		9 kHz to 150 kHz	-45.51	-45.98	-46.22	-45.42	-39.02	-6.40
		150 kHz to 30 MHz	-34.70	-34.18	-33.86	-34.45	-29.02	-4.84
		30 MHz to 600 MHz	-39.60	-39.84	-39.47	-39.77	-19.02	-20.45
	~	600 MHz to 616.9 GHz	-37.49	-37.76	-38.07	-38.17	-19.02	-18.47
	2	652.1 MHz to 700 MHz	-37.84	-37.41	-37.69	-37.41	-19.02	-18.39
		700 MHz to 1 GHz	-38.17	-38.67	-38.04	-38.62	-19.02	-19.02
		1 GHz to 3 GHz	-24.09	-23.89	-24.01	-24.33	-19.02	-4.87
		3 GHz to 8 GHz	-26.96	-26.99	-27.12	-26.69	-19.02	-7.67
		9 kHz to 150 kHz	-46.69	-46.00	-45.52	-47.15	-39.02	-6.50
		150 kHz to 30 MHz	-34.14	-32.10	-33.85	-35.70	-29.02	-3.08
		30 MHz to 600 MHz	-40.13	-39.99	-40.05	-39.99	-19.02	-20.97
		600 MHz to 616.9 GHz	-37.49	-37.57	-37.84	-37.27	-19.02	-18.25
	3	652.1 MHz to 700 MHz	-37.63	-37.68	-37.62	-37.54	-19.02	-18.52
		700 MHz to 1 GHz	-38.54	-38.35	-38.47	-38.37	-19.02	-19.33
		1 GHz to 3 GHz	-24.28	-24.06	-24.10	-24.03	-19.02	-5.01
		3 GHz to 8 GHz	-27.23	-27.01	-27.25	-27.11	-19.02	-7.99
		9 kHz to 150 kHz	-45.99	-46.39	-45.53	-47.62	-39.02	-6.51
		150 kHz to 30 MHz	-32.74	-33.02	-33.30	-34.52	-29.02	-3.72
		30 MHz to 600 MHz	-39.29	-39.48	-39.65	-39.13	-19.02	-20.11
		600 MHz to 616.9 GHz	-37.59	-37.85	-37.87	-38.05	-19.02	-18.57
	0	652.1 MHz to 700 MHz	-26.02	-26.50	-24.91	-26.16	-19.02	-5.89
		700 MHz to 1 GHz	-38.53	-38.54	-38.53	-38.30	-19.02	-19.28
		1 GHz to 3 GHz	-24.73	-25.14	-25.11	-24.20	-19.02	-5.18
		3 GHz to 8 GHz	-28.96	-28.82	-29.05	-28.19	-19.02	-9.17
		9 kHz to 150 kHz	-45.33	-46.63	-46.64	-47.89	-39.02	-6.31
		150 kHz to 30 MHz	-33.44	-33.40	-33.87	-35.06	-29.02	-4.38
		30 MHz to 600 MHz	-39.49	-39.43	-39.24	-38.84	-19.02	-19.82
		600 MHz to 616.9 GHz	-37.36	-37.10	-36.96	-37.48	-19.02	-17.94
	1	652.1 MHz to 700 MHz	-25.25	-26.18	-26.87	-24.66	-19.02	-5.64
		700 MHz to 1 GHz	-38.13	-38.08	-38.05	-37.99	-19.02	-18.97
		1 GHz to 3 GHz	-25.01	-25.08	-25.02	-24.09	-19.02	-5.07
		3 GHz to 8 GHz	-28.53	-28.40	-28.61	-28.49	-19.02	-9.38
High		9 kHz to 150 kHz	-46.69	-45.94	-46.75	-46.66	-39.02	-6.92
		150 kHz to 30 MHz	-33.57	-33.64	-34.72	-34.56	-29.02	-4.55
		30 MHz to 600 MHz	-39.87	-39.87	-39.78	-39.35	-19.02	-20.33
		600 MHz to 616.9 GHz	-38.04	-37.49	-38.05	-37.53	-19.02	-18.47
	2	652.1 MHz to 700 MHz	-26.41	-24.72	-25.92	-24.67	-19.02	-5.65
		700 MHz to 1 GHz	-38.43	-38.42	-38.45	-37.95	-19.02	-18.93
		1 GHz to 3 GHz	-24.15	-24.20	-24.13	-23.42	-19.02	-4.40
		3 GHz to 8 GHz	-27.13	-26.81	-27.28	-26.72	-19.02	-7.70
		9 kHz to 150 kHz	-47.18	-46.38	-46.56	-47.64	-39.02	-7.36
		150 kHz to 30 MHz	-34.58	-34.62	-33.94	-34.71	-29.02	-4.92
		30 MHz to 600 MHz	-40.04	-40.00	-40.04	-39.54	-19.02	-20.52
		600 MHz to 616.9 GHz	-38.02	-38.08	-38.03	-38.27	-19.02	-19.00
	3	652.1 MHz to 700 MHz	-26.22	-25.63	-24.86	-25.32	-19.02	-5.84
		700 MHz to 1 GHz	-38.46	-38.49	-38.43	-38.08	-19.02	-19.06
		1 GHz to 3 GHz	-24.07	-24.14	-24.42	-23.15	-19.02	-4.13
		3 GHz to 8 GHz	-27.36	-27.23	-27.07	-26.59	-19.02	-7.57

element

Table 8-29. Conducted Spurious Emission Summary Data (n71_1C_5M)

FCC ID: A3LRF4450T-71A	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dega 46 of 79
8K22101401-00-R1.A3L	10/14/2022 - 10/18/2022	RRU(RF4450t)	raye 40 UI 78
© 2024 Element			EC OD 4C 40 Dev 04



				Level (dBm)				Morgin
Channel	Port	Measurement Range	QPSK	16QAM	64QAM	256QAM	(dBm)	(dB)
		9 kHz to 150 kHz	-46.32	-46.67	-46.26	-46.62	-39.02	-7.24
		150 kHz to 30 MHz	-34.51	-33.83	-33.20	-34.31	-29.02	-4.18
		30 MHz to 600 MHz	-39.12	-39.27	-39.50	-39.58	-19.02	-20.10
		600 MHz to 616.9 GHz	-28.90	-25.74	-27.93	-26.72	-19.02	-6.72
	0	652.1 MHz to 700 MHz	-36.02	-37.19	-36.75	-36.59	-19.02	-17.00
		700 MHz to 1 GHz	-38.31	-38.03	-38.53	-38.17	-19.02	-19.01
		1 GHz to 3 GHz	-25.05	-24.92	-25.06	-24.96	-19.02	-5.90
		3 GHz to 8 GHz	-28.93	-28.83	-28.91	-29.15	-19.02	-9.81
		9 kHz to 150 kHz	-45.55	-46.57	-45.85	-45.93	-39.02	-6.53
		150 kHz to 30 MHz	-33.89	-34.92	-32.85	-33.03	-29.02	-3.83
		30 MHz to 600 MHz	-38.95	-39.07	-39.16	-38.94	-19.02	-19.92
		600 MHz to 616.9 GHz	-28.11	-27.06	-27.48	-27.07	-19.02	-8.04
	1	652.1 MHz to 700 MHz	-36.48	-36.69	-35.99	-36.59	-19.02	-16.97
		700 MHz to 1 GHz	-38.30	-37.94	-37.61	-37.56	-19.02	-18.54
		1 GHz to 3 GHz	-24.75	-24.93	-24.99	-25.00	-19.02	-5.73
		3 GHz to 8 GHz	-28.68	-28.54	-28.66	-28.46	-19.02	-9.44
Low		9 kHz to 150 kHz	-46.35	-46.29	-46.18	-46.17	-39.02	-7.15
		150 kHz to 30 MHz	-33.10	-33.19	-33.35	-32.46	-29.02	-3.44
		30 MHz to 600 MHz	-39.40	-39.59	-39.65	-39.56	-19.02	-20.38
		600 MHz to 616.9 GHz	-28.05	-26.98	-27.55	-28.63	-19.02	-7.96
	2	652 1 MHz to 700 MHz	-36.62	-36.90	-36 44	-37.30	-19.02	-17 42
		700 MHz to 1 GHz	-38.24	-38.12	-38.08	-38.54	-19.02	-19.06
		1 GHz to 3 GHz	-23.96	-24 17	-24 11	-24 13	-19.02	-4 94
		3 GHz to 8 GHz	-27.00	-27.06	-27.11	-27.10	-19.02	-7.98
	-	9 kHz to 150 kHz	-47.36	-46.96	-46.26	-46.90	-39.02	-7.24
		150 kHz to 30 MHz	-33.72	-33.52	-34.84	-34 98	-29.02	-4.50
		30 MHz to 600 MHz	-39.73	-39.98	-39.99	-39.97	-19.02	-20 71
		600 MHz to 616 9 GHz	-28.03	-28.96	-27 51	-29.12	-19.02	-8.49
	3	652 1 MHz to 700 MHz	-36.44	-37.02	-36.59	-37.13	-19.02	-17 42
		700 MHz to 1 GHz	-38.41	-38.29	-38.38	-38.36	-19.02	-19.27
		1 GHz to 3 GHz	-24 13	-24 19	-24.28	-24 17	-19.02	-5.11
		3 GHz to 8 GHz	-27.27	-27.28	-27.26	-27.31	-19.02	-8.24
		9 kHz to 150 kHz	-46 58	-45.92	-46.42	-46.45	-39.02	-6.90
		150 kHz to 30 MHz	-32 50	-33.22	-33.42	-3/ 97	-29.02	-3.48
		30 MHz to 600 MHz	-39.55	-39.56	-39.40	-39.43	-10.02	-20.40
		600 MHz to 616 9 GHz	-35.63	-36.30	-35.82	-35.77	-10.02	-16.61
	0	652 1 MHz to 700 MHz	-35.75	-36.09	-36.18	-35.78	-10.02	-16.73
		700 MHz to 1 GHz	-38.13	-37.99	-37.99	-38/11	-10.02	-18.07
		1 GHz to 3 GHz	-25.03	-25.08	-25.04	-25.06	-10.02	-6.01
		3 GHz to 8 GHz	-23.03	-28.48	-20.18	-28.00	-19.02	-0.01
Middle		9 kHz to 150 kHz	-20.00	-20.40	-46.30	-20.92	-19.02	-9.40
			-45.94	-40.90	-40.39	-40.22	-39.02	-0.92
		30 MHz to 600 MHz	-34.20	-34.30	-33.24	-33.10	-29.02	10.92
		600 MHz to 616 0 GHz	-39.14	-39.10	-30.04	-39.00	10.02	-19.02
	1	652 1 MHz to 700 MHz	-55.45	-55.77	-55.19	-55.05	10.02	16.22
		700 MHz to 1 GHz	-33.73	-33.80	-33.90	-33.25	10.02	-10.23
			-30.13	-31.91	-30.01	-30.11	-19.02	-10.90
	ŀ		-24.00	-24.00	-24.11	-20.04	10.02	-0.00
			-20.43	-20.34	-20.00	-20.00	-19.02	-9.43
FCC ID: A3LRE	4450T-714	element	MEASUREMEN	REPORT	SA	MSUNG	Approved	by:
			(CERTIFICA	TION)			Technical N	Manager
Test Report S/N:		Test Dates: EUT Ty	De:				Page 47 of	78

