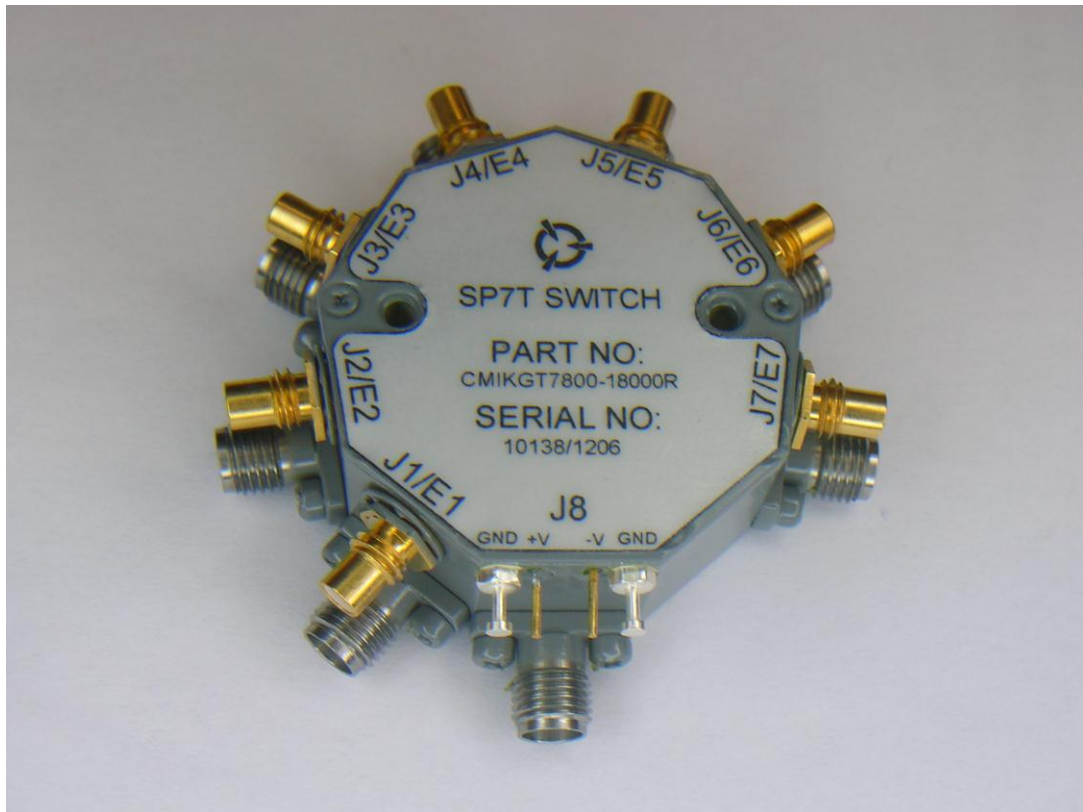




**TYPICAL CHARACTERISTICS  
FOR  
P7T-0R8G18G-60-T-SFF-SMC**



**TESTED & REPORTED BY:  
PAUL KUHN & RANDY COMBS  
August 22, 2012**



**TYPICAL CHARACTERISTICS  
FOR  
P7T-0R8G18G-60-T-SFF-SMC**

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC		
1	Frequency Range:	0.8 GHz – 18 GHz	<b>Pass 0.8 GHz – 18 GHz</b>			
2	Insertion Loss:	4.3dB Max.	<b>Pass (See Plot)</b>			
3	Isolation:	0.8 GHz to 18 GHz: 60 dB Min	<b>Pass (See Plot)</b>			
4	VSWR:	In/Out 2.0:1 Out/Off 2.0:1	<b>Pass (See Plot)</b>			
5	Switching Speed:	Rise: 15ns Max. Fall: 15ns Max. Delay On: 75ns Max. Delay Off: 75ns Max.	<b>Pass (See Plot)</b>			
6	Input Power:	+20dBm CW (Standard) 1W CW(Survival)	<b>Pass Pass</b>			
7	DC Supply:	+5V @ 350mA Max. -5V @ 100mA Max.	<b>Pass 283 mA 44 mA</b>			
8	Control Signal:	TTL "0" → (On) TTL "1" → (Off)	<b>Pass</b>			
SPECIFICATIONS REQUIRED	INSERTION LOSS 4.3dB	VSWR (2:1/9.54dB)	ISOLATION 60dB	SWITCHING SPEED 75ns	POWER ≤20dBm (STD) ≤30dBm (SURVIVAL)	AVG UNIT ERROR INCLUDING TEMP. WAVES ≤ 0.2dB
PERFORMANCE VARIATION INCONSISTENCY*	±0.5dB	±1dB	±5dB	±5ns	COMPLIANT	≤ 0.75dB

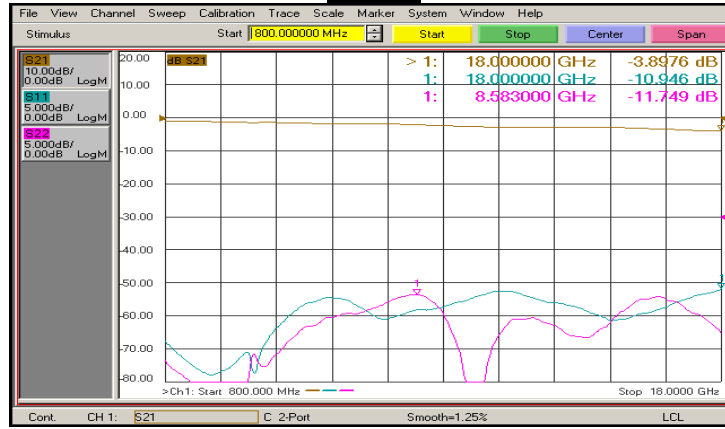
\* CONSISTENCY/STABILITY FOR EACH DEVICE



