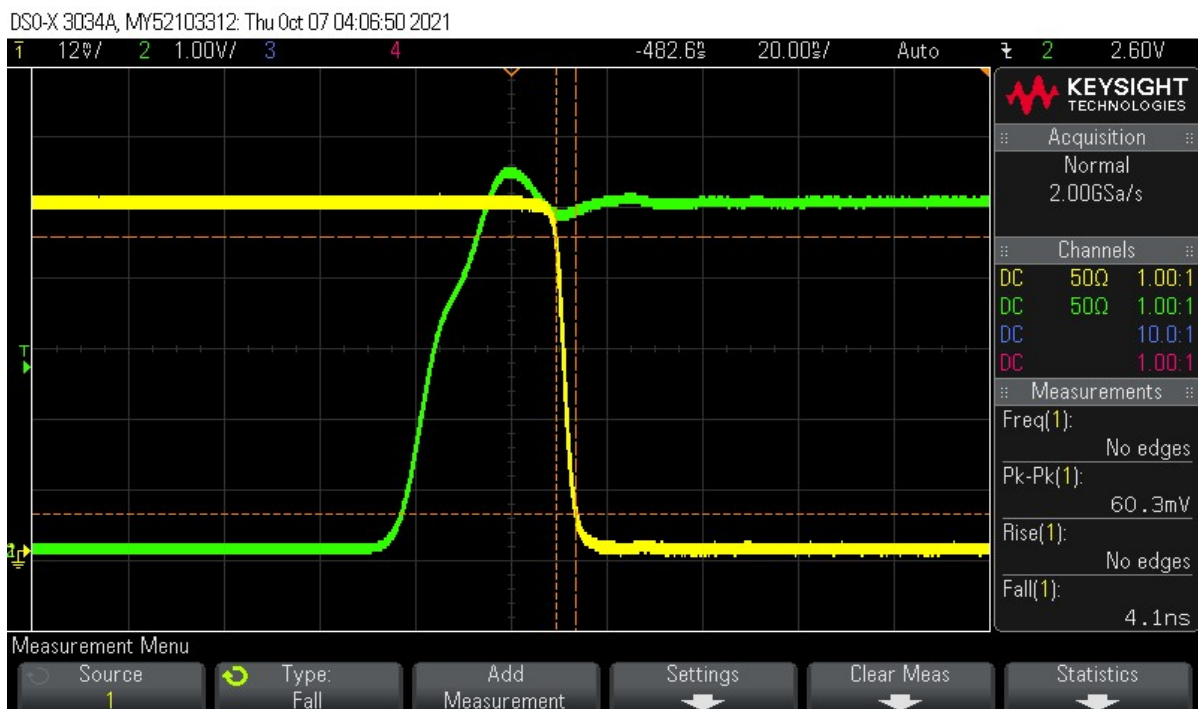


Typical Characteristics ON P6T-0R5G18G-60-T-SFF

Rise Time
20 ns Per Div.
Measured Value (10.6 ns)



Fall Time
20 ns Per Div.
Measured Value (21.6 ns)

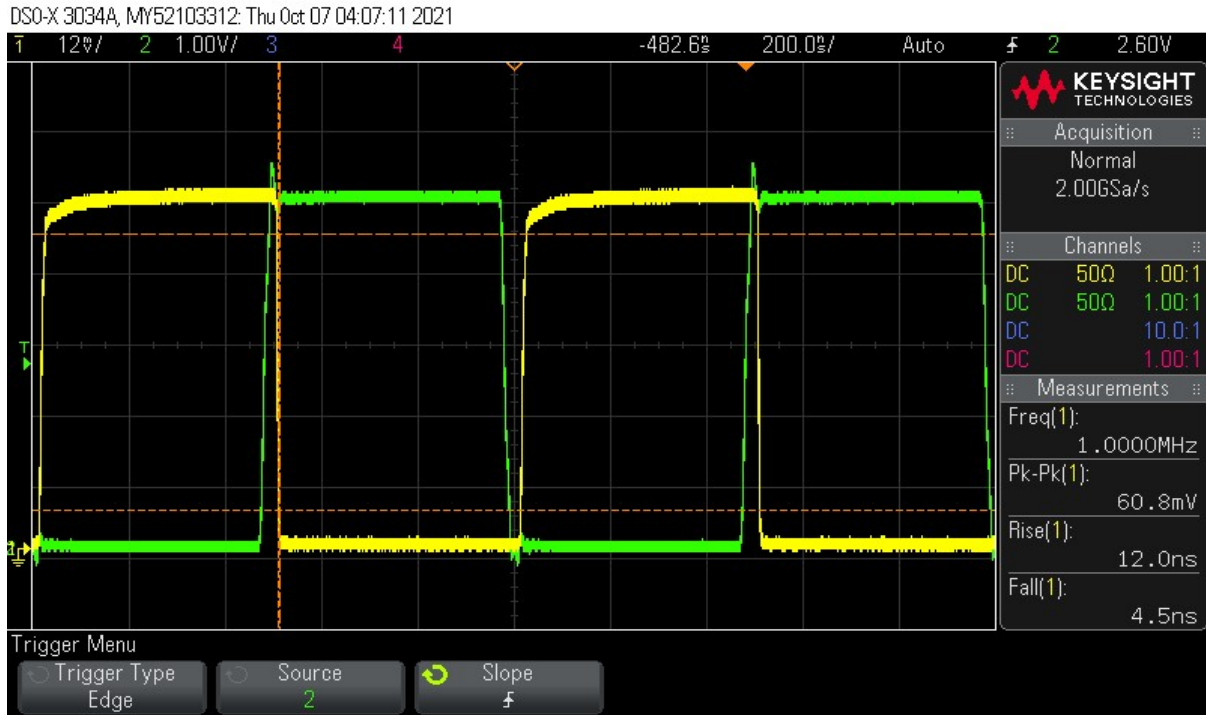


Green Trace = TTL Signal
Yellow Trace = RF Signal



Typical Characteristics ON P6T-0R5G18G-60-T-SFF

Full Pulse
200 ns Per Div.



Green Trace = TTL Signal
Yellow Trace = RF Signal