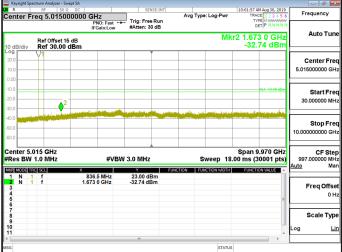


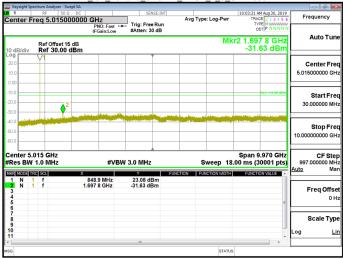
### NB\_IoT\_Band26\_3.75kHz\_BPSK\_1\_0\_CH26791

							trum Analyz	
Frequency	10:00:40 AM Aug 30, 2019 TRACE 1 2 3 4 5 6 TYPE M WWWWW DET P N N N N N	vg Type: Log-Pwr	un	SENS	PNO: Fast	50 Ω DC 5000000	<sup>RF</sup> eq 5.01	nter F
Auto Tur	r2 1.648 2 GHz -32.40 dBm	Mk	В	#Atten: 30	IFGain:Low	et 15 dB .00 dBm	Ref Offs Ref 30	dB/div
Center Fre 5.015000000 GH								
Start Fre 30.000000 MF	0L1 -19:00 dBm					¢ <sup>2</sup>		
Stop Fre 10.000000000 Gi								0
CF Ste 997.000000 MI Auto M	Span 9.970 GHz .00 ms (30001 pts)			V 3.0 MHz			15 GHz 1.0 MHz	es BW
Freq Offs	FUNCTION VALUE	FUNCTION MDTH		22.74 dB -32.40 dB	824.1 MHz 1.648 2 GHz		f f	NODE TE N 1 N 1
Scale Typ								
	· · ·	STATUS						

NB\_IoT\_Band26\_3.75kHz\_BPSK\_1\_0\_CH26915

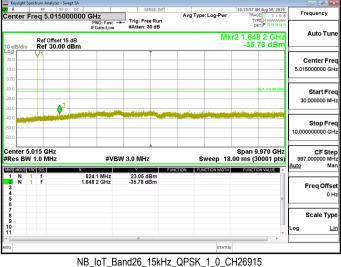


NB\_loT\_Band26\_3.75kHz\_BPSK\_1\_0\_CH27039



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NB\_IoT\_Band26\_15kHz\_QPSK\_1\_0\_CH26791





NB\_loT\_Band26\_15kHz\_QPSK\_1\_0\_CH27039

	ctrum Analyzer - Swept SA					- # <b>*</b>
Center F	RF 50 Ω DC req 5.0150000	00 GHz	SENSE:INT	Avg Type: Log-Pwr	10:27:17 AM Aug 30, 2019 TRACE 1 2 3 4 5 6 TYPE M WWWWW	Frequency
10 dB/div	Ref Offset 15 dB Ref 30.00 dBn	PNO: Fast IFGain:Low	#Atten: 30 dB	м	kr2 1.697 8 GHz -31.35 dBm	Auto Tune
20.0 10.0			¥			Center Freq 5.015000000 GHz
-10.0	¢2				BL1-43.09 cDm	Start Free 30.000000 MH:
-40.0 -50.0 -60.0						Stop Fred 10.00000000 GH:
Center 5.0 #Res BW	1.0 MHz	#VBW	3.0 MHz	Sweep 1	Span 9.970 GHz 8.00 ms (30001 pts)	CF Step 997.000000 MH: <u>Auto</u> Mar
1 N 1 2 N 1 3 4	f	848.9 MHz 1.697 8 GHz	23.23 dBm -31.35 dBm		1	Freq Offse 0 H
5 6 7 8 9						Scale Type
11			m			Log <u>Lin</u>
ISG				STAT	05	

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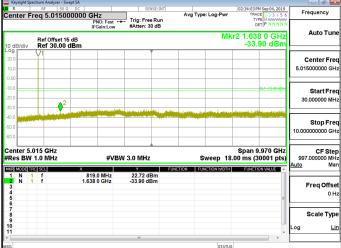
f (886-2) 2298-0488