# TYPICAL CHARACTERISTICS FOR P7T-0R8G18G-60-T-SFF-SMC

## (J8 - J1) Insertion Loss and Return Loss

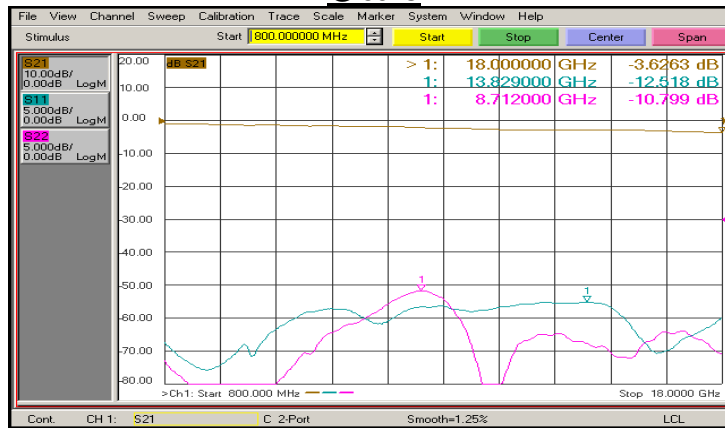
**@ 25°C**



**@ -40°C**



**@ 85°C**

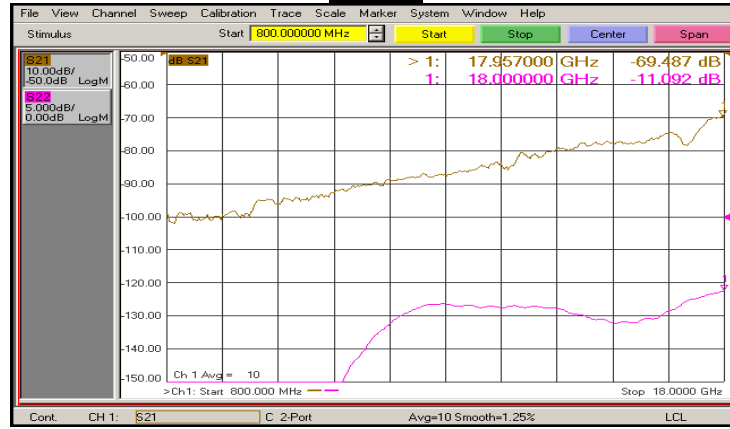




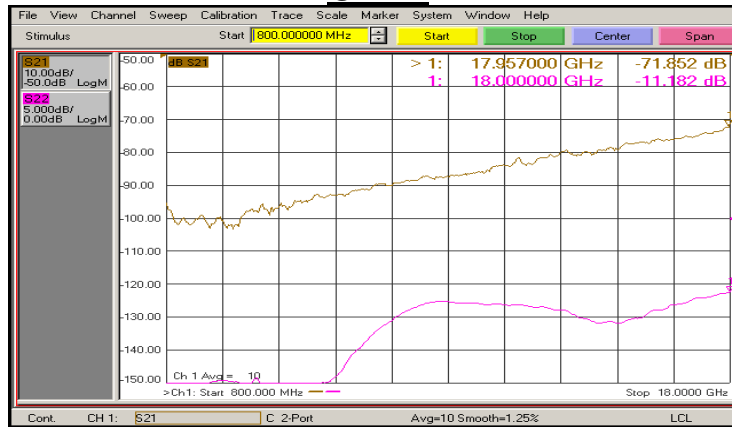
# TYPICAL CHARACTERISTICS FOR P7T-0R8G18G-60-T-SFF-SMC

## (J8 – J1) Isolation and Termination Return Loss

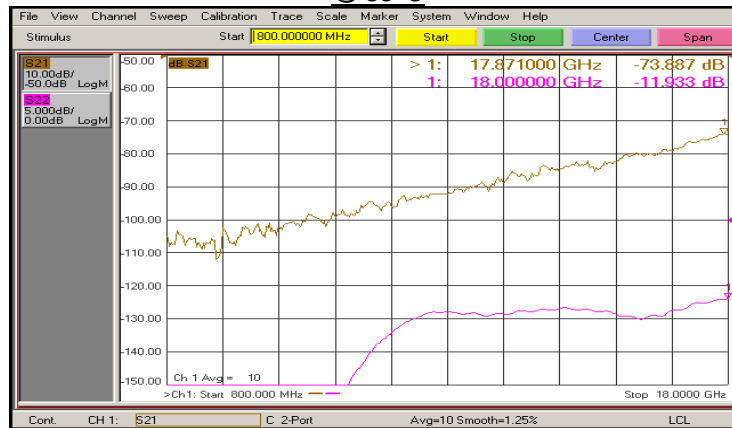
@ 25°C



@ -40°C



@ 85°C

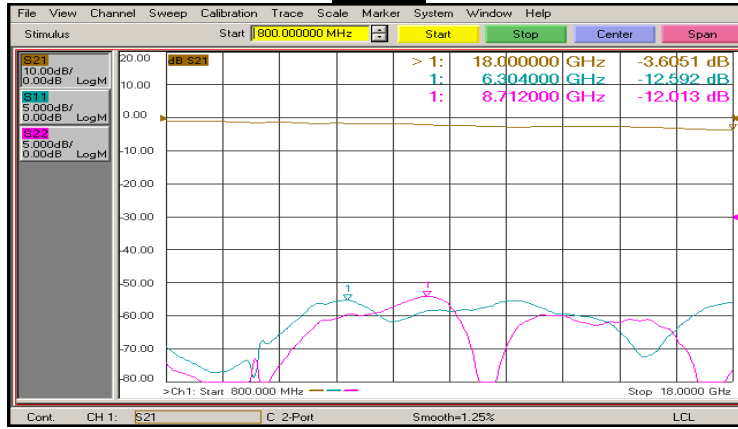




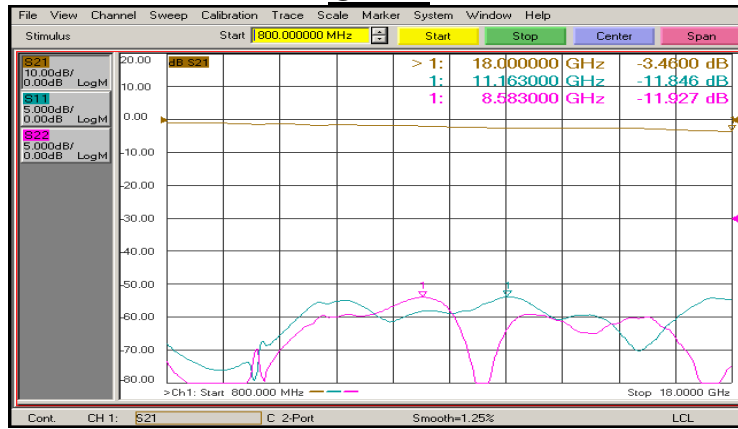
# TYPICAL CHARACTERISTICS FOR P7T-0R8G18G-60-T-SFF-SMC

## (J8 - J2) Insertion Loss and Return Loss

@ 25°C



@ -40°C



@ 85°C

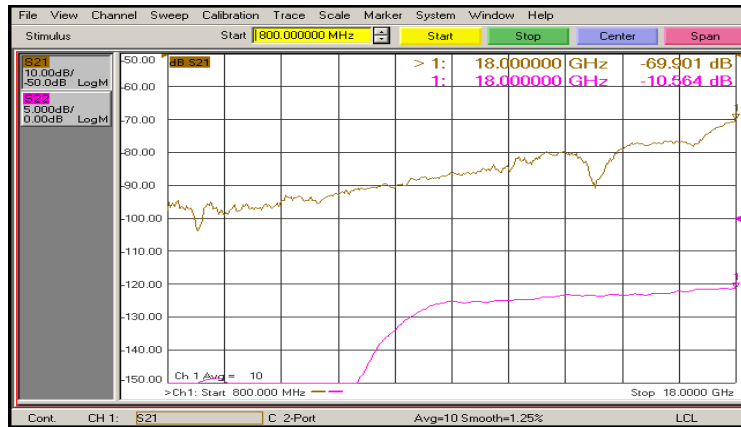




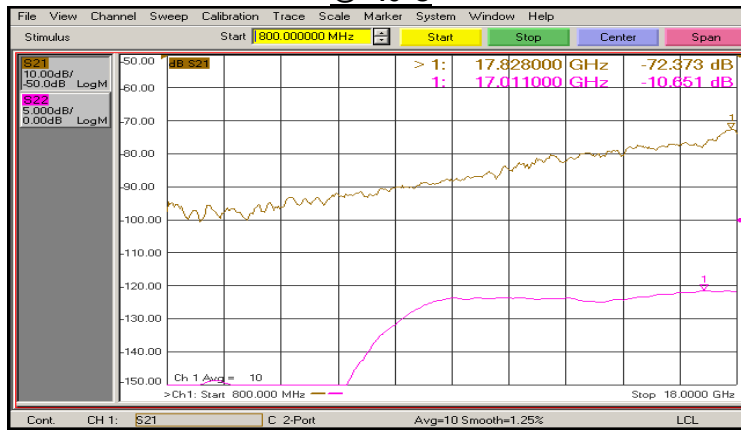
# TYPICAL CHARACTERISTICS FOR P7T-0R8G18G-60-T-SFF-SMC

## (J8 – J2) Isolation and Termination Return Loss

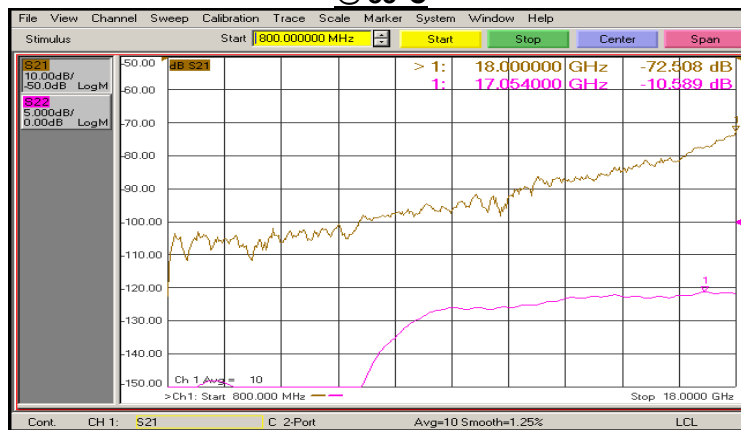
**@ 25°C**



**@ -40°C**



**@ 85°C**





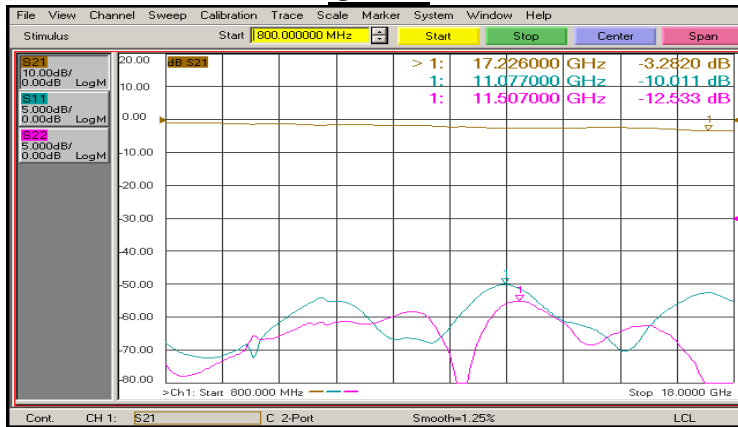
# TYPICAL CHARACTERISTICS FOR P7T-0R8G18G-60-T-SFF-SMC

