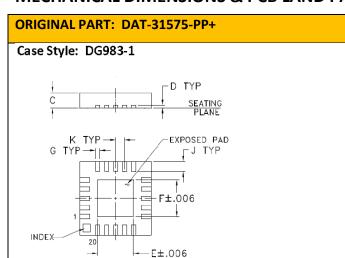


# REPLACEMENT PART REFERENCE GUIDE, DAT-31575-PP+ AN-70-022

ORIGINAL PART: DAT-31575-PP+
REPLACEMENT PART: DAT-31575A-PP+

Replacement Part has been judged by Mini-Circuits Engineering as a suitable replacement to Original Parta

### **MECHANICAL DIMENSIONS & PCB LAND PATTERN**

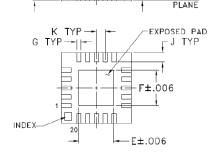


### Inches (mm)

С	E	F	G
.035	.081	.081	.010
(0.90)	(2.06)	(2.06)	(0.25)

### **REPLACEMENT PART: DAT-31575A-PP+**

Case Style: DG983-2 (minor dimensional changes as below)

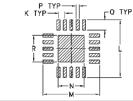


### inches (mm)

С	E	F	G
.033	.085	.085	.009
(0.85)	(2.15)	(2.15)	(0.23)

Note: Dimensions not shown are same as that in DG983-1

## Suggested PCB Land Pattern



K	L	М	N	Р	Q	R
.020	.177	.177	.081	.010	.032	.081
(0.50)	(4.50)	(4.50)	(2.06)	(0.25)	(0.81)	(2.06)

Marking

Marking

31575

**DS75** 

#### Notes



# **CONCLUSION:**

### 1) **FORM-FIT-FUNCTIONAL COMPATIBLE**<sub>a</sub>:

Replacement part is Form, Fit compatible. Following is a summary of changes/improvements:

Typical performance: see part 2) and 3)

For Min/Max Specifications, see below:

Parameter	tions, see below:	DAT-31575-P	P+	DAT-31575A-PP-	+			
	tut High (V) ut Low (V)  rent (μA) 0.5  1  2  4  8  16  remperature (°C) mperature(°C)  ting Power  ax Rating:  ax Rating:	(Original Part	:)	(Replacement Part)				
Frequency (GF	Hz)	DC-2.0		0.001-2.5 +2.3 to +3.6, usable to +5.2V				
VDD(V)		+2.7 to +3.3						
Control input	High (V)	0.7Vdd to Vdd		+1.17 to +3.6	+1.17 to +3.6			
Control input	Low (V)	0 to 0.3V <sub>DD</sub>		-0.3 to +0.6 (OV during power-up)				
IDD (μA)		100 μA max.		200 μA max.				
Control Currer	nt (μΑ)	1 max		20 max				
Attenuation	Step (dB)	<u>Frequency</u>	Spec max	<u>Frequency</u>	Spec max			
accuracy		<u>(GHz)</u>		<u>(GHz)</u>				
	0.5	DC-1.2	0.17	0.001-1.2	0.17			
		1.2-2.0	0.18	1.2-2.0	0.18			
	1	DC-1.2	0.24	0.001-1.2	0.18			
		1.2-2.0	0.25	1.2-2.0	0.20			
	2	DC-1.2	0.28	0.001-1.2	0.21			
		1.2-2.0	0.3	1.2-2.0	0.26			
	4	DC-1.2	0.36	0.001-1.2	0.27			
		1.2-2.0	0.4	1.2-2.0	0.36			
	8	DC-1.2	0.52	0.001-1.2	0.39			
		1.2-2.0	0.6	1.2-2.0	0.6			
	16	DC-1.2	0.84	0.001-1.2	0.63			
		1.2-2.0	1	1.2-2.0	1.0			
Operating Ten	nperature (°C)	-40 to 85		-40 to 105				
Storage Temp	erature(°C)	-55 to 100		-65 to 150				
ESD (HBM)		< 500V		1000 to <2000V				
ESD (MM)		<100V		500 to <1000V				
Max Operating	g Power	Not Specified		From 1-30 MHz per Figure 1 (in Model Data				
			'		Sheet) and +24 dBm above 30 MHz			
Max Input Pov	wer	+24 dBm		1-30 MHz (10-24	24 dBm) per Figure 2 of data			
·					Sheet			
				>30 MHz: +30 dBm				
Absolute Max	put High (V) put Low (V)  urrent (μA)  0.5  1  2  4  8  16  3 Temperature (°C) emperature(°C)  in the power of the power	ax Rating: -0.3V Min., 4V Max.			-0.3V Min., 5.5V Max.			
Vdd(v)								
Absolute Max	-	-0.3V Min., V	dd+0.3V Max.	-0.3V Min., 3.6V Max.				
Voltage on an	y digital input (V)							