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		9 kHz to 150 kHz	-47.07	-46.37	-45.94	-46.07	-39.02	-6.92
		150 kHz to 30 MHz	-33.14	-33.20	-34.15	-32.76	-29.02	-3.74
		30 MHz to 600 MHz	-39.27	-39.60	-39.47	-39.32	-19.02	-20.25
	_	600 MHz to 616.9 GHz	-34.93	-35.39	-35.10	-35.30	-19.02	-15.91
	2	652.1 MHz to 700 MHz	-35.28	-35.43	-35.23	-35.52	-19.02	-16.21
		700 MHz to 1 GHz	-38.72	-38.44	-38.34	-38.48	-19.02	-19.32
		1 GHz to 3 GHz	-23.96	-24.31	-23.56	-24.11	-19.02	-4.54
		3 GHz to 8 GHz	-27.07	-27.14	-27.11	-26.93	-19.02	-7.91
		9 kHz to 150 kHz	-45.85	-46.31	-46.71	-46.79	-39.02	-6.83
		150 kHz to 30 MHz	-33.75	-33.94	-36.29	-33.14	-29.02	-4.12
		30 MHz to 600 MHz	-39.85	-40.00	-39.91	-40.02	-19.02	-20.83
		600 MHz to 616.9 GHz	-35.77	-35.87	-35.89	-35.72	-19.02	-16.70
	3	652.1 MHz to 700 MHz	-35.71	-35.86	-35.68	-35.52	-19.02	-16.50
		700 MHz to 1 GHz	-38.34	-38.14	-38.34	-38.15	-19.02	-19.12
		1 GHz to 3 GHz	-23.79	-24.10	-24.08	-24.19	-19.02	-4.77
		3 GHz to 8 GHz	-27.32	-27.32	-27.32	-27.35	-19.02	-8.30
		9 kHz to 150 kHz	-46.30	-46.22	-45.80	-45.38	-39.02	-6.36
		150 kHz to 30 MHz	-33.81	-33.85	-33.15	-33.96	-29.02	-4.13
		30 MHz to 600 MHz	-39.53	-39.40	-39.57	-39.47	-19.02	-20.38
		600 MHz to 616.9 GHz	-36.23	-37.08	-36.56	-37.16	-19.02	-17.21
	0	652.1 MHz to 700 MHz	-25.22	-26.92	-27.30	-26.29	-19.02	-6.20
		700 MHz to 1 GHz	-38.47	-38.56	-38.41	-38.54	-19.02	-19.39
		1 GHz to 3 GHz	-24.75	-24.91	-25.09	-24.70	-19.02	-5.68
		3 GHz to 8 GHz	-28.87	-28.98	-28.80	-28.87	-19.02	-9.78
		9 kHz to 150 kHz	-46.65	-46.39	-46.53	-46.27	-39.02	-7.25
		150 kHz to 30 MHz	-32.94	-34.44	-33.98	-34.64	-29.02	-3.92
		30 MHz to 600 MHz	-39.31	-39.20	-39.12	-39.30	-19.02	-20.10
		600 MHz to 616.9 GHz	-36.41	-36.92	-36.57	-36.75	-19.02	-17.39
	1	652.1 MHz to 700 MHz	-26.85	-27.87	-26.05	-25.84	-19.02	-6.82
		700 MHz to 1 GHz	-37.97	-38.16	-38.01	-37.83	-19.02	-18.81
	F	1 GHz to 3 GHz	-24.87	-24.85	-24.73	-25.02	-19.02	-5.71
		3 GHz to 8 GHz	-28.51	-28.61	-28.34	-28.80	-19.02	-9.32
High		9 kHz to 150 kHz	-46.21	-45.84	-46.22	-46.04	-39.02	-6.82
		150 kHz to 30 MHz	-35.11	-34.62	-33.66	-35.37	-29.02	-4.64
		30 MHz to 600 MHz	-39.60	-39.39	-39.64	-39.22	-19.02	-20.20
		600 MHz to 616.9 GHz	-36.50	-37.21	-37.43	-37.42	-19.02	-17.48
	2	652.1 MHz to 700 MHz	-26.05	-27.64	-27.93	-25.69	-19.02	-6.67
		700 MHz to 1 GHz	-38.45	-38.50	-38.37	-38.17	-19.02	-19.15
		1 GHz to 3 GHz	-24.14	-24.09	-24.09	-24.33	-19.02	-5.07
		3 GHz to 8 GHz	-27.13	-26.96	-27.20	-26.79	-19.02	-7.77
		9 kHz to 150 kHz	-46.12	-46.42	-47.13	-46.68	-39.02	-7.10
		150 kHz to 30 MHz	-33.00	-34.89	-35.04	-35.33	-29.02	-3.98
		30 MHz to 600 MHz	-39.98	-39.85	-39.59	-40.05	-19.02	-20.57
	_	600 MHz to 616.9 GHz	-36.66	-36.76	-37.32	-37.09	-19.02	-17.64
	3	652.1 MHz to 700 MHz	-27.37	-29.36	-26.25	-27.81	-19.02	-7.23
		700 MHz to 1 GHz	-38.55	-38.66	-38.28	-38.50	-19.02	-19.26
		1 GHz to 3 GHz	-24.25	-24.18	-24.17	-24.29	-19.02	-5.15
		3 GHz to 8 GHz	-27.30	-27.30	-27.19	-27.20	-19.02	-8.17

element

Table 8-30. Conducted Spurious Emission Summary Data (n71_1C_10M)

FCC ID: A3LRF4450T-71A	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Degr. 49 of 79
8K22101401-00-R1.A3L	10/14/2022 - 10/18/2022	RRU(RF4450t)	Page 48 01 78
© 2021 Element			ES OD 16 12 Boy 01