## (J8 - J3) Insertion Loss and Return Loss

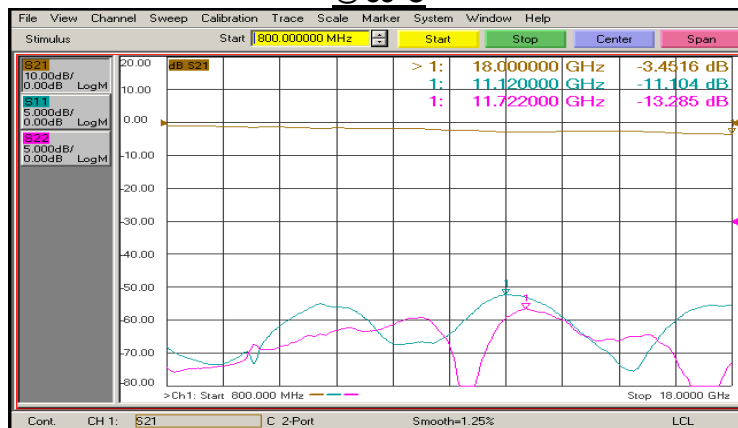
@ 25°C



@ -40°C



@ 85°C

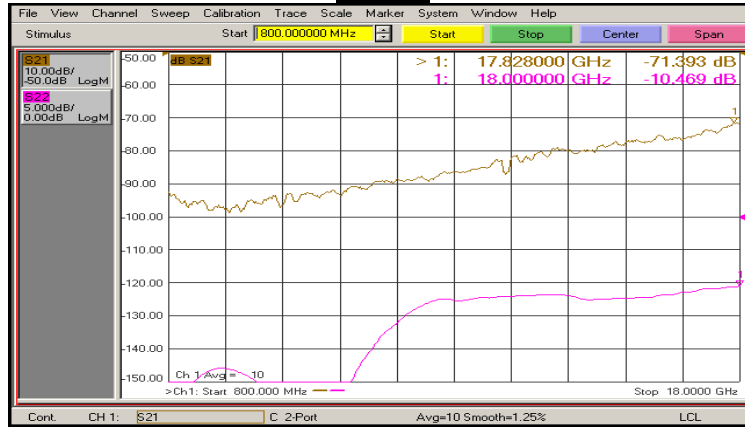




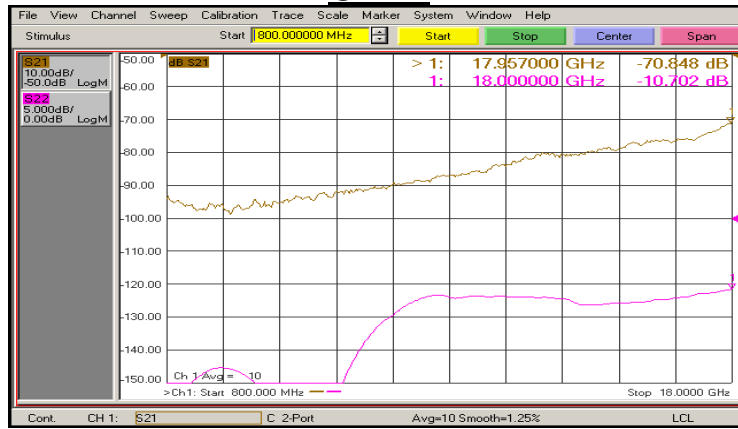
# TYPICAL CHARACTERISTICS FOR P7T-0R8G18G-60-T-SFF-SMC

## (J8 – J3) Isolation and Termination Return Loss

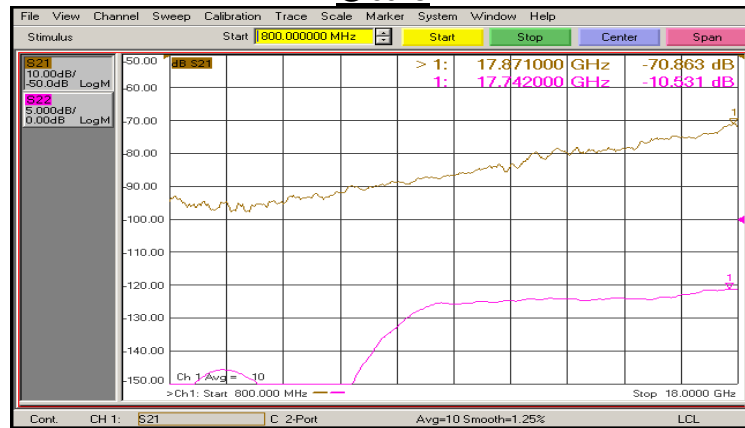
**@ 25°C**



**@ -40°C**



**@ 85°C**



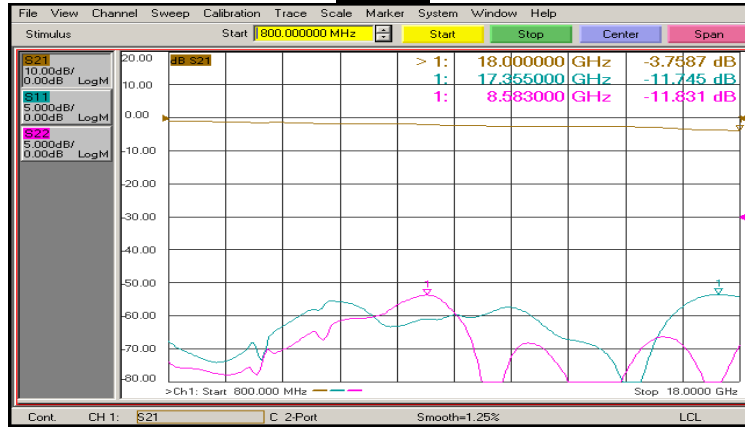




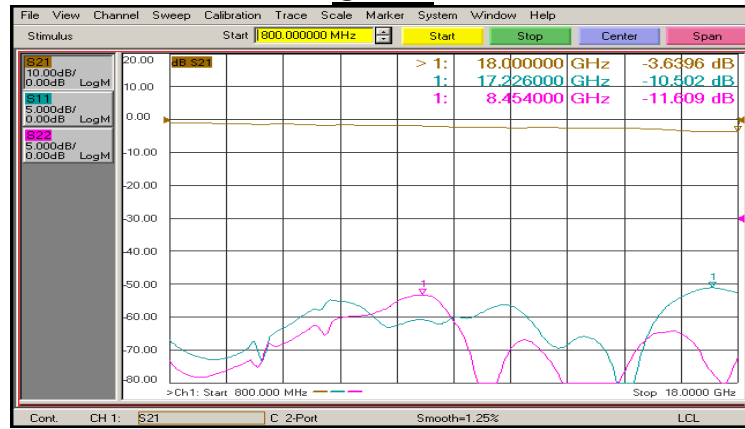
# TYPICAL CHARACTERISTICS FOR P7T-0R8G18G-60-T-SFF-SMC

## (J8 - J4) Insertion Loss and Return Loss

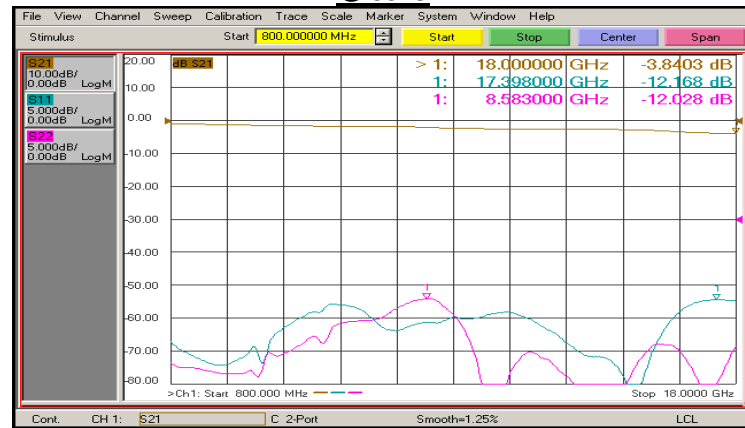
@ 25°C



@ -40°C



@ 85°C