#### Notes





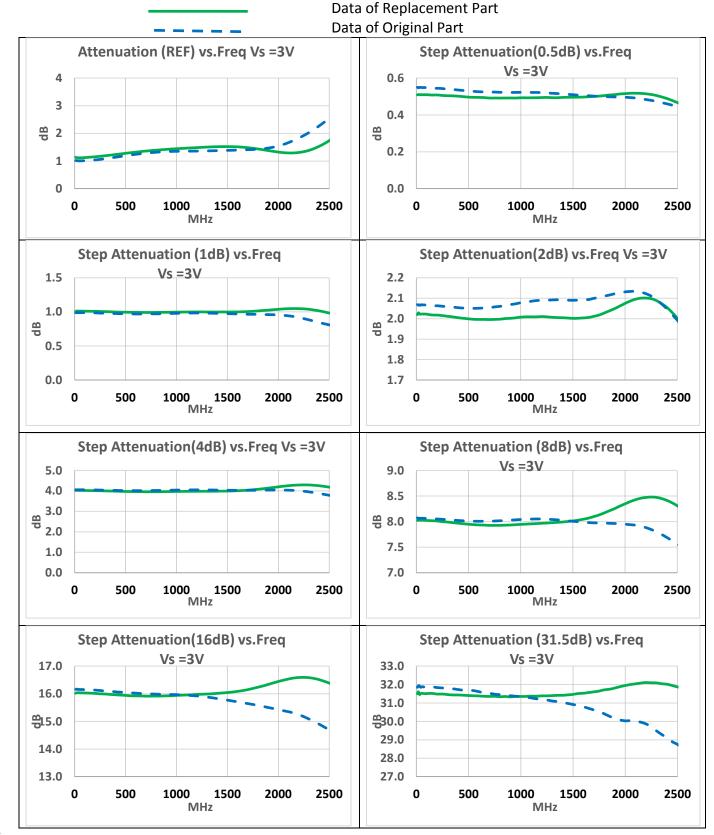
### 2) PERFORMANCE COMPARISON<sub>a</sub> (TYPICAL), DC Voltage=3V:

DAT-31575A-PP+				DAT-31575A-PP+			DAT-31575-PP+		
VS.   (MH-Z)   DAT H337F   Max.   Min.   Avg.   Max.   Min.	DAT-31575A-DD+	From							
DAT-31575-PP+   From To									
STEP ATTENUATION OB (dB)		_							Max.
STEP ATTENUATION   100	DA 1-31373-1 1 +							,	1.4
STEP ATTENUATION   10   1200   0.49   0.50   0.52   0.50   0.51   0.50   0.51   0.50   0.52   0.50   0.51   0.50   0.51   0.50   0.52   0.50   0.51   0.50   0.51   0.50   0.52   0.50   0.51   0.50   0.51   0.50   0.52   0.50   0.51   0.50   0.51   0.50   0.52   0.50   0.51   0.50   0.51   0.50   0.52   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.52   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.52   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.52   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.52   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.52   0.50   0.51   0.50   0.51   0.50   0.51   0.50   0.52   0.50   0.51   0.51   0.50   0.51   0.51   0.51   0.51   0.51   0.51   0.51   0.51   0.51   0.51   0.51									1.5
STEP ATTENUATION   1200   2000   0.49   0.50   0.52   0.52   0.54   0.50   0.56   0.50   0.55   0.	0dB (dB)								2.
STEP ATTENUATION   1200   2000   0.49   0.50   0.52   0.50   0.48   0.48   0.99   1.00   1.02   0.97   0.98   0.97   0.98   0.97   0.98   0.97   0.98   0.97   0.98   0.99   0.									0.5
STEP ATTENUATION   10   1200   2000   2500   0.47   0.51   0.53   0.45   0.48   0.99   0.00   1.00   1.00   0.99   0.97   0.97   0.97   0.97   0.98   0.00   0.00   0.00   0.01   0.00									0.5
STEP ATTENUATION 1dB (dB)	0.5dB (dB)								0.5
STEP ATTENUATION   100   2500   0.98   1.04   1.06   0.81   0.89   0.97   0   0.98   1.04   1.06   0.81   0.89   0.98   1.04   1.06   0.81   0.89   0.90   2.00   2.01   2.04   2.05   2.07   2   2.08   2.09   2.									0.9
STEP ATTENUATION   10   1200   2.00   2.01   2.04   2.05   2.07   2.08   2.09		1200							0.9
STEP ATTENUATION   10   1200   2.00   2.01   2.04   2.05   2.07   2   2   2   2   2   2   2   2   2	1dB (dB)								0.9
STEP ATTENUATION   2000   2000   2.00   2.09   2.09   2.00   2.	OTED ATTENUATION	1							2.0
STEP ATTENUATION			2000					2.10	2.1
STEP ATTENUATION   1200   2000   3.95   3.99   4.03   4.01   4.04   4.04   4.06   4.05   4.06   4.05   4.06   4.05   4.06   4.05   4.06   4.	2dB (dB)	2000	2500	2.00	2.09	2.13	1.99	2.09	2.1
AdB (dB)	OTED ATTENUATION			3.95	3.99	4.03	4.01	4.04	
NPUT RETURN LOSS   10   1200   1200   12.01   1200   12.01   1200   12.01   1200   12.01   1200   12.01   1200   12.01   1200   12.01   1200   12.01   1200   12.01   1200   12.01   1200   12.01   1200   12.01   1		1200	2000	3.96	4.04	4.20	4.02	4.04	4.0
STEP ATTENUATION   8dB (dB)   2000   2500   8.31   8.42   8.50   7.56   7.81   7.50	4dB (dB)	2000	2500	4.18	4.26	4.31	3.79	3.95	4.0