Channel Port Measurement Range DPSk 16QAM 64QAM 266QAM (dBr) (dBr) 0 9 kHz to 150 kHz 442.8 446.08 -45.81 -46.44 -39.02 -6.79 30 MHz to 600 MHz 33.12 -33.91 -33.60 -33.10 -29.02 -4.08 600 MHz to 616.9 GHz -25.07 -25.73 -28.05 -27.41 19.02 -19.00 6601 MHz to 616.9 GHz -25.07 -25.73 -28.05 -27.41 19.02 -6.05 662.1 MHz to 700 MHz -33.56 -34.25 19.02 -16.55 -10.22 -16.55 1 GHz to 3 GHz -24.99 -24.63 -24.89 -28.08 -28.02 -28.03 -19.02 -5.61 1 600 MHz to 600 MHz -38.79 -39.05 -38.78 -19.02 -18.76 1 600 MHz to 600 MHz -38.79 -39.06 -38.05 -38.78 -19.02 -5.61 1 600 MHz to 50 GHz -28.93 -28.61 -22.751 -19.02 -5.61					Level (dBm)				Manaia
Low 9 kHz to 150 kHz -46.28 -46.06 -45.81 -46.44 -33.00 -67.93 0 150 kHz to 30 MHz -33.10 -33.00 -33.10 -33.00 -4.08 30 MHz to 600 MHz -33.10 -33.00 -33.10 -19.02 -4.08 600 MHz to 616.9 GHz -25.07 -25.73 -28.06 -27.41 -19.02 -46.05 665.1 MHz to 700 MHz -33.56 -34.11 -33.56 -34.25 -19.02 -46.05 1 GHz to 3 GHz -24.99 -24.63 -24.99 -24.63 -19.02 -6.94 1 GHz to 3 GHz -28.91 -26.54 -46.41 -45.96 -39.02 -6.94 1 GO MHz to 610 MHz -33.04 -34.66 -34.41 -32.00 -20.02 -38.81 1 GO MHz to 610 MHz -33.04 -34.66 -34.41 -32.00 -19.02 -6.60 1 GHz to 3 GHz -26.83 -25.62 -28.61 -27.51 -19.02 -18.02 1 GHz to 3 GHz -24.63	Channel	Port	Measurement Range	QPSK	16QAM	64QAM	256QAM	(dBm)	Margin (dB)
Low 150 kHz to 30 MHz -33.12 -33.91 -33.60 -33.10 -23.02 -4.08 0 300 MHz to 616.9 GHz 25.07 25.73 28.06 -27.41 19.02 -6.05 600 MHz to 616.9 GHz 25.07 25.73 28.06 -27.41 19.02 -4.05 165.1 MHz to 700 MHz 33.55 -36.67 -36.30 -36.28 -19.02 -46.55 1 GHz to 3 GHz -24.99 -24.63 -49.07 -86.57 -46.41 -45.96 -98.71 -19.02 -3.88 -39.02 -38.83 -19.02 -18.05 -69.07 1 50 kHz to 30 MHz -33.04 -34.66 -33.41 -37.20 -28.02 -38.83 -19.02 -18.02 -18.02 -19.02 -18.02 -18.02 -19.02 -18.02 -18.02 -18.02 -18.02 -18.02 -19.02 -18.02 -18.02 -18.02 -18.02 -18.02 -18.02 -18.02 -18.02 -18.02 -18.02 -18.02 -18.02 -18.02			9 kHz to 150 kHz	-46.28	-46.08	-45.81	-46.44	-39.02	-6.79
Image: bit is a serie in the image: image			150 kHz to 30 MHz	-33.12	-33.91	-33.60	-33.10	-29.02	-4.08
0 600 MHz to 616.9 GHz 652.1 MHz to 700 MHz -25.07 -25.73 -28.05 -36.25 -27.41 -36.20 -19.02 -36.25 -46.05 -36.24 1 GHz to 3 GHz -3 GHz to 6 GHz -24.99 -24.63 -24.99 -24.63 -24.63 -24.99 -24.63 -24.63 -19.02 -46.55 1 GHz to 3 GHz -24.90 -24.88 -24.69 -28.83 -19.02 -6.94 3 GHz to 8 GHz -20.06 -28.84 -28.69 -28.83 -19.02 -6.94 1 50 MHz to 50 MHz -33.04 -34.66 -34.41 -32.90 -22.02 -38.85 30 MHz to 600 MHz -33.73 -34.08 -33.03 -33.80 -19.02 -16.60 1 GHz to 3 GHz -24.63 -24.77 -24.64 -24.79 19.02 -56.1 1 GHz to 3 GHz -24.63 -24.77 -24.64 -24.79 19.02 -56.1 1 GHz to 3 GHz -24.63 -34.77 -24.64 -24.79 19.02 -56.7 1 GHz to 3 GHz -28.54 -28.64 -28.65 -28.73 19.02 -34.65			30 MHz to 600 MHz	-39.13	-38.92	-39.29	-39.17	-19.02	-19.90
Image: constraint of the		0	600 MHz to 616.9 GHz	-25.07	-25.73	-28.05	-27.41	-19.02	-6.05
Image: https://www.image: htttps://www.image: https://www.image: https://www.image:		Ũ	652.1 MHz to 700 MHz	-33.56	-34.11	-33.55	-34.25	-19.02	-14.53
Image: https://www.image: https://www.imagee: https://wwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwww			700 MHz to 1 GHz	-35.57	-36.67	-36.30	-36.28	-19.02	-16.55
Image: state is a serie in the ser			1 GHz to 3 GHz	-24.99	-24.63	-24.99	-24.63	-19.02	-5.61
Image: state is the ison of the			3 GHz to 8 GHz	-29.06	-28.88	-28.69	-28.83	-19.02	-9.67
Interview 150 kHz to 30 MHz -33.04 -34.66 -34.41 -32.90 -33.80 -19.02 -19.02 -6.60 652 1 MHz to 10 GHz -36.66 -37.14 -37.23 -37.66 -39.90 -33.91 -19.02 -5.61 1 GHz to 3 GHz -28.64 -28.64 -28.66 -28.73 -19.02 -3.65 150 KHz to 30 MHz -32.91 -32.12 -32.91 -32.14 -19.02 -7.37 652 1 MHz to 700 MHz -32.91 -32.12 -32.74 -19.02 -7.37 652 1 MHz to 700 MHz -32.91 -32.12 -32.74 -19.02 -7.37 1 GHz to 3 GHz -23.76 -33.72 -37.41 -19.02 <td></td> <td></td> <td>9 kHz to 150 kHz</td> <td>-45.97</td> <td>-46.55</td> <td>-46.41</td> <td>-45.96</td> <td>-39.02</td> <td>-6.94</td>			9 kHz to 150 kHz	-45.97	-46.55	-46.41	-45.96	-39.02	-6.94
Image: state in the ima			150 kHz to 30 MHz	-33.04	-34.66	-34.41	-32.90	-29.02	-3.88
Image: bit is to be address of the image: bit is the image: b			30 MHz to 600 MHz	-38.79	-39.05	-38.95	-38.78	-19.02	-19.76
Low 652.1 MHz to 700 MHz -33.73 -34.08 -33.30 -19.02 -114.01 TOO MHz to 1 GHz -36.66 -37.14 -37.23 -37.68 -19.02 -17.64 1 GHz to 3 GHz -24.63 -24.77 -24.84 -28.65 -28.73 -19.02 -5.61 3 GHz to 8 GHz -28.64 -28.64 -28.65 -28.73 -19.02 -5.62 9 KHz to 150 KHz -30.01 -33.90 -33.10 -20.02 -3.64 30 MHz to 600 MHz -32.91 -32.12 -32.47 -32.03 -19.02 -17.70 652.1 MHz to 700 MHz -32.91 -32.12 -32.47 -32.03 -19.02 -13.01 700 MHz to 1 GHz -32.91 -32.12 -32.47 -32.03 -19.02 -17.70 1 GHz to 3 GHz -26.83 -27.10 -26.81 -26.72 -19.02 -7.70 3 GHz to 8 GHz -26.83 -27.10 -26.81 -26.72 -19.02 -5.95 650.1 MHz to 70 MHz -33.93 <t< td=""><td></td><td>1</td><td>600 MHz to 616.9 GHz</td><td>-26.93</td><td>-25.62</td><td>-28.61</td><td>-27.51</td><td>-19.02</td><td>-6.60</td></t<>		1	600 MHz to 616.9 GHz	-26.93	-25.62	-28.61	-27.51	-19.02	-6.60
Low Low 1 GHz to 3 GHz 1 GHz 2-36.66 -37.14 -37.23 -37.68 -19.02 -17.64 1 GHz to 3 GHz 2-24.63 -24.77 -24.64 -24.79 -19.02 -5.61 3 GHz to 8 GHz -28.54 -28.64 -28.65 -28.73 -19.02 -9.52 9 KHz to 150 KHz -46.15 -46.46 -45.60 -45.99 -39.02 -6.58 150 KHz to 30 MHz -32.28 -34.02 -33.93 -33.10 -29.02 -3.46 100 MHz to 610.9 GHz -39.29 -39.09 -39.17 -39.14 -19.02 -20.07 600 MHz to 616.9 GHz -28.02 -26.39 -27.45 -26.63 -19.02 -7.37 652.1 MHz to 700 MHz -32.91 -32.12 -32.47 -32.03 -19.02 -13.01 700 MHz to 150 KHz -28.64 -28.68 -23.75 -37.74 -19.02 -18.23 1 GHz to 3 GHz -23.76 -23.88 -23.60 -23.59 -19.02 -7.70 9 KHz to 150 KHz -46.63 -46.50 -46.86 -47.51 -39.02 -7.70 9 KHz to 150 KHz -39.98 -39.99 -39.99 -39.79 -19.02 -4.57 3 GHz to 8 GHz -22.17 -33.17 -32.88 -33.07 -19.02 -7.70 662.1 MHz to 700 MHz -32.91 -32.17 -33.18 -34.58 -34.45 -29.02 -4.86 30 MHz to 616.9 GHz -28.24 -26.73 -24.97 -27.64 -19.02 -5.57 652.1 MHz to 700 MHz -32.17 -33.17 -32.88 -33.07 -19.02 -13.15 700 MHz to 161.9 GHz -23.217 -33.17 -32.88 -33.07 -19.02 -13.15 700 MHz to 161.9 GHz -23.94 -37.14 -37.30 -37.45 -19.02 -13.15 700 MHz to 161.9 GHz -23.94 -33.17 -32.88 -33.07 -19.02 -4.91 3 GHz to 8 GHz -27.20 -27.12 -27.03 -27.26 -19.02 -4.81 1 GHz to 3 GHz -33.90 -33.94 -39.91 -39.19 -19.02 -19.28 600 MHz to 161.9 GHz -33.07 -34.27 -34.26 -33.11 -29.02 -4.51 30 MHz to 10 Hz -33.07 -34.27 -34.28 -33.07 -19.02 -19.92 600 MHz to 164.9 GHz -32.14 -31.58 -31.18 -32.07 -19.02 -19.92 600 MHz to 164.9 GHz -32.14 -31.58 -31.19 -31.02 -19.02 -19.92 600 MHz to 164.9 GHz -32.14 -31.58 -31.28 -31.78 -19.02 -11.62 700 MHz to 164.9 GHz -32.91 -34.01 -32.87 -39.19 -19.02 -19.22 600 MHz to 164.9 GHz -32.94 -34.01 -32.87 -34.28 -33.91 -19.02 -19.22 600 MHz to 164.9 GHz -32.14 -31.28 -31.78 -31.02 -19.02 -4.57 3 GHz to 8 GHz -24.89 -46.18 -46.20 -46.12 -39.02 -7.10 15 kHz to 30 MHz -30.91 -30.91 -30.90		1	652.1 MHz to 700 MHz	-33.73	-34.08	-33.03	-33.80	-19.02	-14.01
Low			700 MHz to 1 GHz	-36.66	-37.14	-37.23	-37.68	-19.02	-17.64
Low 3 GHz to 8 GHz -28.54 -28.64 -28.65 -28.73 -19.02 -9.52 9 kHz to 150 kHz -46.15 -46.46 -45.60 -45.99 -39.02 -6.58 20 30 MHz to 600 MHz -39.29 -39.09 -39.17 -39.14 -19.02 -20.07 600 MHz to 600 MHz -39.29 -39.09 -39.17 -39.14 -19.02 -7.37 652.1 MHz to 700 MHz -32.91 -32.12 -32.47 -32.03 -19.02 -13.01 700 MHz to 1GHz -32.76 -23.88 -23.60 -23.58 -91.02 -7.70 3 GHz to 8 GHz -26.83 -27.10 -26.72 19.02 -13.01 3 GHz to 8 GHz -26.84 -26.73 -39.79 -19.02 -7.70 3 GHz to 8 GHz -26.24 -26.73 -24.97 -27.64 -19.02 -57.5 600 MHz to 616.9 GHz -26.24 -26.73 -24.97 -27.64 -19.02 -16.38 150 kHz to 30 MHz -33.06 -33.17			1 GHz to 3 GHz	-24.63	-24.77	-24.64	-24.79	-19.02	-5.61
LUW 9 kHz to 150 kHz -46.15 -46.46 -45.60 -45.99 -39.02 -5.88 150 kHz to 30 MHz -32.48 -34.02 -33.93 -33.10 -29.02 -3.46 2 600 MHz to 616.9 GHz -39.29 -39.09 -39.14 -19.02 -20.07 600 MHz to 616.9 GHz -28.02 -26.39 -27.45 -26.63 -19.02 -13.01 700 MHz to 700 MHz -32.91 -32.12 -32.47 -32.03 -19.02 -13.01 1 GHz to 3 GHz -23.76 -23.88 -23.60 -23.59 -19.02 -7.70 3 GHz to 8 GHz -26.83 -27.10 -26.81 -26.72 -19.02 -7.70 9 kHz to 150 kHz -46.63 -46.50 -46.86 -47.51 -39.02 -4.86 30 MHz to 600 MHz -39.86 -39.69 -39.59 -39.79 -19.02 -20.57 600 MHz to 16.9 GHz -32.17 -33.17 -32.88 -33.07 -19.02 -13.15 700 MHz to 1GHz <t< td=""><td>Low</td><td></td><td>3 GHz to 8 GHz</td><td>-28.54</td><td>-28.64</td><td>-28.65</td><td>-28.73</td><td>-19.02</td><td>-9.52</td></t<>	Low		3 GHz to 8 GHz	-28.54	-28.64	-28.65	-28.73	-19.02	-9.52
150 kHz to 30 MHz -32.48 -34.02 -33.91 -33.10 -29.02 -3.46 30 MHz to 600 MHz -39.29 -39.09 -39.17 -39.14 -19.02 -20.07 652.1 MHz to 700 MHz -28.02 -26.39 -27.45 -26.63 -19.02 -13.01 700 MHz to 1 GHz -37.64 -37.65 -37.25 -37.74 -19.02 -18.23 1 GHz to 3 GHz -22.68 -22.88 -22.681 -26.72 -19.02 -7.70 3 GHz to 8 GHz -26.63 -27.10 -26.81 -26.72 -19.02 -7.70 3 GHz to 8 GHz -26.83 -27.10 -26.81 -26.72 -19.02 -7.74 3 0 MHz to 600 MHz -33.93 -33.88 -34.45 -29.02 -4.86 30 MHz to 600 MHz -33.94 -39.19 -39.79 -19.02 -5.95 600 MHz to 616.9 GHz -26.24 -26.73 -24.97 -27.64 -19.02 -5.95 652.1 MHz to 700 MHz -36.14 -33.14 -33.03	LOW		9 kHz to 150 kHz	-46.15	-46.46	-45.60	-45.99	-39.02	-6.58