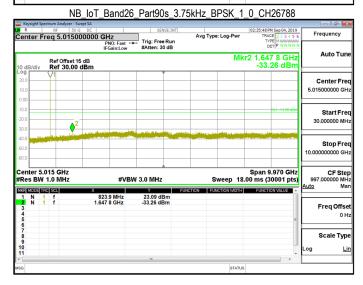


#### NB\_IoT\_Band26\_Part90s\_3.75kHz\_BPSK\_1\_0\_CH26692

- 6						Analyzer - Swept Si		
Frequency	02:32:33 PM Sep 04, 2019 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N N	g Type: Log-Pwr	ın	Trig: Free F	0000 GHz PNO: Fast	F 50 Ω D 5.0150000		R Renter
Auto Tun	IFGainLow         #Atten: 30 dB         Cert P NAMAN           Ref Offset 16 dB         Mkr2 1.628 2.6 Hz         dB/dl/         4B/dl/         -34.54 dBm         -34.54 dBm <td< th=""></td<>							
Center Fre 5.015000000 GH						50.00 UBI	Ŷ	og 20.0
Start Fre 30.000000 MH	DL1-19.09 dDm					2		0.00 10.0 20.0 30.0
Stop Fre 10.000000000 G⊦								40.0 50.0 60.0
CF Ste 997.000000 MH Auto Ma	Span 9.970 GHz .00 ms (30001 pts) FUNCTION VALUE	Sweep 18	FUNC	W 3.0 MHz	#VE	MHz	N 1.0	enter Res B
Freq Offse 0 ⊦	E			22.42 dBr -34.54 dBr	814.1 MHz 1.628 2 GHz		1 1	1 N 2 N 3 4 5 6
Scale Typ								7 8 9 10
	•	STATUS						G







## Report No.: TERF2207001194ER Page: 137 of 321

NB\_IoT\_Band26\_Part90s\_15kHz\_QPSK\_1\_0\_CH26692

Keysight Spectrum An					- 6 <b>- ×</b>
X R RF Center Frea 5.	50 Ω DC 015000000 GHz	SENSE:INT	Avg Type: Log-Pwr	02:48:33 PM Sep 04, 2019 TRACE 1 2 3 4 5 6	Frequency
	PNO: Fast IFGain:Low ffset 15 dB 30.00 dBm	Trig: Free Run #Atten: 30 dB	Mk	r2 1.628 2 GHz -35.42 dBm	Auto Tune
20.0 10.0 0.00					Center Frec 5.015000000 GH;
-10.0	2			0L1~10.00 dDn	Start Free 30.000000 MH:
-40.0					Stop Free 10.00000000 GH
Center 5.015 GI #Res BW 1.0 M		W 3.0 MHz	•	Span 9.970 GHz .00 ms (30001 pts)	CF Stej 997.000000 MH Auto Ma
MKR MODE TRC SCL 1 N 1 f 2 N 1 f 3 4 5 6 7	x 814.1 MHz 1.628 2 GHz	Y Fu: 22.85 dBm -35.42 dBm	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	Freq Offse
7 8 9 10 11		ш			Scale Typ Log <u>Li</u>
ISG		0.0.15			
	NB_loT_Band2	26_Part90s_15	KHZ_QPSK_1_	_U_CH26740	

R RF 50 Ω DC enter Freq 5.015000000 GHz PNO: Fast 02:49:52 PM Sep 04, 2019 Frequency Ava Type: Log-Pwr Trig: Free Run #Atten: 30 dB DET Auto Tur Mkr2 1.638 0 GHz -35.28 dBm Ref Offset 15 dB Ref 30.00 dBn Center Fre 5.015000000 G⊦ Start Fre 30.000000 MH Stop Fre enter 5.015 GHz Res BW 1.0 MHz Span 9.970 GHz Sweep 18.00 ms (30001 pts) CF Step 997.0 #VBW 3.0 MHz MODE TRC S N 1 f N 1 f 819.0 MHz 1.638 0 GHz 23.10 dBm -35.28 dBm Freq Offse οн Scale Type Li