STEP ATTENUATION   1200   2000   15.9   16.0   16.0   15.9   16.1   16.4   15.7   17.1   17		10	1200	7.90	7.97	8.03	8.01	8.04	8.0
STEP ATTENUATION   1200   2000   15.9   16.0   16.0   15.9   16.1   16.4   16.4   15.4   15.7   1.1   16dB (dB)   2000   2500   16.4   16.5   16.6   14.7   15.1   1.1   1200   31.2   31.4   31.6   31.2   31.6   31.5	STEP ATTENUATION	1200	2000	7.94	8.08	8.35	7.95	8.00	8.0
STEP ATTENUATION   1200   2000   15.9   16.1   16.4   15.4   15.7   1.1	8dB (dB)	2000	2500	8.31	8.42	8.50	7.56	7.81	7.9
16dB (dB)				15.9	16.0	16.0	15.9	16.1	16.
STEP ATTENUATION   1200   2000   31.3   31.6   31.2   31.6   33.   30.0   30.7   33.		1200	2000		16.1	16.4		15.7	15.
STEP ATTENUATION 31.5dB (dB)	16dB (dB)	2000			16.5	16.6		15.1	15.
NPUT RETURN LOSS   10   1200   15.9   17.7   19.4   15.0   17.7   2.8   17.4   2.8   18.2   19.2   19.6   22.8   3.8   18.2   19.2   19.6   22.8   3.8   18.2   19.2   19.6   22.8   3.8   18.2   19.2   19.6   22.8   3.8   18.2   19.2   19.6   22.8   3.8   18.2   19.2   19.6   22.8   3.8   18.2   19.2   19.6   22.8   3.8   18.2   19.2   19.6   22.8   3.8   18.2   19.2   19.6   22.8   3.8   18.2   19.2   19.6   22.8   3.8   23.0   27.7   9.6   17.4   3.8   2.0   27.7   9.6   17.4   3.8   2.0   27.7   9.6   17.4   3.8   2.0   27.7   9.6   17.7   2.5   4.8   4.6   2.0   2.0   2.0   2.0   2.0   2.1   14.5   17.1   2.2   2.0				-			_		31.
INPUT RETURN LOSS OdB (dB)	STEP ATTENUATION	1200	2000		31.5	31.9	30.0	30.7	31.
NPUT RETURN LOSS   10   1200   2000   14.8   16.2   19.2   19.6   22.8   3   2000   2500   12.3   20.0   27.7   9.6   17.4   3   3   2000   2500   12.3   20.0   27.7   9.6   17.4   3   3   2000   2500   13.8   23.6   46.3   11.7   22.5   4   4   20.0   2500   13.8   23.6   46.3   11.7   22.5   4   4   20.0   2000   15.8   17.0   20.6   16.9   23.3   3   20.0   2500   14.5   23.1   34.7   20.5   16.5   17.7   20.5   16.5   17.7   20.5   16.5   17.7   20.5   16.5   17.7   20.5   16.5   17.7   20.5   16.5   17.7   20.5   16.5   17.7   20.5   16.5   17.3   20.0   2500   14.5   23.1   34.7   20.5   16.5   17.3   20.0   2500   14.5   23.1   34.7   20.5   16.5   17.3   20.0   2500   14.5   23.1   35.6   14.5   17.3   20.0   2500   14.5   23.1   35.6   14.5   17.3   20.0   2500   2500   14.9   18.1   19.9   10.6   16.4   22.9   3   20.0   2500   14.9   18.1   19.9   10.6   16.4   22.9   3   20.0   2500   14.9   18.1   19.9   10.6   16.4   20.0   2500	31.5dB (dB)								30.
1200   2000   14.8   16.2   19.2   19.6   22.8   3   2000   2500   12.3   20.0   27.7   9.6   17.4   3   3   3   3   3   3   3   3   4   6   3   1   7   2   2   5   4   3   3   3   3   3   3   3   4   6   3   1   7   2   2   5   4   3   3   3   3   3   3   3   4   6   3   1   7   2   2   5   4   3   3   3   3   3   3   3   4   6   3   1   7   2   2   5   4   3   3   3   3   3   3   3   3   3	INPUT RETURN LOSS								20.