Addition 30 MHz to 600 MHz -39.29 -39.09 -39.17 -39.14 -19.02 -20.07 600 MHz to 616.9 GHz -28.02 -26.39 -27.45 -26.63 -19.02 -7.37 601 MHz to 700 MHz -32.91 -32.12 -32.47 -32.03 -19.02 -13.01 700 MHz to 1 GHz -37.64 -37.65 -37.25 -37.74 -19.02 -18.23 1 GHz to 3 GHz -26.83 -27.10 -26.81 -26.72 -19.02 -7.76 3 GHz to 8 GHz -26.83 -27.10 -26.81 -26.72 -19.02 -7.74 150 kHz to 150 kHz -46.63 -46.50 -46.86 -47.51 -39.02 -7.48 150 kHz to 30 MHz -39.86 -39.69 -39.59 -39.79 -19.02 -20.57 652.1 MHz to 100 MHz -32.17 -33.17 -32.88 -33.07 -19.02 -16.38 1 GHz to 3 GHz -27.00 -27.12 -27.03 -27.26 -19.02 -16.39 1 GHz to 3 GHz			150 kHz to 30 MHz	-32.48	-34.02	-33.93	-33.10	-29.02	-3.46
A 600 MHz to 616.9 GHz -28.02 -26.39 -27.45 -26.63 -19.02 -7.37 652.1 MHz to 700 MHz -32.10 -32.12 -32.47 -32.03 -19.02 -13.01 700 MHz to 3 GHz -32.64 -37.65 -37.25 -37.74 -19.02 -18.23 3 GHz to 8 GHz -23.76 -23.88 -23.60 -23.59 -19.02 -7.70 3 GHz to 8 GHz -26.83 -27.10 -26.81 -26.72 -19.02 -7.70 9 kHz to 150 kHz -46.63 -46.50 -46.86 -47.51 -29.02 -26.55 650.1 MHz to 616.9 GHz -26.24 -26.73 -24.97 -27.64 -19.02 -5.55 652.1 MHz to 10 GHz -32.17 -33.17 -37.30 -37.45 19.02 -16.33 1 GHz to 3 GHz -27.00 -27.12 -27.03 -27.26 -19.02 -8.01 3 GHz to 8 GHz -27.00 -27.12 -27.03 -27.26 -19.02 -16.23 30 MHz to 600 MHz -33.0			30 MHz to 600 MHz	-39.29	-39.09	-39.17	-39.14	-19.02	-20.07
Middle 2 652.1 MHz to 700 MHz -32.91 -32.12 -32.47 -32.03 -19.02 -13.01 700 MHz to 1 GHz -37.64 -37.65 -37.25 -37.74 19.02 -18.23 1 GHz to 3 GHz -23.76 -23.88 -23.60 -23.76 -37.45 19.02 -4.67 3 GHz to 8 GHz -26.83 -27.10 -26.81 -26.72 19.02 -7.78 9 kHz to 150 kHz -43.03 -33.88 -34.56 -34.45 -9.02 -4.86 30 MHz to 600 MHz -39.86 -39.69 -39.59 -39.79 19.02 -20.57 600 MHz to 616.9 GHz -26.24 -26.73 -24.97 -27.64 19.02 -16.38 1 GHz to 3 GHz -23.96 -33.99 -33.03 19.02 -16.38 1 GHz to 3 GHz -23.96 -23.99 -23.93 19.02 -4.91 3 GHz to 8 GHz -27.20 -27.12 -27.03 -27.26 -19.02 -4.04 1 50 kHz to 30 MHz -33.07		2	600 MHz to 616.9 GHz	-28.02	-26.39	-27.45	-26.63	-19.02	-7.37
Middle 700 MHz to 1 GHz -37.64 -37.65 -37.25 -37.74 -19.02 -18.23 1 GHz to 3 GHz -23.76 -23.88 -23.60 -23.59 19.02 -4.57 3 GHz to 8 GHz -26.83 -27.10 -26.81 -26.72 19.02 -7.70 9 kHz to 150 kHz -46.63 -46.50 -46.86 -47.51 -39.02 -7.48 30 MHz to 600 MHz -33.93 -33.88 -34.58 -34.45 -29.02 -4.86 30 MHz to 600 MHz -39.96 -39.69 -39.59 -39.79 19.02 -50.55 652.1 MHz to 700 MHz -32.17 -33.17 -32.88 -33.07 19.02 -13.15 700 MHz to 1 GHz -35.40 -37.14 -37.30 -37.45 19.02 -16.38 1 GHz to 3 GHz -22.06 -23.99 -23.93 19.02 -4.91 3 GHz to 8 GHz -27.20 -27.12 -27.03 -27.26 -39.02 -6.63 1 GHz to 3 0 MHz -30.07 -34.27 <td></td> <td>2</td> <td>652.1 MHz to 700 MHz</td> <td>-32.91</td> <td>-32.12</td> <td>-32.47</td> <td>-32.03</td> <td>-19.02</td> <td>-13.01</td>		2	652.1 MHz to 700 MHz	-32.91	-32.12	-32.47	-32.03	-19.02	-13.01
Middle 1 GHz to 3 GHz -23.76 -23.88 -23.60 -23.59 -19.02 -4.57 3 GHz to 8 GHz -26.83 -27.10 -26.81 -26.72 -19.02 -7.70 9 kHz to 150 kHz -46.63 -46.60 -46.86 -47.51 -39.02 -7.48 150 kHz to 30 MHz -33.93 -33.88 -34.58 -34.45 -20.02 -4.86 30 MHz to 600 MHz -39.86 -39.69 -39.59 -39.79 -19.02 -20.57 600 MHz to 616.9 GHz -26.24 -26.73 -24.97 -27.64 -19.02 -5.95 652.1 MHz to 700 MHz -32.17 -33.17 -32.88 -33.07 -19.02 -4.91 3 GHz to 8 GHz -27.20 -27.12 -27.03 -27.26 -19.02 -8.01 3 GHz to 8 GHz -27.20 -27.12 -27.03 -27.26 -19.02 -4.05 3 GHz to 8 GHz -33.07 -34.26 -33.41 -29.02 -4.05 3 0 M+z to 610.9 GHz -32.14			700 MHz to 1 GHz	-37.64	-37.65	-37.25	-37.74	-19.02	-18.23
Middle 3 GHz to 8 GHz -26.83 -27.10 -26.81 -26.72 -19.02 -7.70 9 HHz to 150 kHz -46.63 -46.80 -46.86 -47.51 -39.02 -7.48 150 kHz to 30 MHz -33.93 -33.88 -34.58 -34.45 -29.02 -4.86 30 MHz to 600 MHz -39.86 -39.69 -39.59 -33.77 -19.02 -5.95 6600 MHz to 616.9 GHz -26.24 -26.73 -24.97 -27.64 -19.02 -13.15 700 MHz to 1 GHz -32.17 -33.17 -32.88 -33.07 -19.02 -16.38 1 GHz to 3 GHz -22.96 -23.99 -23.93 -19.02 -4.91 3 GHz to 8 GHz -27.20 -27.12 -27.03 -27.26 -19.02 -4.05 3 GHz to 8 GHz -30.01 -33.07 -34.27 -34.26 -33.41 -29.02 -4.05 3 GHz to 8 GHz -32.14 -31.58 -31.88 -32.07 -19.02 -12.56 652.1 MHz to 700 MHz -			1 GHz to 3 GHz	-23.76	-23.88	-23.60	-23.59	-19.02	-4.57
Middle 9 kHz to 150 kHz -46.63 -46.50 -46.86 -47.51 -39.02 -7.48 150 kHz to 30 MHz -33.93 -33.88 -34.65 -29.02 -4.86 30 MHz to 600 MHz -39.86 -39.69 -39.59 -39.79 -19.02 -20.57 600 MHz to 616.9 GHz -26.24 -26.73 -24.97 -27.64 -19.02 -13.15 700 MHz to 1 GHz -32.17 -33.17 -32.88 -33.07 -19.02 -16.38 1 GHz to 3 GHz -23.96 -23.96 -23.99 -23.93 -19.02 -4.91 3 GHz to 8 GHz -27.20 -27.12 -27.03 -27.26 -19.02 -4.05 3 0MHz to 500 MHz -33.07 -34.27 -34.26 -33.41 -29.02 -4.05 30 MHz to 600 MHz -39.20 -38.94 -39.21 -39.19 -19.02 -11.25 30 MHz to 600 MHz -30.64 -31.29 -31.19 -31.02 -19.02 -11.62 30 GMHz to 600 MHz -32.90			3 GHz to 8 GHz	-26.83	-27.10	-26.81	-26.72	-19.02	-7.70
Middle 150 kHz to 30 MHz -33.93 -33.88 -34.58 -34.45 -29.02 -4.86 30 MHz to 600 MHz -39.86 -39.69 -39.59 -39.79 -19.02 -20.57 600 MHz to 616.9 GHz -26.24 -26.73 -24.97 -27.64 -19.02 -13.15 700 MHz to 1GHz -32.17 -33.14 -37.30 -37.45 -19.02 -16.38 1 GHz to 3 GHz -23.96 -23.96 -23.99 -23.93 -19.02 -4.63 3 GHz to 8 GHz -27.20 -27.12 -27.03 -27.26 -19.02 -4.05 3 GHz to 8 GHz -27.20 -27.12 -27.03 -27.26 -19.02 -4.05 30 MHz to 600 MHz -39.01 -34.26 -34.14 -29.02 -40.05 30 MHz to 600 MHz -39.20 -38.94 -39.21 -39.19 -19.02 -12.56 652.1 MHz to 700 MHz -30.64 -31.29 -31.19 -31.02 -19.02 -18.73 1 GHz to 3 GHz -28.99			9 kHz to 150 kHz	-46.63	-46.50	-46.86	-47.51	-39.02	-7.48
Middle 30 MHz to 600 MHz -39.86 -39.69 -39.59 -39.79 -19.02 -20.57 600 MHz to 616.9 GHz -26.24 -26.73 -24.97 -27.64 -19.02 -5.95 652.1 MHz to 700 MHz -32.17 -33.17 -32.88 -33.07 -19.02 -16.38 1 GHz to 3 GHz -23.96 -23.96 -23.99 -23.93 -19.02 -4.91 3 GHz to 8 GHz -27.20 -27.12 -27.03 -27.26 -19.02 -4.91 3 GHz to 8 GHz -27.20 -27.12 -27.03 -27.26 -19.02 -4.91 3 GHz to 8 GHz -27.20 -27.12 -27.03 -27.26 -19.02 -4.05 30 MHz to 600 MHz -39.02 -38.94 -39.21 -39.02 -6.63 150 kHz to 30 MHz -30.64 -31.29 -31.19 -31.02 -19.02 -11.52 662.1 MHz to 10 GHz -32.14 -31.84 -32.07 -19.02 -11.62 -700 -19.02 -18.73 1 GHz t			150 kHz to 30 MHz	-33.93	-33.88	-34.58	-34.45	-29.02	-4.86
Middle 600 MHz to 616.9 GHz -26.24 -26.73 -24.97 -27.64 -19.02 -5.95 652.1 MHz to 700 MHz -32.17 -33.17 -32.88 -33.07 -19.02 -13.15 700 MHz to 1 GHz -35.40 -37.14 -37.30 -37.45 -19.02 -4.91 3 GHz to 3 GHz -23.96 -23.96 -23.99 -23.93 -19.02 -4.91 3 GHz to 8 GHz -27.20 -27.12 -27.03 -27.26 -19.02 -4.91 9 kHz to 150 kHz -46.31 -45.65 -46.04 -45.92 -39.02 -6.63 150 kHz to 30 MHz -33.07 -34.27 -34.26 -33.41 -29.02 -4.05 30 MHz to 600 MHz -39.20 -38.94 -39.21 -39.02 -11.02 -19.02 -11.62 700 MHz to 1 GHz -32.14 -31.58 -31.88 -32.07 -19.02 -11.62 700 MHz to 1 GHz -37.96 -37.86 -37.75 -37.76 -19.02 -5.70 1 GHz			30 MHz to 600 MHz	-39.86	-39.69	-39.59	-39.79	-19.02	-20.57
Middle 0 652.1 MHz to 700 MHz -32.17 -33.17 -32.88 -33.07 -19.02 -13.15 700 MHz to 1 GHz -35.40 -37.14 -37.30 -37.45 -19.02 -16.38 1 GHz to 3 GHz -23.96 -23.96 -23.99 -23.93 -19.02 -4.91 3 GHz to 8 GHz -27.20 -27.12 -27.03 -27.26 -19.02 -8.01 9 kHz to 150 kHz -46.31 -45.65 -46.04 -45.92 -39.02 -6.63 150 kHz to 30 MHz -33.07 -34.27 -34.26 -33.41 -29.02 -4.05 30 MHz to 600 MHz -39.20 -38.94 -39.21 -39.19 -19.02 -19.92 600 MHz to 1 GHz -32.04 -31.58 -31.88 -32.07 -19.02 -18.73 1 GHz to 3 GHz -24.80 -24.72 -24.90 -24.90 -19.02 -5.70 3 GHz to 8 GHz -28.99 -28.91 -29.02 -28.87 -19.02 -5.70 1 GHz to 3 GHz <td></td> <td>2</td> <td>600 MHz to 616.9 GHz</td> <td>-26.24</td> <td>-26.73</td> <td>-24.97</td> <td>-27.64</td> <td>-19.02</td> <td>-5.95</td>		2	600 MHz to 616.9 GHz	-26.24	-26.73	-24.97	-27.64	-19.02	-5.95
Middle 700 MHz to 1 GHz -35.40 -37.14 -37.30 -37.45 -19.02 -16.38 1 GHz to 3 GHz -23.96 -23.96 -23.99 -23.93 -19.02 -4.91 3 GHz to 8 GHz -27.20 -27.12 -27.03 -27.26 -19.02 -8.01 9 kHz to 150 kHz -46.31 -45.65 -46.04 -45.92 -39.02 -6.63 30 MHz to 30 MHz -33.07 -34.27 -34.26 -33.41 -29.02 -4.05 30 MHz to 600 MHz -39.20 -38.94 -39.21 -39.19 -19.02 -11.92 600 MHz to 1616.9 GHz -32.14 -31.88 -32.07 19.02 -11.82 700 MHz to 1 GHz -37.96 -37.86 -37.75 -37.76 -19.02 -18.73 1 GHz to 3 GHz -24.80 -24.72 -24.90 -24.90 -19.02 -57.70 3 GHz to 8 GHz -28.99 -28.91 -29.02 -28.87 -19.02 -57.70 1 GHz to 3 0 MHz -32.91 -3		3	652.1 MHz to 700 MHz	-32.17	-33.17	-32.88	-33.07	-19.02	-13.15
Middle 1 GHz to 3 GHz -23.96 -23.96 -23.99 -23.93 -19.02 -4.91 3 GHz to 8 GHz -27.20 -27.12 -27.03 -27.26 -19.02 -8.01 9 KHz to 150 KHz -46.31 -45.65 -46.04 -45.92 -39.02 -6.63 150 KHz to 30 MHz -33.07 -34.27 -34.26 -33.41 -29.02 -4.05 30 MHz to 600 MHz -39.20 -38.94 -39.21 -39.19 119.02 -19.92 600 MHz to 616.9 GHz -32.04 -31.88 -32.07 19.02 -11.62 700 MHz to 1GHz -37.96 -37.86 -37.75 -37.76 19.02 -18.73 1 GHz to 3 GHz -24.80 -24.72 -24.90 -24.90 -19.02 -5.70 3 GHz to 8 GHz -28.99 -28.91 -29.02 -28.87 19.02 -9.85 9 kHz to 150 kHz -46.29 -46.18 -46.20 -46.12 -39.02 -7.10 150 kHz to 30 MHz -32.91 -34.01<			700 MHz to 1 GHz	-35.40	-37.14	-37.30	-37.45	-19.02	-16.38
Middle 3 GHz to 8 GHz -27.20 -27.12 -27.03 -27.26 -19.02 -8.01 9 kHz to 150 kHz -46.31 -45.65 -46.04 -45.92 -39.02 -6.63 150 kHz to 30 MHz -33.07 -34.27 -34.26 -33.41 -29.02 -4.05 30 MHz to 600 MHz -39.20 -38.94 -39.21 -39.19 -19.02 -19.92 600 MHz to 616.9 GHz -32.14 -31.58 -31.88 -32.07 -19.02 -12.56 652.1 MHz to 700 MHz -30.64 -31.29 -31.19 -31.02 -19.02 -11.62 700 MHz to 1 GHz -37.96 -37.86 -37.75 -37.76 -19.02 -5.70 3 GHz to 8 GHz -28.99 -28.91 -29.02 -28.87 -19.02 -5.70 3 GHz to 600 MHz -38.75 -38.76 -38.79 -38.91 -19.02 -7.10 150 kHz to 30 MHz -32.91 -34.01 -32.87 -34.63 -29.02 -28.87 -19.02 -19.73			1 GHz to 3 GHz	-23.96	-23.96	-23.99	-23.93	-19.02	-4.91