NB\_loT\_Band26\_Part90s\_15kHz\_QPSK\_1\_0\_CH26788

	trum Analyzer - Swept SA					- 6 <del>x</del>
Center Fre	RF 50 Ω DC eq 5.015000000	) GHz PNO: Fast	SENSE:INT	Avg Type: Log-Pwr	02:51:17 PM Sep 04, 2019 TRACE 1 2 3 4 5 6 TYPE M WWWWW	Frequency
10 dB/div	Ref Offset 15 dB Ref 30.00 dBm	IFGain:Low	#Atten: 30 dB	Mk	r2 1.647 8 GHz -32.70 dBm	Auto Tune
20.0 10.0						Center Freq 5.015000000 GHz
-10.0	▲ <sup>2</sup>				DL1-13.09 dDm	Start Freq 30.000000 MHz
-40.0 -50.0 -60.0						Stop Freq 10.000000000 GHz
Center 5.0 #Res BW 1	1.0 MHz	#VBW	3.0 MHz	Sweep 18	Span 9.970 GHz .00 ms (30001 pts)	CF Step 997.000000 MH; <u>Auto</u> Mar
1 N 1 2 N 1 3	f	823.9 MHz .647 8 GHz	23.06 dBm -32.70 dBm		8	Freq Offset 0 Ha
4 5 7 8 9 10						Scale Type
11 KINSG			m	STATUS	• •	

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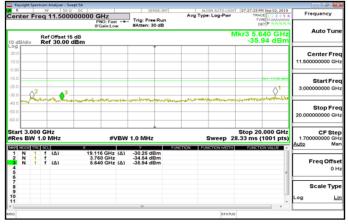


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#### Cat\_M1\_30MHz~3GHz\_Band2\_1\_4MHz\_QPSK\_1\_0\_LowCH18607-1850.7

Keysight Sp	ectrum Analyzer - Swept S					
Center F	req 1.5150000	000 GHz	Trig: Free Run	Aug Type: Log-Pwr	TR4CE 1 2 3 4 5 6	Frequency
	Ref Offset 15 dB		#Atten: 30 dB	M	(r1 1.850 6 GHz 22.67 dBm	Auto Tun
20.0 10.0	Ref 30.00 dB	m		•1	22.07 0.511	Center Fre 1.515000000 GH
20.0					DL1-12:00 dDm	Start Fre 30.000000 MH
10.0 <b>4-4</b> 50.0	1000 Annon the second second	ىرىنىيەر مەرمەر يەرمەر بىرىنى رىزىر يەرمەر يەرمەر يەرمەر بىرىنى	and the second	and a second	6, 16, 16, 16, 16, 16, 16, 16, 16, 16, 1	Stop Fre 3.000000000 GH
tart 0.03 Res BW	1.0 MHz	#VB	W 1.0 MHz	Sweep 3	Stop 3.000 GHz .600 ms (1001 pts)	CF Ste 297.000000 MH Auto Ma
1 N 1 2 3 4 5	f (Δ)	1.850 6 GHz (2	<ol> <li>22.67 dBm</li> </ol>			Freq Offs 0 H
6 7 8 9						Scale Typ
10					· · ·	Log <u>Li</u>
93				STATU	5	

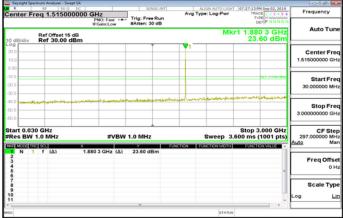
#### Cat\_M1\_3GHz~10GHz\_Band2\_1\_4MHz\_QPSK\_1\_0\_MidCH18900-1880



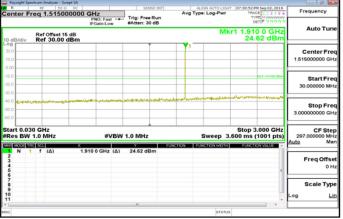
### Cat\_M1\_3GHz~10GHz\_Band2\_1\_4MHz\_QPSK\_1\_0\_LowCH18607-1850.7