INPUT RETURN LOSS 100   1200   16.6   18.6   21.2   16.1   18.7   2   2   2   2   2   2   1   1   1   1									30.
The lurn loss   1200   2000   15.2   16.5   19.7   19.3   21.1   3   2000   2500   13.8   23.6   46.3   11.7   22.5   4   4   4   4   4   5.7   17.4   14.8   19.9   20.1   14.5   17.1   2   2   4   4   4   20.1   2   2   2   2   2   2   2   2   2									30.
1dB (dB)	INPUT RETURN LOSS							_	21.
INPUT RETURN LOSS 2dB (dB)									30.
1200   2000   15.8   17.0   20.6   16.9   23.3   3   3   2000   2500   14.5   23.1   34.7   9.9   16.1   2   2   2   2   2   2   2   2   2		1							41.
INPUT RETURN LOSS   4dB (dB)	INPUT RETURN LOSS								20.
INPUT RETURN LOSS   10   1200   19.3   25.1   35.6   14.5   17.3   2   2000   2500   14.9   18.1   19.9   10.6   16.4   2   2   2   2   2   2   2   2   3   2   2	2dB (dB)								32.
1200   2000   16.6   17.7   20.2   16.1   22.9   3   2000   2500   14.9   18.1   19.9   10.6   16.4   2   2   2   2   2   2   2   2   2	. ,								26.
NPUT RETURN LOSS 8dB (dB)	INPUT RETURN LOSS								20.
INPUT RETURN LOSS 8dB (dB)	4dB (dB)								32.
NPUT RETURN LOSS   1200   2000   17.7   18.4   20.0   15.6   23.5   4.5									25.4
NPUT RETURN LOSS 160B (dB)	INPUT RETURN LOSS								21. 42.
INPUT RETURN LOSS   10   1200   19.0   28.6   54.7   16.1   20.5   2   2000   2500   13.8   15.4   16.9   15.3   20.1   2   2   2   2   2   2   2   2   2	8dB (dB)								28.
1200   2000   16.4   18.2   20.2   16.4   20.5   2   2000   2500   13.8   15.4   16.9   15.3   20.1   2   2   2   2   2   2   2   2   2									25.
Thomas   T	INPUT RETURN LOSS								25.
The true in the image is a second of the ima	16dB (dB)					_			25.
1200   2000   15.6   17.8   20.6   16.3   18.4   2   2000   2500   13.6   14.8   16.1   17.4   20.3   2   2   2   2   2   2   2   2   2									27.
OUTPUT RETURN LOSS 20B (dB) 2500 13.6 14.8 16.1 17.4 20.3 2 2 2 2 2 2 2 17.2 19.9 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2									21.
OUTPUT RETURN LOSS 1200 2000 14.4 15.7 17.4 18.9 20.5 2 2000 2500 12.3 17.4 21.1 9.3 15.4 2.2 2 2000 2500 15.0 16.6 18.4 20.9 15.1 17.4 20.2 2 2 2000 2500 15.0 16.2 18.9 17.4 20.2 2 2 2000 2500 15.0 16.2 18.9 17.4 20.2 2 2 2 2000 2500 15.0 16.2 18.9 17.4 20.2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	31.5dB (dB)								
OUTPUT RETURN LOSS 0dB (dB)         1200         2000         14.4         15.7         17.4         18.9         20.5         2           OUTPUT RETURN LOSS 1dB (dB)         10         1200         16.6         18.4         20.9         15.1         17.4         2           OUTPUT RETURN LOSS 2dB (dB)         10         1200         2000         15.0         16.2         18.9         17.4         20.2         2           OUTPUT RETURN