Middle 9 kHz to 150 kHz -46.31 -45.65 -46.04 -45.92 -39.02 -6.63 150 kHz to 30 MHz -33.07 -34.27 -34.26 -33.41 -29.02 -4.05 30 MHz to 600 MHz -39.20 -38.94 -39.21 -39.19 -19.02 -19.92 600 MHz to 616.9 GHz -32.14 -31.58 -31.88 -32.07 -19.02 -11.62 652.1 MHz to 700 MHz -30.64 -31.29 -31.19 -31.02 -19.02 -11.62 700 MHz to 1 GHz -37.96 -37.86 -37.75 -37.76 -19.02 -18.73 1 GHz to 3 GHz -24.80 -24.72 -24.90 -24.90 -19.02 -5.70 3 GHz to 8 GHz -28.99 -28.91 -29.02 -28.87 -19.02 -9.85 9 kHz to 150 kHz -46.29 -46.18 -46.20 -46.12 -39.02 -7.10 150 kHz to 30 MHz -32.91 -34.01 -32.87 -34.63 -29.02 -3.85 30 MHz to 600 MHz -3			3 GHz to 8 GHz	-27.20	-27.12	-27.03	-27.26	-19.02	-8.01
Middle 150 kHz to 30 MHz -33.07 -34.27 -34.26 -33.41 -29.02 -4.05 30 MHz to 600 MHz -39.20 -38.94 -39.21 -39.19 -19.02 -19.92 600 MHz to 616.9 GHz -32.14 -31.58 -31.88 -32.07 -19.02 -12.56 652.1 MHz to 700 MHz -30.64 -31.29 -31.19 -31.02 -19.02 -11.62 700 MHz to 1 GHz -37.96 -37.86 -37.75 -37.76 -19.02 -5.70 3 GHz to 8 GHz -28.99 -28.91 -29.02 -28.87 -19.02 -5.70 3 GHz to 8 GHz -28.99 -28.91 -29.02 -28.87 -19.02 -9.85 9 kHz to 150 kHz -46.29 -46.18 -46.20 -46.12 -39.02 -7.10 150 kHz to 30 MHz -32.91 -34.01 -32.87 -34.63 -29.02 -38.51 30 MHz to 600 MHz -38.75 -38.76 -38.79 -34.63 -29.02 -38.51 600 MHz to 616.9 GHz			9 kHz to 150 kHz	-46.31	-45.65	-46.04	-45.92	-39.02	-6.63
Middle 30 MHz to 600 MHz -39.20 -38.94 -39.21 -39.19 -19.02 -19.92 1 600 MHz to 616.9 GHz -32.14 -31.58 -31.88 -32.07 -19.02 -12.56 1 652.1 MHz to 700 MHz -30.64 -31.29 -31.19 -31.02 -19.02 -11.62 700 MHz to 1 GHz -37.96 -37.86 -37.75 -37.76 -19.02 -18.73 1 GHz to 3 GHz -24.80 -24.72 -24.90 -24.90 -19.02 -5.70 3 GHz to 8 GHz -28.99 -28.91 -29.02 -28.87 -19.02 -9.85 9 kHz to 150 kHz -46.29 -46.18 -46.20 -46.12 -39.02 -7.10 150 kHz to 30 MHz -32.91 -34.01 -32.87 -34.63 -29.02 -38.5 30 MHz to 616.9 GHz -31.21 -32.15 -31.28 -31.78 -19.02 -11.73 600 MHz to 616.9 GHz -31.21 -32.15 -31.28 -31.78 -19.02			150 kHz to 30 MHz	-33.07	-34.27	-34.26	-33.41	-29.02	-4.05
Middle 600 MHz to 616.9 GHz -32.14 -31.58 -31.88 -32.07 -19.02 -12.56 652.1 MHz to 700 MHz -30.64 -31.29 -31.19 -31.02 -19.02 -11.62 700 MHz to 1 GHz -37.96 -37.86 -37.75 -37.76 -19.02 -18.73 1 GHz to 3 GHz -24.80 -24.72 -24.90 -24.90 -19.02 -5.70 3 GHz to 8 GHz -28.99 -28.91 -29.02 -28.87 -19.02 -9.85 9 kHz to 150 kHz -46.29 -46.18 -46.20 -46.12 -39.02 -7.10 150 kHz to 30 MHz -32.91 -34.01 -32.87 -34.63 -29.02 -38.51 30 MHz to 616.9 GHz -31.21 -32.91 -34.01 -32.87 -34.63 -29.02 -38.55 30 MHz to 616.9 GHz -31.21 -32.15 -31.28 -31.78 -19.02 -19.73 652.1 MHz to 700 MHz -30.31 -30.95 -30.08 -30.24 -19.02 -11.06			30 MHz to 600 MHz	-39.20	-38.94	-39.21	-39.19	-19.02	-19.92
Middle 0 652.1 MHz to 700 MHz 30.64 31.29 31.19 31.02 19.02 11.62 700 MHz to 1 GHz 37.96 -37.86 37.75 37.76 -19.02 18.73 1 GHz to 3 GHz -24.80 -24.72 -24.90 -24.90 -19.02 -5.70 3 GHz to 8 GHz -28.99 -28.91 -29.02 -28.87 -19.02 -9.85 9 kHz to 150 kHz -46.29 -46.18 -46.20 -46.12 -39.02 -7.10 150 kHz to 30 MHz -32.91 -34.01 -32.87 -34.63 -29.02 -38.55 30 MHz to 600 MHz -38.75 -38.76 -38.79 -34.63 -29.02 -19.73 600 MHz to 616.9 GHz -31.21 -32.15 -31.28 -31.78 -19.02 -11.06 700 MHz to 1 GHz -30.31 -30.95 -30.08 -30.24 -19.02 -11.06 1 GHz to 3 GHz -24.78 -24.83 -24.41 -24.86 -19.02 -18.31 <td< td=""><td></td><td>0</td><td>600 MHz to 616.9 GHz</td><td>-32.14</td><td>-31.58</td><td>-31.88</td><td>-32.07</td><td>-19.02</td><td>-12.56</td></td<>		0	600 MHz to 616.9 GHz	-32.14	-31.58	-31.88	-32.07	-19.02	-12.56
Middle 700 MHz to 1 GHz -37.96 -37.86 -37.75 -37.76 -19.02 -18.73 Middle 1 GHz to 3 GHz -24.80 -24.72 -24.90 -24.90 -19.02 -5.70 3 GHz to 8 GHz -28.99 -28.91 -29.02 -28.87 -19.02 -9.85 9 kHz to 150 kHz -46.29 -46.18 -46.20 -46.12 -39.02 -7.10 150 kHz to 30 MHz -32.91 -34.01 -32.87 -34.63 -29.02 -38.51 30 MHz to 600 MHz -38.75 -38.76 -38.79 -38.91 -19.02 -19.73 600 MHz to 616.9 GHz -31.21 -32.15 -31.28 -31.78 -19.02 -12.19 652.1 MHz to 700 MHz -30.31 -30.95 -30.08 -30.24 -19.02 -11.06 700 MHz to 1 GHz -37.33 -37.49 -37.70 -37.54 -19.02 -18.31 1 GHz to 3 GHz -24.78 -24.83 -24.41 -24.86 -19.02 -5.39 3 GHz		0	652.1 MHz to 700 MHz	-30.64	-31.29	-31.19	-31.02	-19.02	-11.62
Middle 1 GHz to 3 GHz -24.80 -24.72 -24.90 -24.90 -19.02 -5.70 3 GHz to 8 GHz -28.99 -28.91 -29.02 -28.87 -19.02 -9.85 9 kHz to 150 kHz -46.29 -46.18 -46.20 -46.12 -39.02 -7.10 150 kHz to 30 MHz -32.91 -34.01 -32.87 -34.63 -29.02 -3.85 30 MHz to 600 MHz -38.75 -38.76 -38.79 -38.91 -19.02 -19.73 600 MHz to 616.9 GHz -31.21 -32.15 -31.28 -31.78 -19.02 -12.19 652.1 MHz to 700 MHz -30.31 -30.95 -30.08 -30.24 -19.02 -11.06 700 MHz to 1 GHz -37.33 -37.49 -37.70 -37.54 -19.02 -18.31 1 GHz to 3 GHz -24.78 -24.83 -24.41 -24.86 -19.02 -5.39 3 GHz to 8 GHz -28.55 -28.43 -28.50 -28.48 -19.02 -5.39 3 GHz to 8 GHz -			700 MHz to 1 GHz	-37.96	-37.86	-37.75	-37.76	-19.02	-18.73
Middle 3 GHz to 8 GHz -28.99 -28.91 -29.02 -28.87 -19.02 -9.85 9 kHz to 150 kHz -46.29 -46.18 -46.20 -46.12 -39.02 -7.10 150 kHz to 30 MHz -32.91 -34.01 -32.87 -34.63 -29.02 -3.85 30 MHz to 600 MHz -38.75 -38.76 -38.79 -38.91 -19.02 -19.73 600 MHz to 616.9 GHz -31.21 -32.15 -31.28 -31.78 -19.02 -19.73 652.1 MHz to 700 MHz -30.31 -30.95 -30.08 -30.24 -19.02 -11.06 700 MHz to 1 GHz -37.33 -37.49 -37.70 -37.54 -19.02 -18.31 1 GHz to 3 GHz -24.78 -24.83 -24.41 -24.86 -19.02 -5.39 3 GHz to 8 GHz -28.55 -28.43 -28.50 -28.48 -19.02 -5.39 5 CC ID: A3LRF4450T-71A Gelement MEASUREMENT REPORT (CERTIFICATION) Approved by: Technical Manager			1 GHz to 3 GHz	-24.80	-24.72	-24.90	-24.90	-19.02	-5.70
Middle 9 kHz to 150 kHz -46.29 -46.18 -46.20 -46.12 -39.02 -7.10 150 kHz to 30 MHz -32.91 -34.01 -32.87 -34.63 -29.02 -3.85 30 MHz to 600 MHz -38.75 -38.76 -38.79 -38.91 -19.02 -19.73 600 MHz to 616.9 GHz -31.21 -32.15 -31.28 -31.78 -19.02 -12.19 652.1 MHz to 700 MHz -30.31 -30.95 -30.08 -30.24 -19.02 -11.06 700 MHz to 1 GHz -37.33 -37.49 -37.70 -37.54 -19.02 -18.31 1 GHz to 3 GHz -24.78 -24.83 -24.41 -24.86 -19.02 -5.39 3 GHz to 8 GHz -28.55 -28.43 -28.50 -28.48 -19.02 -9.41 MEASUREMENT REPORT (CERTIFICATION) MEASUREMENT REPORT (CERTIFICATION) Approved by: Technical Manager	N 41 H H		3 GHz to 8 GHz	-28.99	-28.91	-29.02	-28.87	-19.02	-9.85
150 kHz to 30 MHz -32.91 -34.01 -32.87 -34.63 -29.02 -3.85 30 MHz to 600 MHz -38.75 -38.76 -38.79 -38.91 -19.02 -19.73 600 MHz to 616.9 GHz -31.21 -32.15 -31.28 -31.78 -19.02 -12.19 652.1 MHz to 700 MHz -30.31 -30.95 -30.08 -30.24 -19.02 -11.06 700 MHz to 1 GHz -37.33 -37.49 -37.70 -37.54 -19.02 -18.31 1 GHz to 3 GHz -24.78 -24.83 -24.41 -24.86 -19.02 -5.39 3 GHz to 8 GHz -28.55 -28.43 -28.50 -28.48 -19.02 -9.41 MEASUREMENT REPORT (CERTIFICATION)	Middle		9 kHz to 150 kHz	-46.29	-46.18	-46.20	-46.12	-39.02	-7.10
30 MHz to 600 MHz 38.75 38.76 38.79 38.91 -19.02 -19.73 600 MHz to 616.9 GHz 31.21 32.15 31.28 31.78 -19.02 -12.19 652.1 MHz to 700 MHz 30.31 30.95 30.08 30.24 -19.02 -11.06 700 MHz to 1 GHz 37.33 37.49 37.70 37.54 -19.02 -18.31 1 GHz to 3 GHz -24.78 -24.83 -24.41 -24.86 -19.02 -5.39 3 GHz to 8 GHz -28.55 -28.43 -28.50 -28.48 -19.02 -9.41 MEASUREMENT REPORT (CERTIFICATION) MEASUREMENT REPORT (CERTIFICATION) Approved by: Technical Manager			150 kHz to 30 MHz	-32.91	-34.01	-32.87	-34.63	-29.02	-3.85
1 600 MHz to 616.9 GHz -31.21 -32.15 -31.28 -31.78 -19.02 -12.19 652.1 MHz to 700 MHz -30.31 -30.95 -30.08 -30.24 -19.02 -11.06 700 MHz to 1 GHz -37.33 -37.49 -37.70 -37.54 -19.02 -18.31 1 GHz to 3 GHz -24.78 -24.83 -24.41 -24.86 -19.02 -5.39 3 GHz to 8 GHz -28.55 -28.43 -28.50 -28.48 -19.02 -9.41 FCC ID: A3LRF4450T-71A MEASUREMENT REPORT (CERTIFICATION) Approved by: Technical Manager			30 MHz to 600 MHz	-38.75	-38.76	-38.79	-38.91	-19.02	-19.73
1 652.1 MHz to 700 MHz -30.31 -30.95 -30.08 -30.24 -19.02 -11.06 700 MHz to 1 GHz -37.33 -37.49 -37.70 -37.54 -19.02 -18.31 1 GHz to 3 GHz -24.78 -24.83 -24.41 -24.86 -19.02 -5.39 3 GHz to 8 GHz -28.55 -28.43 -28.50 -28.48 -19.02 -9.41 FCC ID: A3LRF4450T-71A MEASUREMENT REPORT (CERTIFICATION) Approved by: Technical Manager			600 MHz to 616.9 GHz	-31.21	-32.15	-31.28	-31.78	-19.02	-12.19
700 MHz to 1 GHz -37.33 -37.49 -37.70 -37.54 -19.02 -18.31 1 GHz to 3 GHz -24.78 -24.83 -24.41 -24.86 -19.02 -5.39 3 GHz to 8 GHz -28.55 -28.43 -28.50 -28.48 -19.02 -9.41 FCC ID: A3LRF4450T-71A MEASUREMENT REPORT (CERTIFICATION) Approved by: Technical Manager		1	652.1 MHz to 700 MHz	-30.31	-30.95	-30.08	-30.24	-19.02	-11.06
1 GHz to 3 GHz -24.78 -24.83 -24.41 -24.86 -19.02 -5.39 3 GHz to 8 GHz -28.55 -28.43 -28.50 -28.48 -19.02 -9.41 FCC ID: A3LRF4450T-71A MEASUREMENT REPORT (CERTIFICATION) SIMSURE Approved by: Technical Manager			700 MHz to 1 GHz	-37.33	-37.49	-37.70	-37.54	-19.02	-18.31
3 GHz to 8 GHz -28.55 -28.43 -28.50 -28.48 -19.02 -9.41 FCC ID: A3LRF4450T-71A element MEASUREMENT REPORT (CERTIFICATION) Image: Comparison of the second data and the second			1 GHz to 3 GHz	-24.78	-24.83	-24.41	-24.86	-19.02	-5.39
FCC ID: A3LRF4450T-71A Element MEASUREMENT REPORT (CERTIFICATION) SIMSUNG Approved by: Technical Manager			3 GHz to 8 GHz	-28.55	-28.43	-28.50	-28.48	-19.02	-9.41
FCC ID: A3LRF4450T-71A Celement MEASUREMENT REPORT (CERTIFICATION) Approved by:						•			hu
	FCC ID: A3LRF	4450T-71A	element	MEASUREMEN (CERTIFICA		ŚAI	MSUNG	Technical I	Manager