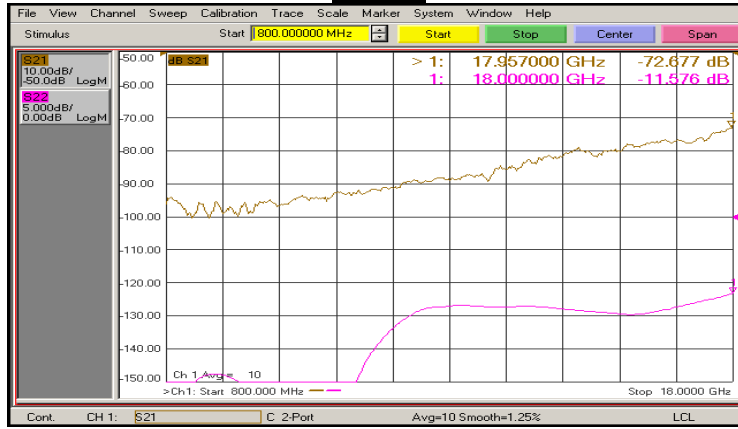




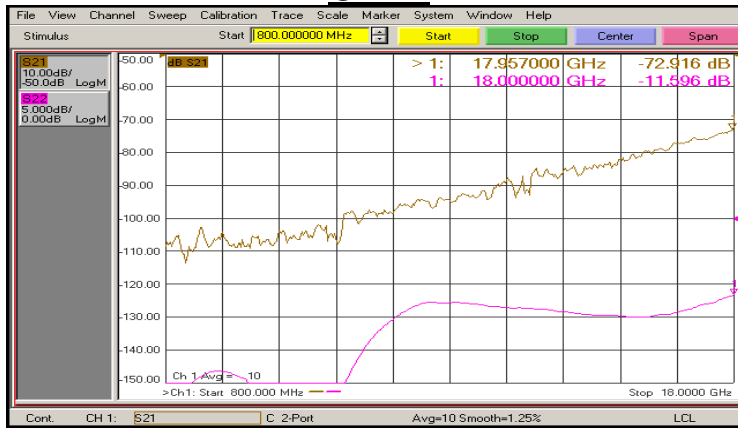
# TYPICAL CHARACTERISTICS FOR P7T-0R8G18G-60-T-SFF-SMC

## (J8 – J4) Isolation and Termination Return Loss

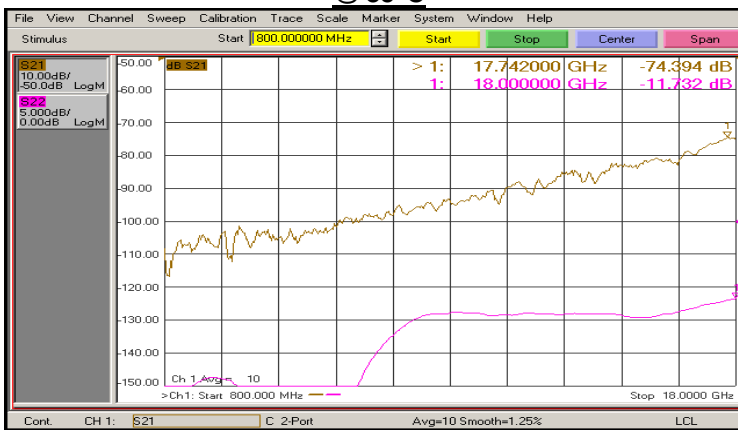
@ 25°C



@ -40°C



@ 85°C

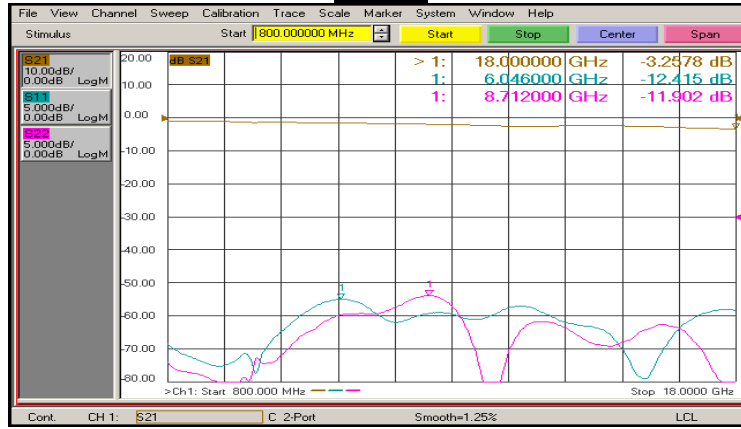




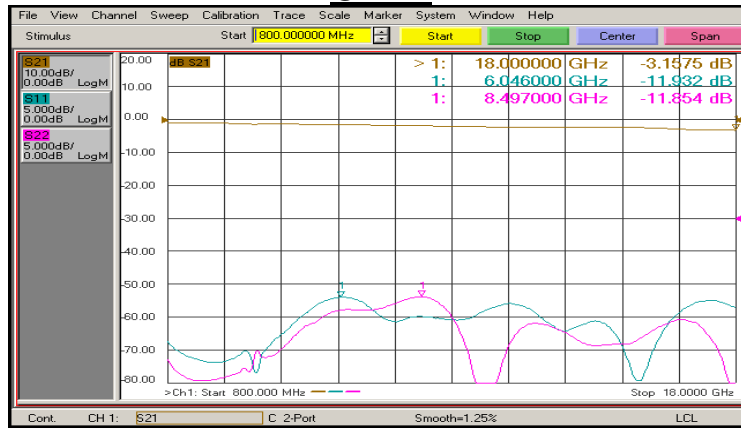
# TYPICAL CHARACTERISTICS FOR P7T-0R8G18G-60-T-SFF-SMC

## (J8 - J5) Insertion Loss and Return Loss

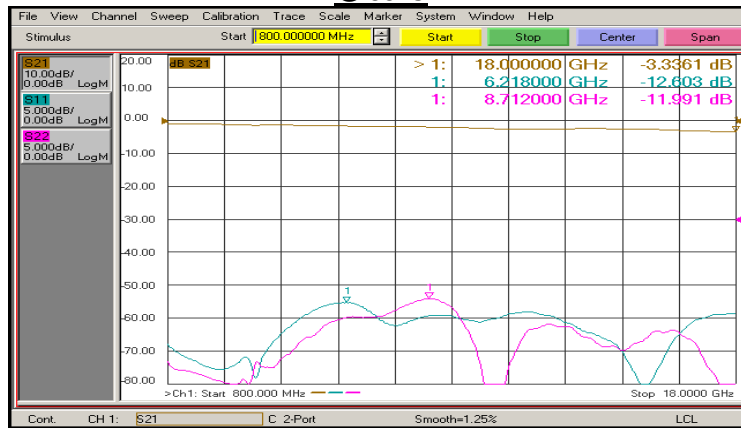
@ 25°C



@ -40°C



@ 85°C

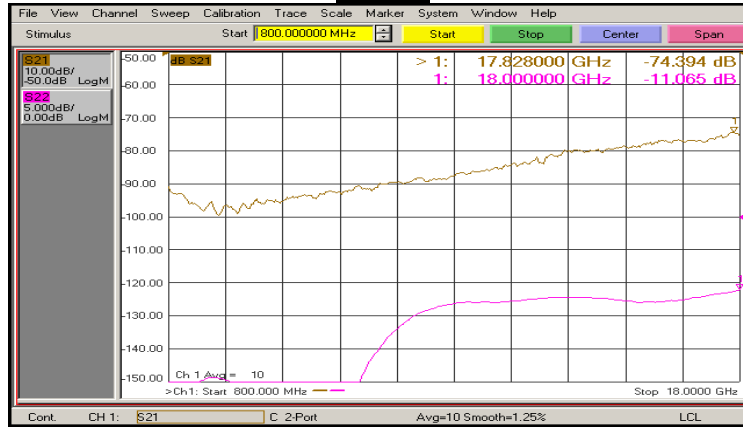




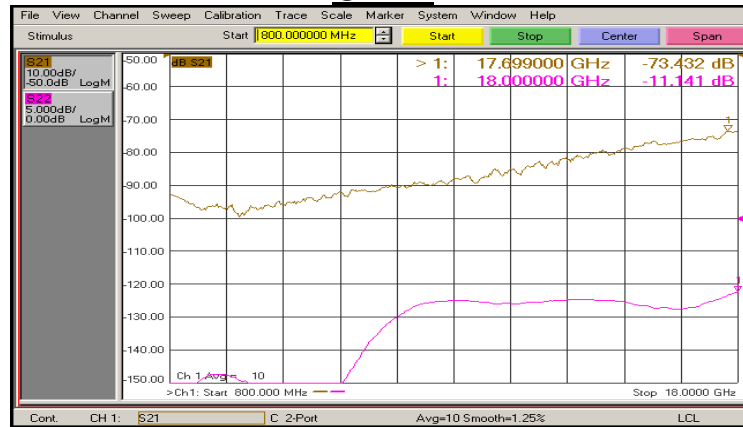
# TYPICAL CHARACTERISTICS FOR P7T-0R8G18G-60-T-SFF-SMC