LOSS 2dB (dB)         10         1200         16.8         19.9         25.9         9.6         15.6         2           OUTPUT RETURN LOSS 3dB (dB)         10         1200         15.6         16.7         20.2         18.3         19.9         2           OUTPUT RETURN LOSS 4dB (dB)         10         1200         15.6         16.7         20.2         18.3         19.9         2           10         1200         2000         15.6         16.7         20.2         18.3         19.9         2           2000         2500         15.6         16.7         20.2         18.3         19.9         2         20.7         18.8         19.9         22.0         17.5         20.7         2         2         20.7         2									20.
OdB (dB)         2000         2500         12.3         17.4         21.1         9.3         15.4         2           OUTPUT RETURN LOSS 1dB (dB)         10         1200         16.6         18.4         20.9         15.1         17.4         20.2         2           OUTPUT RETURN LOSS 2dB (dB)         10         1200         2000         15.0         16.2         18.9         17.4         20.2         2           OUTPUT RETURN LOSS 2dB (dB)         10         1200         2000         15.6         16.7         20.2         18.3         19.9         2           OUTPUT RETURN LOSS 4dB (dB)         10         1200         2000         15.6         16.7         20.2         18.3         19.9         2           OUTPUT RETURN LOSS 4dB (dB)         10         1200         16.3         19.4         23.6         17.5         20.7         2           10         1200         2000         16.5         18.6         26.3         17.8         19.4         2           OUTPUT RETURN LOSS 8dB (dB)         10         1200         16.5         18.6         26.3         17.8         19.4         2           OUTPUT RETURN LOSS 8dB (dB)         10         1200         18.6	OUTPUT RETURN LOSS								
OUTPUT RETURN LOSS 10 1200 16.6 18.4 20.9 15.1 17.4 20.2 2 2000 2500 13.8 19.9 25.9 9.6 15.6 2  OUTPUT RETURN LOSS 2dB (dB) 2000 2500 15.6 16.7 20.2 17.2 19.9 2 2000 2500 15.1 22.6 33.7 12.7 21.8 3  OUTPUT RETURN LOSS 4dB (dB) 2000 2500 15.1 22.6 33.7 12.7 21.8 3  OUTPUT RETURN LOSS 4dB (dB) 2000 2500 16.5 18.6 26.3 17.8 19.4 2 2000 2500 14.6 24.6 38.5 14.3 24.4 4  OUTPUT RETURN LOSS 8dB (dB) 2000 2500 15.6 19.4 22.2 14.8 24.0 3  OUTPUT RETURN LOSS 8dB (dB) 2000 2500 15.6 19.4 22.2 14.8 24.0 3  OUTPUT RETURN LOSS 10 1200 18.6 27.0 48.8 16.1 20.1 2 2000 2500 15.6 19.4 22.2 14.8 24.0 3 2000 2500 15.6 19.4 22.2 14.8 24.0 3 2000 2500 15.6 19.4 22.2 14.8 24.0 3 2000 2500 15.6 19.4 22.2 14.8 24.0 3 2000 2500 15.6 19.4 20.2 14.8 24.0 3 2000 2500 15.0 15.0 16.9 19.9 14.8 20.4 3 2000 2500 15.0 16.9 19.9 14.8 20.4 3 2000 2500 15.0 16.9 18.5 17.9 20.4 2  RETURN LOSS 31.5dB (dB) 10 1200 15.9 17.7 19.4 14.5 17.1 2  RETURN LOSS (ABI STATES) (dB) 1200 2000 15.9 17.7 19.4 14.5 17.1 2									