 Test Report S/N:
 Test Dates:
 EUT Type:

 8K22101401-00-R1.A3L
 10/14/2022 - 10/18/2022
 RRU(RF4450t)

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		9 kHz to 150 kHz	-46.60	-46.06	-46.55	-46.01	-39.02	-6.99
		150 kHz to 30 MHz	-33.71	-35.74	-35.24	-33.60	-29.02	-4.58
		30 MHz to 600 MHz	-39.20	-39.11	-39.16	-39.18	-19.02	-20.09
	~	600 MHz to 616.9 GHz	-30.26	-30.07	-30.61	-31.06	-19.02	-11.05
	2	652.1 MHz to 700 MHz	-28.83	-30.02	-29.49	-30.38	-19.02	-9.81
		700 MHz to 1 GHz	-36.76	-37.53	-37.48	-37.78	-19.02	-17.74
		1 GHz to 3 GHz	-23.64	-23.95	-23.85	-24.01	-19.02	-4.62
		3 GHz to 8 GHz	-27.08	-26.75	-26.95	-26.87	-19.02	-7.73
		9 kHz to 150 kHz	-47.26	-46.43	-46.89	-46.41	-39.02	-7.39
		150 kHz to 30 MHz	-34.06	-33.89	-33.93	-33.42	-29.02	-4.40
		30 MHz to 600 MHz	-39.75	-39.83	-39.75	-39.80	-19.02	-20.73
		600 MHz to 616.9 GHz	-31.11	-30.04	-30.70	-30.99	-19.02	-11.02
	3	652.1 MHz to 700 MHz	-30.31	-30.64	-30.40	-30.53	-19.02	-11.29
		700 MHz to 1 GHz	-37.08	-37.64	-37.29	-37.63	-19.02	-18.06
		1 GHz to 3 GHz	-24.10	-24.14	-23.99	-23.71	-19.02	-4.69
		3 GHz to 8 GHz	-27.22	-26.96	-27.22	-27.21	-19.02	-7.94
		9 kHz to 150 kHz	-45.74	-45.97	-46.15	-45.65	-39.02	-6.63
		150 kHz to 30 MHz	-32.74	-32.84	-35.60	-34.04	-29.02	-3.72
		30 MHz to 600 MHz	-39.85	-39.79	-39.63	-39.24	-19.02	-20.22
		600 MHz to 616.9 GHz	-31.02	-30.83	-31.68	-31.95	-19.02	-11.81
	0	652.1 MHz to 700 MHz	-25.17	-25.42	-26.31	-25.43	-19.02	-6.15
		700 MHz to 1 GHz	-36.96	-37.37	-37.28	-37.29	-19.02	-17.94
		1 GHz to 3 GHz	-24.71	-24.54	-24.74	-24.78	-19.02	-5.52
		3 GHz to 8 GHz	-28.93	-28.80	-28.89	-28.84	-19.02	-9.78
		9 kHz to 150 kHz	-46.27	-45.36	-46.46	-46.08	-39.02	-6.34
		150 kHz to 30 MHz	-33.66	-33.61	-32.57	-33.77	-29.02	-3.55
		30 MHz to 600 MHz	-39.54	-39.57	-39.63	-39.56	-19.02	-20.52
		600 MHz to 616.9 GHz	-31.75	-31.51	-31.86	-31.34	-19.02	-12.32
	1	652.1 MHz to 700 MHz	-24.08	-25.05	-24.78	-24.68	-19.02	-5.06
		700 MHz to 1 GHz	-37.24	-37.25	-37.48	-37.11	-19.02	-18.09
		1 GHz to 3 GHz	-24.88	-24.30	-24.55	-24.49	-19.02	-5.28
		3 GHz to 8 GHz	-28.48	-28.45	-28.66	-28.45	-19.02	-9.43
High		9 kHz to 150 kHz	-46.22	-46.30	-46.04	-45 47	-39.02	-6.45
		150 kHz to 30 MHz	-34.11	-33.48	-32.24	-33.14	-29.02	-3.22
		30 MHz to 600 MHz	-39.82	-40.08	-40.04	-39.94	-19.02	-20.80
		600 MHz to 616 9 GHz	-30.41	-30.46	-30.55	-30.84	-19.02	-11.39
	2	652 1 MHz to 700 MHz	-25.80	-25.25	-24 60	-26.26	-19.02	-5.58
		700 MHz to 1 GHz	-37.16	-37.23	-37 27	-37.22	-19.02	-18 14
		1 GHz to 3 GHz	-23.94	-23.96	-23.98	-23.88	-19.02	-4 86
		3 GHz to 8 GHz	-26.99	-26.80	-26.78	-26.00	-19.02	-7 76
		9 kHz to 150 kHz	-46 54	-46 37	-46.66	-46 70	-39.02	-7 35
		150 kHz to 30 MHz	-32.68	-33.07	-33.49	-34 22	-29.02	-3.66
		30 MHz to 600 MHz	-40 51	-40.28	-40.20	-40 53	-19.02	-21 18
		600 MHz to 616 9 GHz	-30.60	-30.20	-31.24	-30.37	-10.02	-11 27
	3	652 1 MHz to 700 MHz	-24.67	-23.87	-24 74	-24 55	_10.02	-4.85
		700 MHz to 1 GHz	-27.07	-20.07	-36.80	-27.00	-10.02	-17 78
		1 GHz to 3 GHz	-23.90	-24 11	-23.83	-23.86	-19.02	-4.81
		3 GHz to 8 GHz	-27.33	-27.06	-27.00	-27.20	_10.02	-8.04
	1			L L	L .00	LI.LU	10.02	0.07

element 🗧

Table 8-31. Conducted Spurious Emission Summary Data (n71_1C_20M)