## (J8 – J5) Isolation and Termination Return Loss

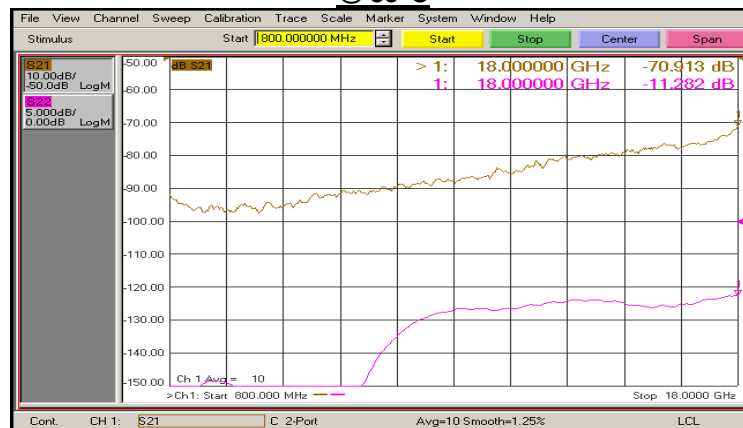
**@ 25°C**



**@ -40°C**



**@ 85°C**

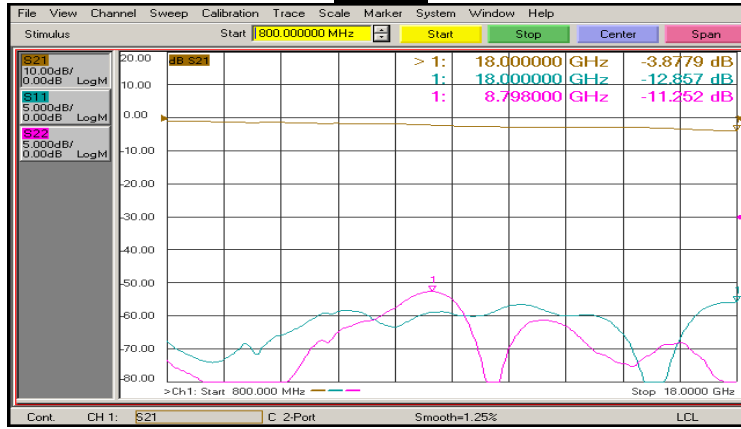




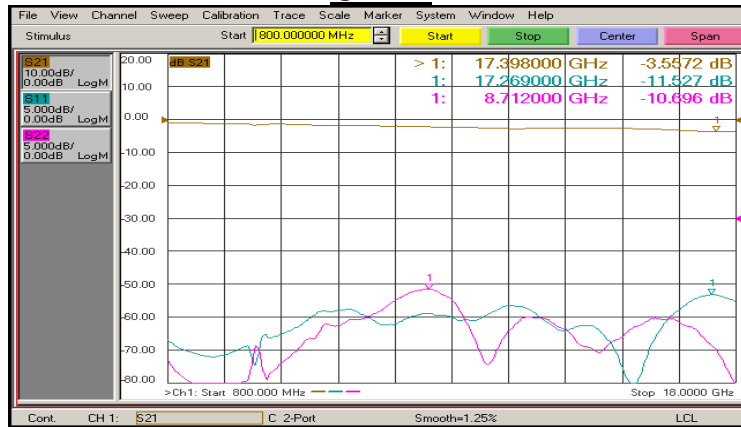
# TYPICAL CHARACTERISTICS FOR P7T-0R8G18G-60-T-SFF-SMC