SENSE:INT	ALIGN AUTO LIGHT 07:26:19 PM 5+p 02, 2019	
PNO: Fast Trig: Free Run IFGain:Low #Atten: 30 dB	Avg Type: Log-Pwr	Frequency
	Mkr3 5.552 GHz -36.98 dBm	Auto Tun
		Center Fre 11.50000000 GF
	R.1.1200 (De	Start Fre 3.00000000 GP
n, Sang, Salah na sa		Stop Fre 20.00000000 Gi
#VBW 1.0 MHz	Stop 20.000 GHz Sweep 28.33 ms (1001 pts)	CF Ste 1.70000000 Gi Auto Mi
		Freq Offs 01
		Scale Typ
	00 GHZ         Trig: Pree Run PKC Fait           Trig: Pree Run PKC Fait         EAtten: 30 db           state: 30 db         State: 30 db	200 GHz PRO: Fast         Trig: Free Run #Atten: 30 dB         Avg Type: Log-Pwr         Trid: 20 a 5 a trid: 10 a 20 a 5 a 5 a trid: 10 a 20 a 5 a 5 a 5 a trid: 10 a 20 a 5 a 5 a 5 a 5 a 5 a 5 a 5 a 5 a 5 a

Cat\_M1\_30MHz~3GHz\_Band2\_1\_4MHz\_QPSK\_1\_0\_MidCH18900-1880



Cat\_M1\_30MHz~3GHz\_Band2\_1\_4MHz\_QPSK\_1\_0\_HighCH19193-1909.3



Cat\_M1\_3GHz~10GHz\_Band2\_1\_4MHz\_QPSK\_1\_0\_HighCH19193-1909.3



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#### Cat\_M1\_30MHz~3GHz\_Band2\_3MHz\_QPSK\_1\_0\_LowCH18615-1851.5

🔤 Keysight Sp	ectrum Analyzer - Swept						
Center F	req 1.515000	000 GHz	Trig: Free R	Avg 1	ALIGN AUTO LIGH	TRACE 1 2 3 4 5 6	Frequency
10 dB/div	Ref Offset 15 dl Ref 30.00 dB		#Atten: 30 d	18	Mk	r1 1.850 6 GHz 26.31 dBm	Auto Tune
20.0 10.0	Ref 30.00 de	m		1			Center Free 1.515000000 GH
-10.0						041-1000 sDm	Start Free 30.000000 MH
-40.0	مېرونې <del>او</del> د مېروو مورو	ulmulmating the paper align light	edina di tang tang sa		ayın esellenen dır		Stop Fre 3.000000000 GH
MAR MODE T	1.0 MHz	×	W 1.0 MHz		Sweep 3.	Stop 3.000 GHz 600 ms (1001 pts)	CF Ste 297.000000 MH Auto Ma
1 N 2 3 4 5	1 f (Δ)	1.850 6 GHz (Δ	) 26.31 dBm	n			Freq Offse 0 H
6 7 8 9 10							Scale Typ
11 <			**		STATUS		

#### Cat\_M1\_3GHz~10GHz\_Band2\_3MHz\_QPSK\_1\_0\_MidCH18900-1880



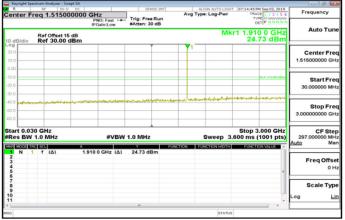
#### Cat\_M1\_3GHz~10GHz\_Band2\_3MHz\_QPSK\_1\_0\_LowCH18615-1851.5

GHz PNO: Fast	Trig: Free Run	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6	Frequency
			DET P NNNNN	
FGain:Low	#Atten: 30 dB		Mkr3 5.555 GHz -36.81 dBm	Auto Tur
				Center Fr 11.500000000 G
			01-1200 dBm	Start Fr 3.000000000 G
nt (* markadra y to		and the second se		Stop Fr 20.000000000 G
	Y FU			CF Sto 1.700000000 G Auto M
03 GHz	-31.77 dBm -34.83 dBm -36.81 dBm			Freq Offs
				Scale Ty
		#VBW 1.0 MHz 93 GHz (Δ) -31.77 dBm 03 GHz -34.83 dBm	#VBW 1.0 MHz         Sweep           93 GHz         (A) - 36.81 dBm	

### Cat\_M1\_30MHz~3GHz\_Band2\_3MHz\_QPSK\_1\_0\_MidCH18900-1880



Cat\_M1\_30MHz~3GHz\_Band2\_3MHz\_QPSK\_1\_0\_HighCH19185-1908.5



Cat\_M1\_3GHz~10GHz\_Band2\_3MHz\_QPSK\_1\_0\_HighCH19185-1908.5



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