FCC ID: A3LRF4450T-71A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 50 of 79
8K22101401-00-R1.A3L	10/14/2022 - 10/18/2022	RRU(RF4450t)	Fage 50 01 76
© 2021 Element			EC OD 4C 40 Dev 04



Channel Dort		Maggurament Dange	Level (dBm)				Limit	Margin
Channel	Pon	measurement Range	QPSK	16QAM	64QAM	256QAM	(dBm)	(dB)
		9 kHz to 150 kHz	-72.62	-72.18	-72.33	-72.61	-39.02	-33.16
		150 kHz to 30 MHz	-50.49	-50.02	-50.97	-50.23	-29.02	-21.00
	0	30 MHz to 863.8625 MHz	-30.54	-28.87	-28.92	-29.71	-19.02	-9.85
	0	869.1375 MHz to 1 GHz	-31.89	-31.60	-31.34	-31.22	-19.02	-12.20
		1 GHz to 3 GHz	-28.26	-28.36	-28.22	-28.23	-19.02	-9.20
		3 GHz to 9 GHz	-31.25	-31.61	-31.62	-31.69	-19.02	-12.23
		9 kHz to 150 kHz	-71.76	-72.67	-72.64	-72.46	-39.02	-32.74
		150 kHz to 30 MHz	-50.84	-50.93	-50.64	-50.57	-29.02	-21.55
	1	30 MHz to 863.8625 MHz	-30.65	-29.36	-28.90	-29.52	-19.02	-9.88
	I	869.1375 MHz to 1 GHz	-33.28	-33.01	-32.53	-32.49	-19.02	-13.47
		1 GHz to 3 GHz	-28.66	-28.82	-28.37	-28.68	-19.02	-9.35
Middle		3 GHz to 9 GHz	-32.76	-32.67	-32.96	-32.79	-19.02	-13.65
Midule		9 kHz to 150 kHz	-72.25	-73.06	-71.12	-72.52	-39.02	-32.10
		150 kHz to 30 MHz	-50.75	-50.37	-51.06	-50.42	-29.02	-21.35
	2	30 MHz to 863.8625 MHz	-27.52	-28.28	-28.56	-28.86	-19.02	-8.50
	2	869.1375 MHz to 1 GHz	-31.87	-32.06	-30.69	-31.64	-19.02	-11.67
		1 GHz to 3 GHz	-28.77	-28.81	-28.54	-28.55	-19.02	-9.52
		3 GHz to 9 GHz	-33.12	-33.09	-32.88	-33.19	-19.02	-13.86
		9 kHz to 150 kHz	-71.89	-71.28	-71.93	-71.79	-39.02	-32.26
		150 kHz to 30 MHz	-51.21	-50.59	-50.71	-51.02	-29.02	-21.57
	2	30 MHz to 863.8625 MHz	-28.75	-29.60	-30.46	-29.57	-19.02	-9.73
	5	869.1375 MHz to 1 GHz	-31.17	-32.16	-31.18	-31.52	-19.02	-12.15
		1 GHz to 3 GHz	-28.98	-28.92	-28.95	-28.85	-19.02	-9.83
		3 GHz to 9 GHz	-33.25	-33.77	-33.67	-33.20	-19.02	-14.18

Table 8-32. Conducted Spurious Emission Summary Data (n26_1C_5M)

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Plot 8-45. Conducted Spurious Emission Plot 9 kHz to 150 kHz (n29_2C_5M+5M_256QAM - Mid Channel, Port 0)



Plot 8-47. Conducted Spurious Emission Plot 30 MHz to 700 MHz (n29_2C_5M+5M_256QAM - Mid Channel, Port 0)



Plot 8-49. Conducted Spurious Emission Plot 728.1 MHz to 800 MHz (n29_2C_5M+5M_256QAM - Mid Channel, Port 0)



Plot 8-46. Conducted Spurious Emission Plot 150 kHz to 30 MHz (n29_2C_5M+5M_256QAM - Mid Channel, Port 0)



Plot 8-48. Conducted Spurious Emission Plot 700 MHz to 717.9 MHz (n29_2C_5M+5M_256QAM - Mid Channel, Port 0)



Plot 8-50. Conducted Spurious Emission Plot 800 MHz to 1 GHz

(n29_1C_5M_256QAM - High Channel, Port 0)

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Plot 8-51. Conducted Spurious Emission Plot 1 GHz to 3 GHz (n29_2C_5M+5M_256QAM - Mid Channel, Port 0)



Plot 8-53. Conducted Spurious Emission Plot 9 kHz to 150 kHz (n71_1C_5M_16QAM - Mid Channel, Port 3)



Plot 8-55. Conducted Spurious Emission Plot 30 MHz to 600 MHz (n71_1C_5M_16QAM - Mid Channel, Port 3)



Plot 8-52. Conducted Spurious Emission Plot 3 GHz to 8 GHz (n29_2C_5M+5M_256QAM - Mid Channel, Port 0)



Plot 8-54. Conducted Spurious Emission Plot 150 kHz to 30 MHz (n71_1C_5M_16QAM - Mid Channel, Port 3)



Plot 8-56. Conducted Spurious Emission Plot 600 MHz to 616.9 MHz (n71_1C_5M_16QAM - Mid Channel, Port 3)

Approved by: MEASUREMENT REPORT 🔵 element FCC ID: A3LRF4450T-71A SAMSUNG (CERTIFICATION) Technical Manager Test Report S/N: Test Dates: EUT Type: Page 53 of 78 8K22101401-00-R1.A3L 10/14/2022 - 10/18/2022 RRU(RF4450t) ES-QP-16-12 Rev.01 © 2021 Element





Plot 8-57. Conducted Spurious Emission Plot 652.1 MHz to 700 MHz (n71_1C_5M_16QAM - Mid Channel, Port 3)



Plot 8-59. Conducted Spurious Emission Plot 1 GHz to 3 GHz (n71_1C_5M_16QAM - Mid Channel, Port 3)



Plot 8-61. Conducted Spurious Emission Plot 9 kHz to 150 kHz (n26_1C_5M_QPSK - Mid Channel, Port 2)



Plot 8-58. Conducted Spurious Emission Plot 700 MHz to 1 GHz (n71_1C_5M_16QAM - Mid Channel, Port 3)



Plot 8-60. Conducted Spurious Emission Plot 3 GHz to 8 GHz (n71_1C_5M_16QAM - Mid Channel, Port 3)



Plot 8-62. Conducted Spurious Emission Plot 150 kHz to 30 MHz (n26_1C_5M_QPSK - Mid Channel, Port 2)

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Plot 8-63. Conducted Spurious Emission Plot 30 MHz to 863.8625 MHz (n26_1C_5M_QPSK - Mid Channel, Port 2)



Plot 8-64. Conducted Spurious Emission Plot 869.1375 MHz to 1 GHz (n26_1C_5M_QPSK - Mid Channel, Port 2)



Plot 8-65. Conducted Spurious Emission Plot 1 GHz to 3 GHz (n26_1C_5M_QPSK - Mid Channel, Port 2)



Plot 8-66. Conducted Spurious Emission Plot 3 GHz to 9 GHz (n26_1C_5M_QPSK - Mid Channel, Port 2)

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8.7 Frequency Stability

Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of KDB 971168 D01 v03r01. The frequency stability of the transmitter is measured by:

- a.) **Temperature:** The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.
- b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the nominal value for DC powered equipment.

Test Description

- 1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
- 2. The equipment is turned on in a "standby" condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.

Frequency measurements are made -30°C to +50°C in 10°C increments. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

Limit

NR n29 and n71 operation under Part 27.54

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

NR n26 operation under Part 90.213(a),

The frequency stability of the transmitter shall be maintained within ±1.5 ppm (±0.00015%) of center frequency.

Test Setup

The EUT was connected via an RF cable to a spectrum analyzer with the EUT placed inside an environmental chamber.



Figure 8-6. Test Instrument & Measurement Setup

Test Notes

None.

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OPERATING FREQUENCY: <u>725,500,000</u> Hz REFERENCE VOLTAGE: <u>-48.00</u> VDC

VOLTAGE (%)	POWER (VDC)	ТЕМР (°С)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %		+ 20 (Ref)	720,500,052	0	0.0000000
100 %		- 30	720,500,052	0	0.0000000
100 %		- 20	720,500,052	0	0.0000000
100 %	-48.00	- 10	720,500,052	0	0.0000000
100 %		0	720,500,052	0	0.0000000
100 %		+ 10	720,500,052	0	0.0000000
100 %		+ 30	720,500,052	0	0.0000000
100 %		+ 40	720,500,054	2	0.000003
100 %		+ 50	720,500,054	2	0.000003
85 %	-40.80	+ 20	720,500,053	1	0.0000001
115 %	-55.20	+ 20	720,500,052	0	0.0000000

Table 8-33. Frequency Stability Summary Data (NR_n29_1C_5M)



Figure 8-7. Frequency Stability Graph (NR_n29_1C_5M)

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OPERATING FREQUENCY: <u>619,500,000</u> Hz REFERENCE VOLTAGE: <u>-48.00</u> VDC

VOLTAGE (%)	POWER (VDC)	ТЕМР (°С)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %		+ 20 (Ref)	619,500,045	0	0.0000000
100 %		- 30	619,500,045	0	0.0000000
100 %		- 20	619,500,045	0	0.0000000
100 %	-48.00	- 10	619,500,045	0	0.0000000
100 %		0	619,500,045	0	0.0000000
100 %		+ 10	619,500,045	0	0.0000000
100 %		+ 30	619,500,045	0	0.0000000
100 %		+ 40	619,500,045	0	0.0000000
100 %		+ 50	619,500,047	2	0.000003
85 %	-40.80	+ 20	619,500,046	1	0.0000002
115 %	-55.20	+ 20	619,500,045	0	0.0000000

 Table 8-34. Frequency Stability Summary Data (NR_n71_1C_5M)



Figure 8-8. Frequency Stability Graph (NR_n71_1C_5M)

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OPERATING FREQUENCY: <u>866,500,000</u> Hz REFERENCE VOLTAGE: <u>-48.00</u> VDC

VOLTAGE (%)	POWER (VDC)	ТЕМР (°С)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %		+ 20 (Ref)	866,500,053	0	0.0000000
100 %		- 30	866,500,053	0	0.0000000
100 %		- 20	866,500,053	0	0.0000000
100 %	-48.00	- 10	866,500,053	0	0.0000000
100 %		0	866,500,053	0	0.0000000
100 %		+ 10	866,500,053	0	0.0000000
100 %		+ 30	866,500,053	0	0.0000000
100 %		+ 40	866,500,054	1	0.0000001
100 %		+ 50	866,500,054	1	0.0000001
85 %	-40.80	+ 20	866,500,053	0	0.0000000
115 %	-55.20	+ 20	866,500,053	0	0.0000000

Table 8-35. Frequency Stability Summary Data (NR_n26_1C_5M)



Figure 8-9. Frequency Stability Graph (NR_n26_1C_5M)

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8.8 Radiated spurious emission

Test Overview

Radiated spurious emissions measurements are performed using the field strength method described in ANSI C63.26-2015 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically and horizontally polarized broadband tri-log antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally and horizontally polarized broadband tri-log antennas.