## (J8 - J6) Insertion Loss and Return Loss

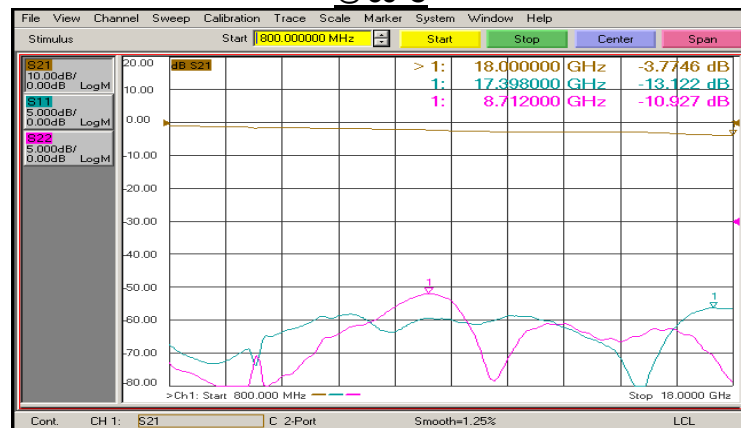
@ 25°C



@ -40°C



@ 85°C

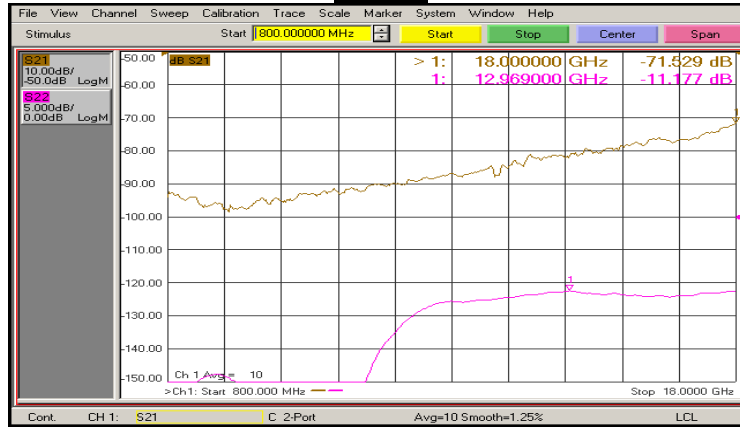




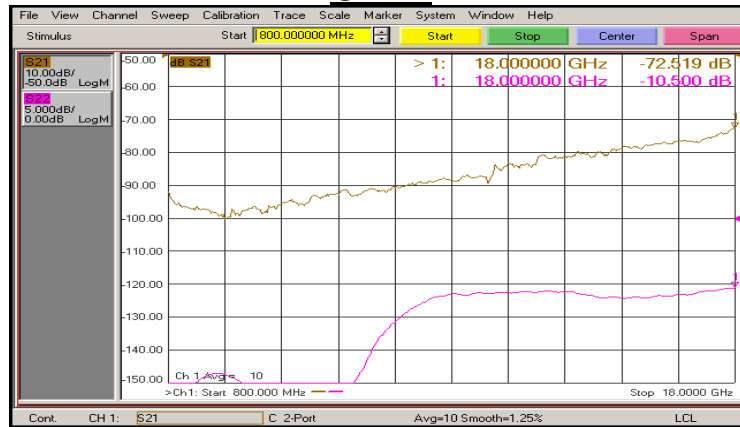
# TYPICAL CHARACTERISTICS FOR P7T-0R8G18G-60-T-SFF-SMC

## (J8 – J6) Isolation and Termination Return Loss

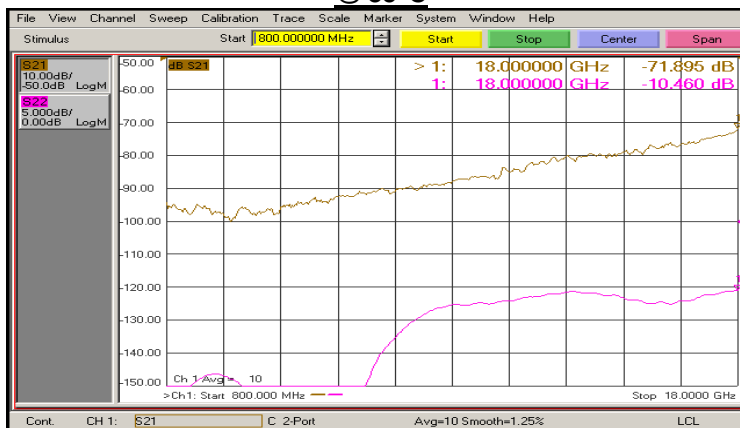
@ 25°C



@ -40°C



@ 85°C





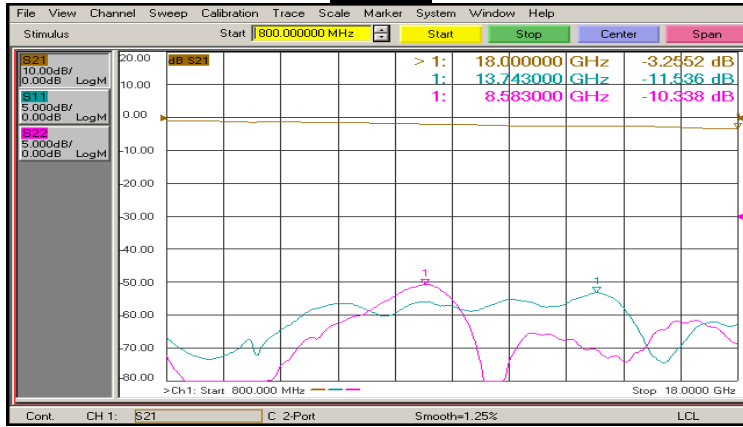
# TYPICAL CHARACTERISTICS FOR P7T-0R8G18G-60-T-SFF-SMC

## (J8 - J7) Insertion Loss and Return Loss

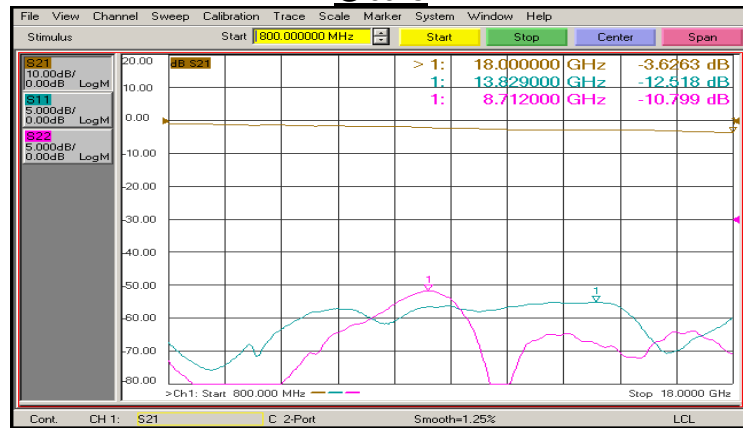
@ 25°C



@ -40°C



@ 85°C

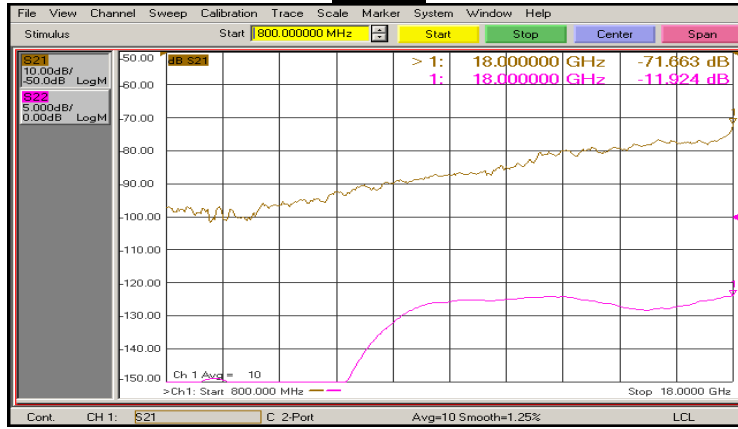




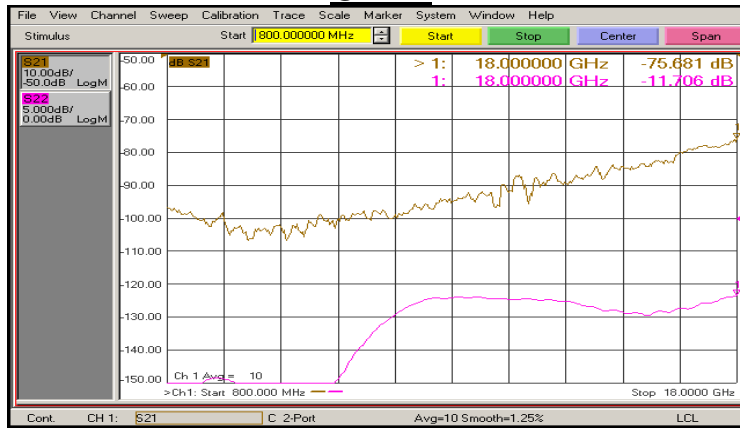
# TYPICAL CHARACTERISTICS FOR P7T-0R8G18G-60-T-SFF-SMC

## (J8- J7) Isolation and Termination Return Loss

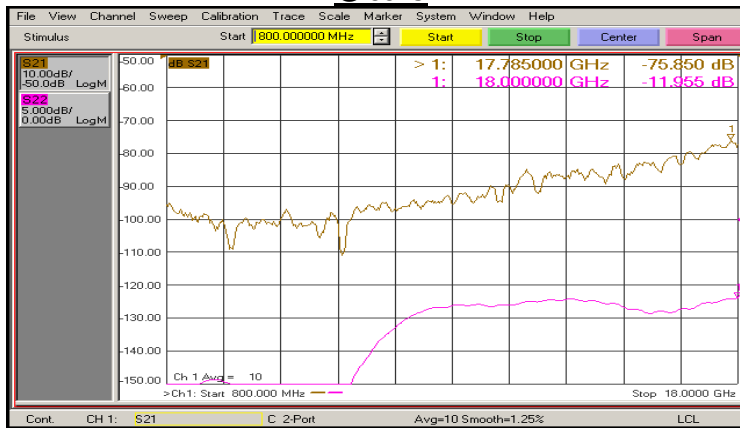
@ 25°C



@ -40°C



@ 85°C







**TYPICAL CHARACTERISTICS  
FOR  
P7T-0R8G18G-60-T-SFF-SMC**

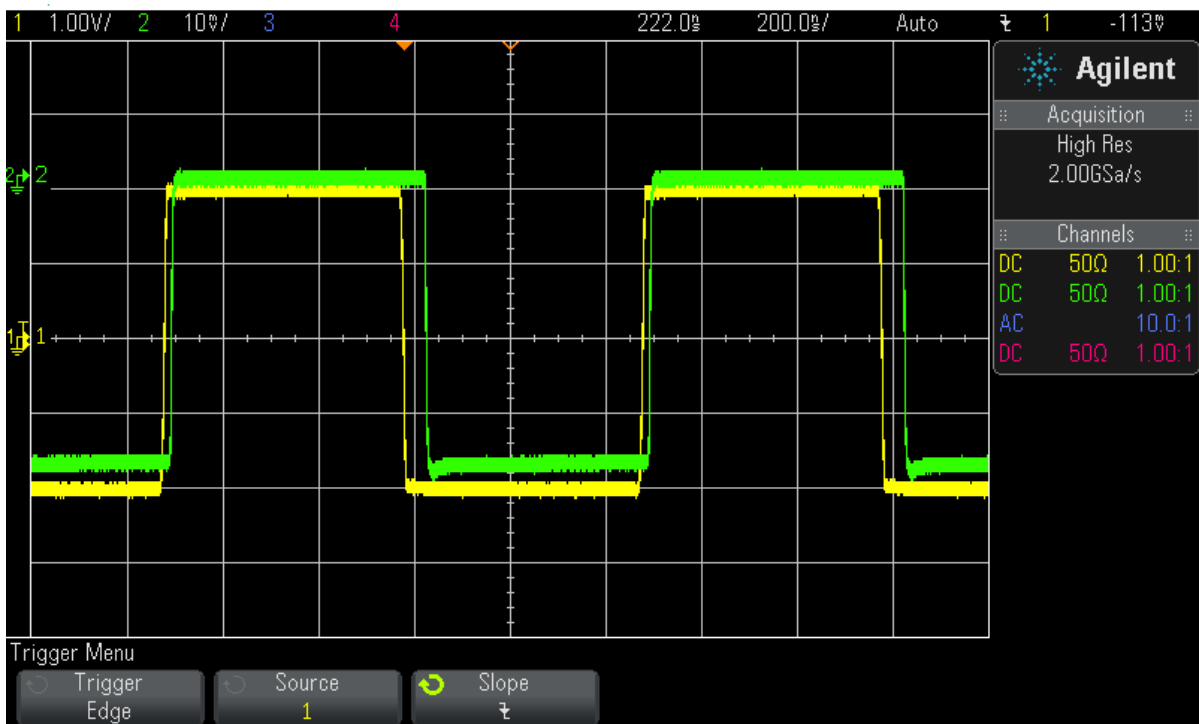
**Switching Speed (200ns per Div.) @ 25°C**