1200   2000   15.0   16.2   18.9   17.4   20.2   2000   2500   13.8   19.9   25.9   9.6   15.6   2000   2500   13.8   19.9   25.9   9.6   15.6   2000   2500   15.6   16.7   20.2   17.2   19.9   2000   2500   15.1   22.6   33.7   12.7   21.8   3000   2500   2500   15.1   22.6   33.7   12.7   21.8   3000   2500   16.3   19.4   23.6   17.5   20.7   20.2   2000   2500   16.5   18.6   26.3   17.8   19.4   2000   25									
OUTPUT RETURN LOSS 8dB (dB)  OUTPUT RETURN LOSS 10 1200 16.8 19.0 22.2 17.2 19.9 2 2000 15.6 16.7 20.2 18.3 19.9 2 2000 15.6 16.7 20.2 18.3 19.9 2 2000 15.6 16.7 20.2 18.3 19.9 2 2000 15.6 16.7 20.2 18.3 19.9 2 2000 15.6 16.7 20.2 18.3 19.9 2 2000 15.6 16.7 20.2 18.3 19.9 2 2000 15.6 16.7 20.2 18.3 19.9 2 2000 15.6 16.5 18.6 26.3 17.8 19.4 22.0 12.0 2000 16.5 18.6 26.3 17.8 19.4 22.0 2000 2500 14.6 24.6 38.5 14.3 24.4 4 10.0 2000 2500 15.6 19.4 22.2 14.8 24.0 19.0 2000 2500 15.6 19.4 22.2 14.8 24.0 19.0 2000 2500 15.6 19.4 22.2 14.8 24.0 19.0 2000 2500 15.6 19.4 22.2 14.8 24.0 19.0 2000 2500 15.6 19.4 22.2 14.8 24.0 19.0 2000 2500 15.6 19.4 22.2 14.8 24.0 19.0 2000 2500 15.6 19.4 22.2 14.8 24.0 19.0 2000 2500 15.0 16.9 19.9 14.8 20.4 3 12.0 2000 2500 15.2 17.7 19.7 13.4 20.9 3 19.0 2000 2500 15.0 15.0 16.9 18.5 17.9 20.4 22.0 2000 2500 15.0 16.9 18.5 17.9 20.4 17.5 20.0 2000 2500 15.0 16.9 18.5 17.9 20.4 17.5 20.0 2000 2500 15.0 16.9 18.5 17.9 20.4 12.0 2000 2000 14.4 15.7 17.4 14.8 17.5 2									24.
OUTPUT RETURN LOSS 2dB (dB)	1dR (qR)								
1200   2000   15.6   16.7   20.2   18.3   19.9   2   2000   2500   15.1   22.6   33.7   12.7   21.8   3   3   2000   2500   15.1   22.6   33.7   12.7   21.8   3   3   2000   2500   15.1   22.6   33.7   12.7   21.8   3   3   2000   2500   16.5   18.6   26.3   17.5   20.7   2   2   2   2   2   2   2   2   2	OUTDUT DETUDAL OCC								
OUTPUT RETURN LOSS 8dB (dB) 2000 2500 15.1 22.6 33.7 12.7 21.8 3  OUTPUT RETURN LOSS 4dB (dB) 2000 16.3 19.4 23.6 17.5 20.7 2 2000 2500 14.6 24.6 38.5 14.3 24.4 4  OUTPUT RETURN LOSS 8dB (dB) 2000 18.4 19.2 21.7 16.3 19.6 2 2000 2500 15.6 19.4 22.2 14.8 24.0 3  OUTPUT RETURN LOSS 10 1200 18.8 28.5 53.0 14.5 18.3 2 2000 2500 15.6 19.4 22.2 14.8 24.0 3  OUTPUT RETURN LOSS 10 1200 18.8 28.5 53.0 14.5 18.3 2 2000 2500 15.2 17.7 19.7 13.4 20.9 3  OUTPUT RETURN LOSS 10 1200 18.8 28.5 53.0 14.5 18.3 2 2000 2500 15.2 17.7 19.7 13.4 20.9 3  OUTPUT RETURN LOSS 31.5dB (dB) 2000 2500 15.0 16.9 18.5 17.9 20.4 2  RETURN LOSS 10 1200 15.9 17.7 19.4 14.5 17.1 2  RETURN LOSS 11 1200 2000 14.4 15.7 17.4 14.8 17.5 2									
OUTPUT RETURN LOSS 8dB (dB)	Zap (ap)								
1200   2000   16.5   18.6   26.3   17.8   19.4   22   2000   2500   14.6   24.6   38.5   14.3   24.4   44	OUTDUT DETUDAL COO								