Test Procedure Used

ANSI C63.26 - Section 5.5.3.2

Test Setting

- 1. Start frequency was set to 30 MHz and stop frequency was set to at least 10 * the fundamental frequency
- 2. RBW = 100 kHz for emissions below 1 GHz and 1 MHz for emissions above 1GHz
- 3. VBW \geq 3 x RBW
- 4. No. of sweep points $\geq 2 \times \text{span} / \text{RBW}$
- 5. Detector = Peak for the pre-scan, (In cases where the level is within 2 dB of the limit, the final measurement is taken using RMS detector.)
- 6. Trace mode = Max Hold (In cases where the level is within 2 dB of the limit, the final measurement is taken using triggering/gating and trace averaging.)
- 7. The trace was allowed to stabilize.

<u>Limit</u>

NR n29 and n71 operation under Part 27.53

The minimum permissible attenuation level of any spurious emission is $43 + \log_{10}(P_{[Watts]})$, where P is the transmitter power in Watts.

NR n26 operation under Part 90.691

For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

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The EUT and measurement equipment were set up as shown in the diagram below.



Figure 8-11. Test Instrument & Measurement Setup > 1 GHz

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Test Notes

- 1. Per Part 90.691, the frequency block by up to and including 37.5 kHz range complies with 50 + 10 Log10(P) decibels and frequency block greater than 37.5 kHz range complies with 43 + 10Log10(P) decibels limit.
- 2. The average EIRP reported below is calculated per 5.2.7 of ANSI C63.26-2015 which states:

The measured e.i.r.p is converted to E-field in V/m. Then the distance correction is applied before converted back to calculated e.i.r.p.as explained in KDB 971168 D01 D01 v03r01.

Effective Isotropic Radiated Power Sample Calculation

Field Strength [dBµV/m]	= Measured Value [dBm] + 107 + AFCL [dB/m]
	= -76.32 [dBm] + 107 + 20.27 [dB/m] = 50.95 dBµV/m
e.i.r.p. [dBm]	= E[dB μV/m] + 20 log ₁₀ (d[m]) - 104.8
	= 50.95 dB[µV/m] + (20*log (3)) - 104.8
	= -44.31 dBm

*AFCL (dB/m) contains measurement antenna factor(dB/m) and cable loss(dB) as below:

Frequency	Antenna Factor	Chamber measurement	AFCL			
[MHz]	(dB/m)	cable loss + amplifier	(dB/m)			
	. ,	[dB]	. ,			
981.33	23.26	2.68	25.94			
8002.12	37.00	-16.73	20.27			

Table 8-36. Adopted AFCL value in the calculation

- 3. The EUT was tested in both horizontal and vertical antenna polarizations and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, channel bandwidth configurations shown in the tables below.
- 4. The spectrum is measured from 30 MHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
- 5. All emissions were measured at a 3-meter test distance.
- 6. Spurious emissions were measured with all EUT antennas transmitting simultaneously and all antenna ports terminated.
- 7. The "-" shown in the following RSE tables are used to denote a noise floor measurement.
- 8. All modes of operation were investigated and the worst case configuration results are reported in this section.

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8-68. Radiated spurious emission_1 GHz to 9 G (n29_1C_5M_Low Channel)

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(n29_1C_5M_High Channel)

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Plot 8-72. Radiated spurious emission Plot_1 GHz to 9 GHz (n29_2C_5M+5M_Mid Channel)

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Plot 8-76. Radiated spurious emission Plot_1 GHz to 9 GHz (n71_1C_10M_Mid Channel)

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(n71 1C 20M Low Channel)

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Plot 8-80. Radiated spurious emission Plot_1 GHz to 9 GHz (n71_1C_20M_Mid Channel)

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Plot 8-81. Radiated spurious emission_30 MHz to 1000 MHz (n71_1C_20M_High Channel)



Plot 8-82. Radiated spurious emission Plot_1 GHz to 9 GHz (n71_1C_20M_High Channel)

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(n26_1C_5M_Mid Channel)

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Bandwidth (MHz)	n71_1C_20 MHz
Center Frequency (MHz)	642 MHz
Modulation Signal	QPSK

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Heigh [cm]	Turntable azimuth [degree]	Analyzer Level [dBm/MHz]	AFCL [dBm]	Field Strength [ⅆ₿⊮//m]	RSE EIRP [dBm/MHz]	Limit [dBm/MHz]	Margin [dB]
981.33	Н	100	100	-86.38	25.94	46.56	-48.70	-13	-35.70
990.42	V	100	60	-85.64	26.01	47.37	-47.88	-13	-34.88
8001.07	н	150	150	-77.15	20.28	50.13	-45.12	-13	-32.12
8002.12	V	200	800	-76.32	20.27	50.95	-44.31	-13	-31.31

Table 8-37. Radiated spurious emission Worst case Summary Data (n71_1C_20 MHz_Low Channel)

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9.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Samsung RRU(RF4450t) FCC ID:** A3LRF4450T-71A complies with all of the requirements of Part 27, Part 90 FCC Rules.

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10.0 APPENDIX. A

10.1 Conducted Average Output Power

Test Overview

A transmitter port of EUT is connected to the input of a signal analyzer. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

Test Description

KDB 971168 D01 v03r01 – Section 5 KDB 662911 D01 v02r01 – Section E)1) In-Band Power Measurements ANSI C63.26-2015 – Section 5.2.4.4.1

The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The spectrum analyzer settings were as follows:

- 1. Conducted power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
- 2. RBW = $1 \sim 5\%$ of the expected OBW
- 3. VBW ≥ 3 x RBW
- 4. Span = 2 ~ 3 x OBW
- 5. No. of sweep points > 2 x span / RBW
- 6. Detector = RMS
- 7. Trigger Settings is set to "RF Power" for signals with non-continuous operation with the sweep times set to

"auto". Refer test note 3 for details.

- 8. Trace mode = Trace-Averaging (RMS) set to average over 100 sweeps
- 9. The trace was allowed to stabilize

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.



Figure 10-1. Test Instrument & Measurement Setup

<u>Limit</u>

N/A

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<u>Note</u>

- 1. Conducted Average Output Power test result used to Grant of Authorization power and MPE.
- 2. MIMO Calculations are done considering output channel power for all ports and respective margins are calculated according to procedures in section 6.4 of ANSI C63.26 and section D of KDB 971168 D01 v03r01.
- Consider the following factors for MIMO Power: Conducted power for each port is measured in dBm. Powers are summed up in linear using the measure-and-sum technique defined in KDB 971168 D01 v03r01-Section D. Conducted power per port (dBm) is converted to a linear value (mW). A summation of linear powers for all ports gives us the total MIMO conducted power in milliWatts (mW).

4. Sample Calculation:

Let us assume the following numbers:

a) Total MIMO Conducted Power as 74593.26 mW

Factors		Value	Unit
Summed MIMO Conducted Power (linear sum)		74593.26	mW
Summed MIMO Conducted Power (dBm)	= 10 * log (74593.26) =	48.73	dBm

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Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	42.39	42.64	42.49	42.67
	1	42.53	42.82	42.74	42.89
Low	2	42.32	42.39	42.41	42.47
LOW	3	42.45	42.47	42.52	42.58
	Total Conducted Power (mW)	69884.16	72506.36	71818.01	73720.07
	Total Conducted Power(dBm)	48.44	48.60	48.56	48.68
	0	42.69	42.60	42.54	42.58
	1	42.86	42.84	42.79	42.78
Lliab	2	42.55	42.51	42.50	42.46
підп	3	42.72	42.68	42.69	42.65
	Total Conducted Power (mW)	74593.26	73787.03	73318.96	73107.94
	Total Conducted Power(dBm)	48.73	48.68	48.65	48.64

Table 10-1. Conducted Average Output Power Table (NR_n29_1C_5M)

Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	45.58	45.64	45.81	45.78
Mid	1	45.70	45.55	45.81	45.80
	2	45.47	45.47	45.42	45.45
	3	45.58	45.54	45.58	45.67
	Total Conducted Power (mW)	144672.58	143582.68	147187.88	147836.15
	Total Conducted Power(dBm)	51.60	51.57	51.68	51.70

Table 10-2. Conducted Average Output Power Table (NR_n29_2C_5M+5M)

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Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	42.63	42.70	42.61	42.64
	1	42.93	42.80	42.80	42.86
Low	2	42.45	42.49	42.49	42.49
LOW	3	42.50	42.51	42.54	42.52
	Total Conducted Power (mW)	73318.78	73241.16	72982.80	73291.84
	Total Conducted Power(dBm)	48.65	48.65	48.63	48.65
	0	42.63	42.66	42.65	42.53
	1	42.90	42.96	42.91	42.89
Mid	2	42.55	42.53	42.52	42.47
IVIIG	3	42.52	42.48	42.44	42.43
	Total Conducted Power (mW)	73675.18	73827.00	73354.80	72518.50
	Total Conducted Power(dBm)	48.67	48.68	48.65	48.60
	0	42.42	42.37	42.33	42.32
	1	42.76	42.71	42.68	42.71
High	2	42.24	42.22	42.19	42.18
	3	42.20	42.19	42.15	42.14
	Total Conducted Power (mW)	69683.43	69152.35	68599.07	68612.40
	Total Conducted Power(dBm)	48.43	48.40	48.36	48.36

Table 10-3. Conducted Average Output Power Table (NR_n71_1C_5M)

Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	45.46	45.85	45.69	45.64
	1	45.60	45.94	45.76	45.80
Low	2	45.30	45.39	45.45	45.46
LOW	3	45.34	45.44	45.47	45.48
	Total Conducted Power (mW)	139546.21	147312.13	145050.73	145137.06
	Total Conducted Power(dBm)	51.45	51.68	51.62	51.62
	0	45.61	45.59	45.58	45.57
	1	45.81	45.83	45.90	45.79
Mid	2	45.51	45.54	45.51	45.51
IVIIG	3	45.47	45.47	45.49	45.47
	Total Conducted Power (mW)	145298.30	145553.50	146008.37	144789.58
	Total Conducted Power(dBm)	51.62	51.63	51.64	51.61
	0	45.61	45.42	45.44	45.46
	1	45.81	45.64	45.71	45.63
High	2	45.33	45.41	45.34	45.33
	3	45.32	45.34	45.32	45.28
	Total Conducted Power (mW)	142658.20	140429.05	140472.45	139563.55
	Total Conducted Power(dBm)	51.54	51.47	51.48	51.45

Table 10-4. Conducted Average Output Power Table (NR_n71_1C_10M)

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Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	47.52	47.49	47.45	47.38
	1	47.54	47.39	47.38	47.38
Low	2	47.18	47.21	47.28	47.22
LOW	3	47.14	47.22	47.27	47.18
	Total Conducted Power (mW)	217248.46	216257.21	217081.95	214365.80
	Total Conducted Power(dBm)	53.37	53.35	53.37	53.31
	0	47.49	47.46	47.40	47.42
	1	47.34	47.39	47.43	47.44
Mid	2	47.30	47.31	47.31	47.27
IVIIQ	3	47.25	47.26	47.21	47.18
	Total Conducted Power (mW)	217096.51	217584.08	216717.80	216243.42
	Total Conducted Power(dBm)	53.37	53.38	53.36	53.35
	0	47.37	47.66	47.32	47.33
	1	47.44	47.63	47.50	47.41
High	2	47.27	47.30	47.28	47.26
	3	47.21	47.25	47.19	47.19
	Total Conducted Power (mW)	215973.57	223079.00	216001.67	214727.07
	Total Conducted Power(dBm)	53.34	53.48	53.34	53.32

Table 10-5. Conducted Average Output Power Table (NR_n71_1C_20M)

Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	39.36	39.41	39.37	39.43
	1	39.55	39.52	39.58	39.73
Mid	2	39.47	39.55	39.62	39.62
MIC	3	39.45	39.46	39.54	39.63
	Total Conducted Power (mW)	35307.14	35529.87	35885.07	36512.77
	Total Conducted Power(dBm)	45.48	45.51	45.55	45.62

Table 10-6. Conducted Average Output Power Table (NR_n26_1C_5M)

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