**Full Pulse**



**Agilent Technologies**

Thu Aug 23 02:37:21 2012



**Channel 1 (Yellow):** TTL Input from Signal Generator

**Channel 2 (Green):** Crystal Detector Output

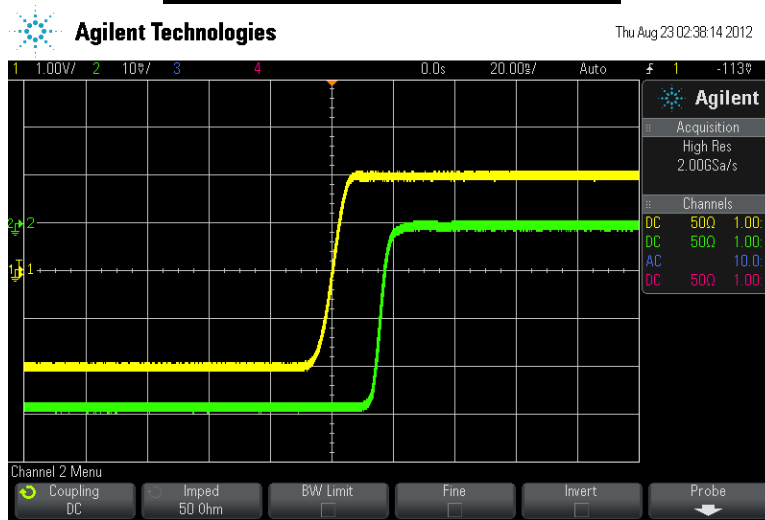


# TYPICAL CHARACTERISTICS FOR P7T-0R8G18G-60-T-SFF-SMC

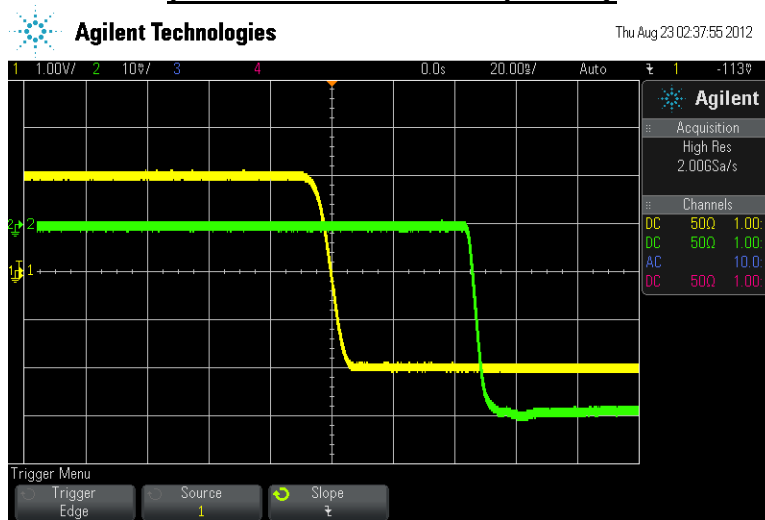
## Switching Speed (20ns per Div.) @ 25°C

Measured with a Crystal Detector @ 5GHz  
Input Power @ 15 dBm

### (Switch Off = TTL High) Delay



### (Switch On = TTL Low) Delay



**Channel 1 (Yellow):** TTL Input from Signal Generator  
**Channel 2 (Green):** Crystal Detector Output

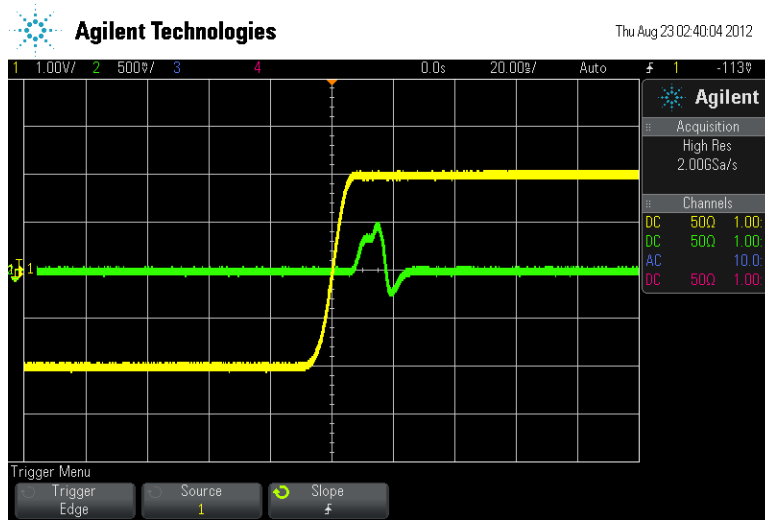


## TYPICAL CHARACTERISTICS FOR P7T-0R8G18G-60-T-SFF-SMC

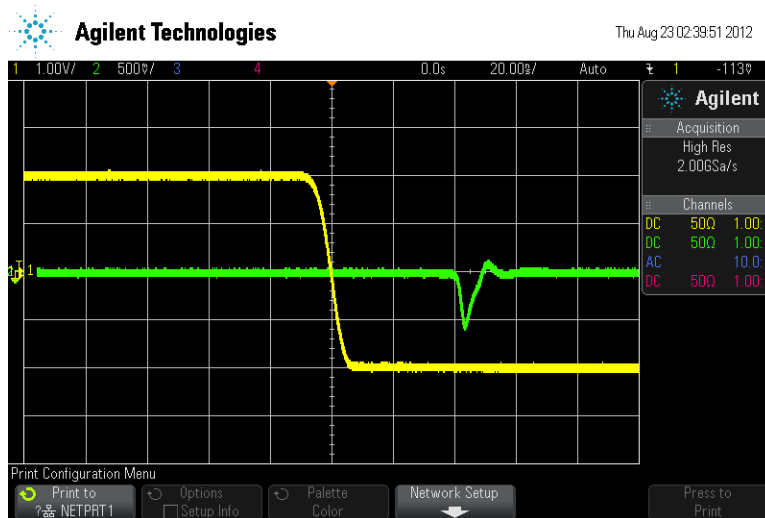
### Video Transient (20ns per Div.) @ 25°C

Measured into 50 Ohm at Input and Output

### (Switch Off = TTL High) Transient



### (Switch On = TTL Low) Transient



**Channel 1 (Yellow):** TTL Input from Signal Generator  
**Channel 2 (Green):** RF Output J5 (500mV/Div.)

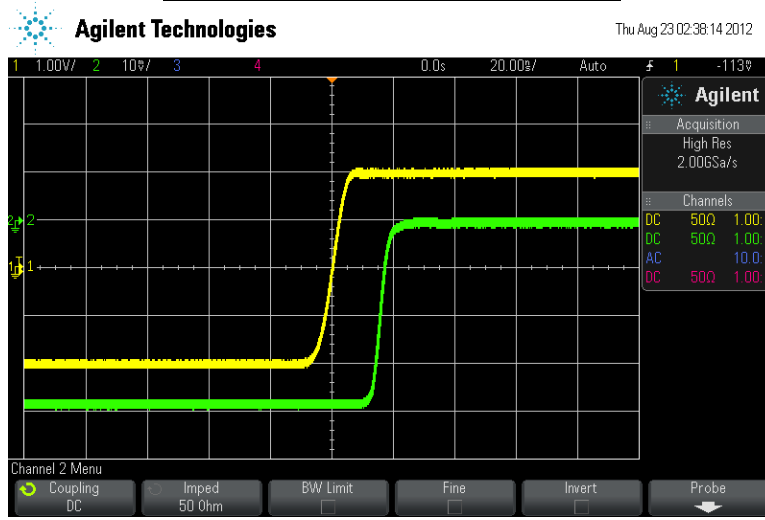


# TYPICAL CHARACTERISTICS FOR P7T-0R8G18G-60-T-SFF-SMC

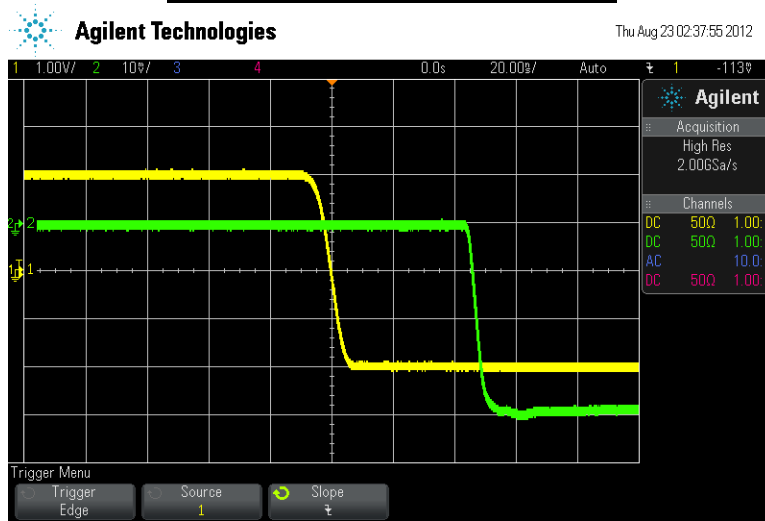
## Switching Speed (20ns per Div.) @ -40°C