QUITPUT RETURN LOSS   10   1200   18.6   27.0   48.8   16.1   20.1   2   2   2   2   2   2   1.7   16.3   19.6   2   2   2   2   2   2   2   2   2					18.6			19.4	
OUTPUT RETURN LOSS 8dB (dB)  OUTPUT RETURN LOSS 1200 2000 18.4 19.2 21.7 16.3 19.6 2 2000 2500 15.6 19.4 22.2 14.8 24.0 3  OUTPUT RETURN LOSS 16dB (dB)  OUTPUT RETURN LOSS 31.5dB (dB)  OUTPU	4ub (0B)	2000	2500	14.6	24.6	38.5	14.3	24.4	44.
8dB (dB)	OLITRI IT DETLIBALLOCO								
OUTPUT RETURN LOSS 16dB (dB) 10 1200 18.8 28.5 53.0 14.5 18.3 2 2000 2500 15.2 17.7 19.7 13.4 20.9 3 2000 2500 15.2 17.7 19.7 13.4 20.9 3 2000 2500 15.2 17.7 18.6 20.3 16.4 17.5 2 2000 2500 15.0 16.9 18.5 17.9 20.4 2 2000 2500 15.0 16.9 18.5 17.9 20.4 2 2000 2500 15.0 16.9 18.5 17.9 20.4 2 2 2000 2500 15.9 17.7 19.4 14.5 17.1 2 2 2000 2500 14.4 15.7 17.4 14.8 17.5 2		1200	2000	18.4	19.2	21.7	16.3	19.6	29.
OUTPUT RETURN LOSS 10 1200 18.8 28.5 53.0 14.5 18.3 2 200 2000 18.1 19.0 19.9 14.8 20.4 3 2000 2500 15.2 17.7 19.7 13.4 20.9 3 2000 2500 15.2 17.7 19.7 13.4 20.9 3 3 1.5dB (dB) 2000 2500 15.0 16.9 27.8 42.9 16.6 23.1 2 2000 2500 15.0 16.9 20.3 16.4 17.5 2 2000 2500 15.0 16.9 18.5 17.9 20.4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	oud (ub)	2000	2500	15.6	19.4	22.2			
16dB (dB) 1200 2000 18.1 19.0 19.9 14.8 20.4 3 2000 2500 15.2 17.7 19.7 13.4 20.9 3 3 1.5dB (dB) 2000 2500 17.1 18.6 20.3 16.4 17.5 2 2000 2500 15.0 16.9 18.5 17.9 20.4 2	OLITPLIT RETLIENLLOSS				28.5	53.0	14.5	18.3	
OUTPUT RETURN LOSS 31.5dB (dB) 1200 19.1 27.8 42.9 16.6 23.1 2 2000 2500 15.0 16.9 18.5 17.9 20.4 2 RETURN LOSS 10 1200 2000 15.0 16.9 18.5 17.9 20.4 2 1200 2000 15.0 15.9 17.7 19.4 14.5 17.1 2		1200	2000		19.0				34.
OUTPOT RETURN LOSS 31.5dB (dB)	TOUD (UD)	2000	2500	15.2	17.7	19.7	13.4	20.9	34.
31.5dB (dB) 1200 2000 17.1 18.6 20.3 16.4 17.5 2 2000 2500 15.0 16.9 18.5 17.9 20.4 2 RETURN LOSS 10 1200 15.9 17.7 19.4 14.5 17.1 2 1200 2000 14.4 15.7 17.4 14.8 17.5 2	OLITRI IT PETI IRM I OCC	10	1200	19.1	27.8	42.9	16.6	23.1	29.
2000 2500 15.0 16.9 18.5 17.9 20.4 2  RETURN LOSS (All States) (RR) 1200 2000 14.4 15.7 17.4 14.8 17.5 2		1200	2000	17.1	18.6	20.3	16.4	17.5	20.
(All States) (dB) 1200 2000 14.4 15.7 17.4 14.8 17.5 2	31.3ub (ub)	2000	2500	15.0	16.9	18.5	17.9	20.4	22.:
(All States) (dB) 1200 2000 14.4 15.7 17.4 14.8 17.5 2	RETIDNI I OSS	10	1200	15.9	17.7	19.4	14.5	17.1	20.
2000 2500 12 3 14 8 16 1 9 3 15 4 2		1200	2000	14.4	15.7		14.8	17.5	20.
2000 2000 12:0 14:0 10:1 0:0 10:1 2	(All States) (UD)	2000	2500	12.3	14.8	16.1	9.3	15.4	21.

#### Notes:

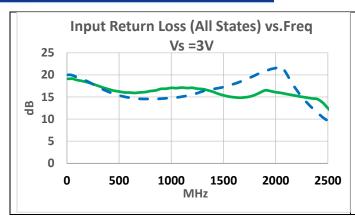


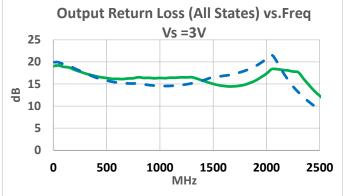
### 3) PERFORMANCE COMPARISON CURVES<sub>a</sub> (TYPICAL),DC Supply=3V:



Notes:







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#### Notes