Measured with a Crystal Detector @ 5GHz  
Input Power @ 15 dBm

### (Switch Off = TTL High) Delay



### (Switch On = TTL Low) Delay



**Channel 1 (Yellow):** TTL Input from Signal Generator

**Channel 2 (Green):** Crystal Detector Output

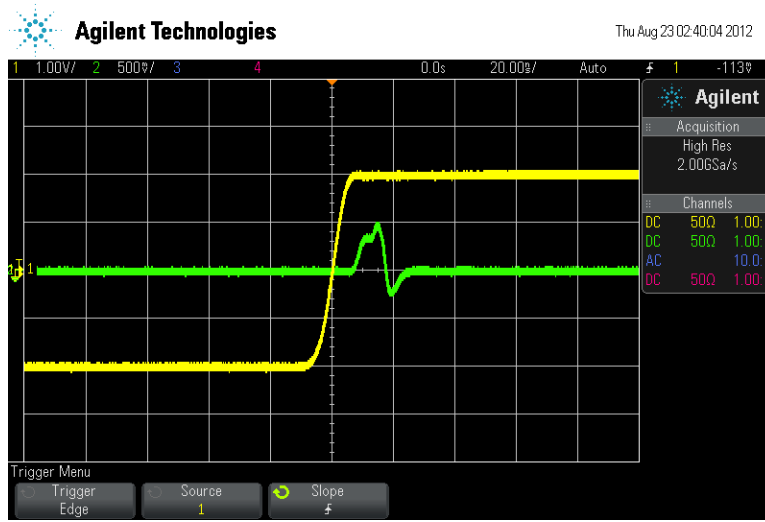


## TYPICAL CHARACTERISTICS FOR P7T-0R8G18G-60-T-SFF-SMC

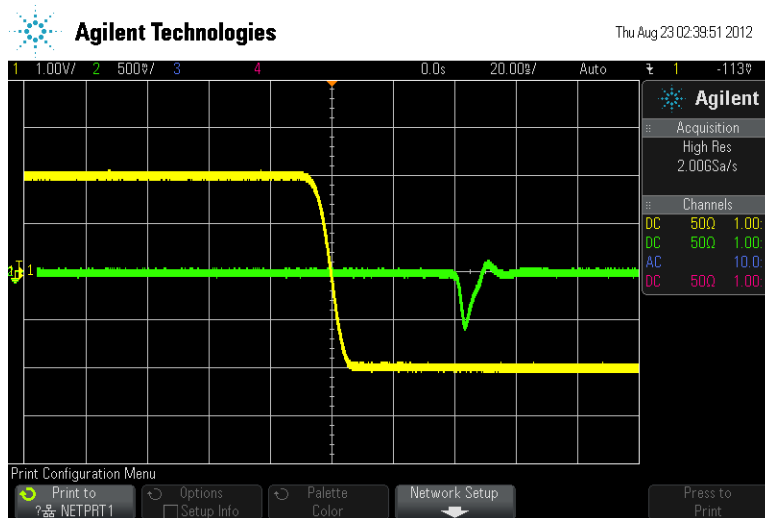
### Video Transient (20ns per Div.) @ -40°C

Measured into 50 Ohm at Input and Output

### (Switch Off = TTL High) Transient



### (Switch On = TTL Low) Transient



**Channel 1 (Yellow):** TTL Input from Signal Generator  
**Channel 2 (Green):** RF Output J5 (500mV/Div.)

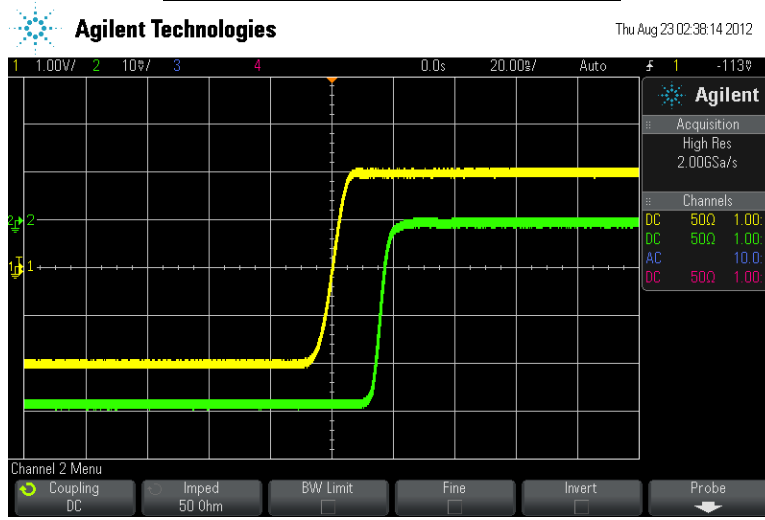


# TYPICAL CHARACTERISTICS FOR P7T-0R8G18G-60-T-SFF-SMC

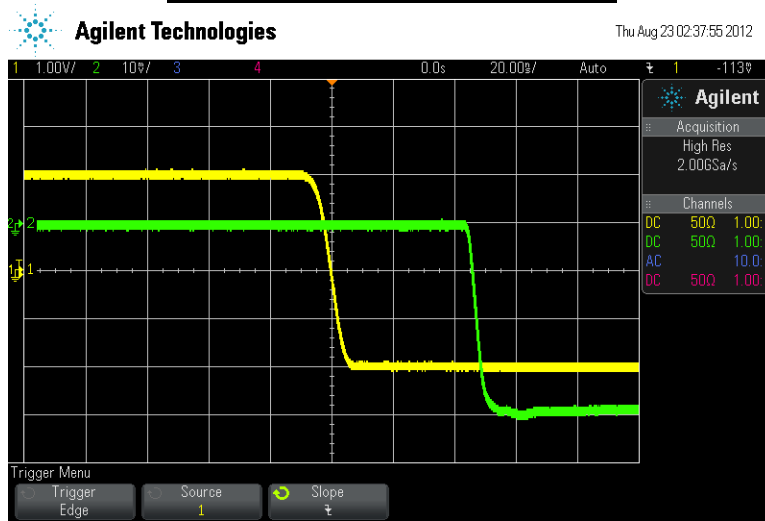
## Switching Speed (20ns per Div.) @ 85°C

Measured with a Crystal Detector @ 5GHz  
Input Power @ 15 dBm

### (Switch Off = TTL High) Delay



### (Switch On = TTL Low) Delay



**Channel 1 (Yellow):** TTL Input from Signal Generator

**Channel 2 (Green):** Crystal Detector Output

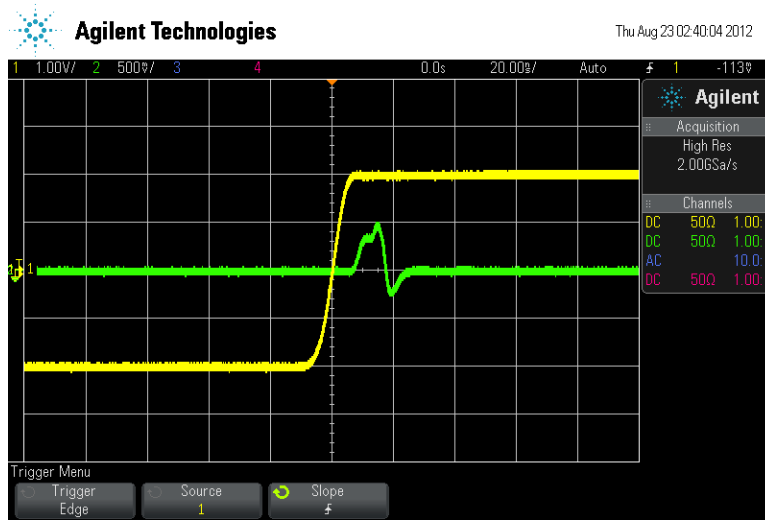


# TYPICAL CHARACTERISTICS FOR P7T-0R8G18G-60-T-SFF-SMC

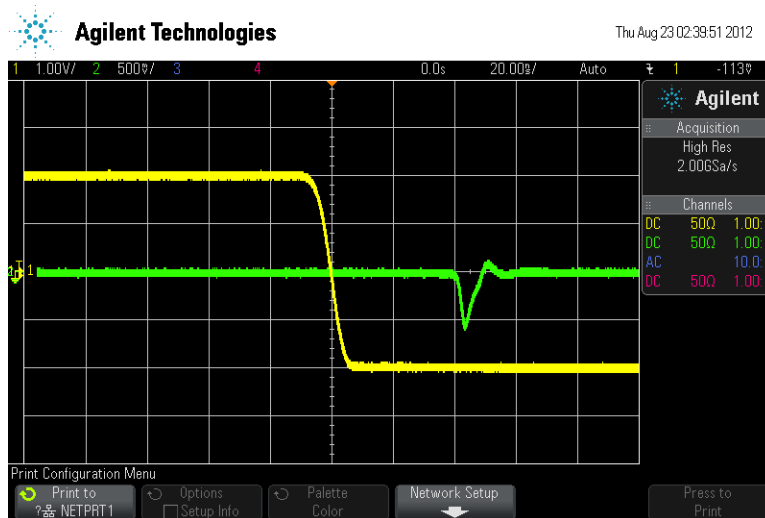
## Video Transient (20ns per Div.) @ 85°C

Measured into 50 Ohm at Input and Output

### (Switch Off = TTL High) Transient



### (Switch On = TTL Low) Transient



**Channel 1 (Yellow):** TTL Input from Signal Generator  
**Channel 2 (Green):** RF Output J5 (500mV/Div.)



TYPICAL CHARACTERISTICS  
FOR  
P7T-0R8G18G-60-T-SFF-SMC

Spectrum Domain Output @ 1MHz Switching

