MOTOROLA

March 31, 2006

Marlene H. Dortch, Secretary
Federal Communications Commission
Office of the Secretary
445 12th Street, SW
Washington, DC 20554

Re: WT Docket 96-86

Dear Ms. Dortch:

Pursuant to Section 1.1206(b)(2) of the Commission's Rules, this is to notify you that on March 30, 2005, Steve Sharkey and David Eierman of Motorola, had a meeting with Jane Jackson, Michael Wilhelm, Scott Stone, Tim Maguire and John Evanoff, of the Wireless Telecommunications Bureau and a meeting with Julius Knapp, Alan Scrime, Alan Stillwell, Ira Keltz, Jamison Prime, Geraldine Matise and Ahmed Lahjouji regarding issues under consideration in the Seventh Notice of Proposed Rule Making in the above captioned proceeding.

During the meetings we discussed the attached presentation describing why -85 dBc is a more appropriate requirement than -100 dBc for suppression of emissions into the paired receive band for systems in the 700 MHz band.

Pursuant to the Commission's Rules, one copy of this notice is being filed electronically with the Commission. If you require any additional information please contact the undersigned at (202) 371-6953.

Sincerely,

/s/ Steve B. Sharkey

Steve B. Sharkey, Director
Director, Spectrum and Standards Strategy

Cc:
Jane Jackson
Michael Wilhelm
Scott Stone
Tim Maguire
John Evanoff
Julius Knapp
Alan Scrime
Alan Stillwell
Ira Keltz
Jamison Prime
Geraldine Matise
Ahmed Lahjouji

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700 MHz Adjacent Couple Power

Docket 96-86 – 7th NPRM

March 30, 2006

700 MHz Adjacent Channel Power (ACP) Requirements

TIA Private Radio Section proposed changes (July 2002) to ACP tables

- Provide flexibility for manufacturing equipment with different bandwidths

- Commission agreed with recommendations and proposed to revise rules accordingly with one exception

TIA proposed "paired receive band" ACP be reduced from -100 dBc to -85 dBc

- Consensus of industry based on recognition that additional filtering would be required for system operation

- Commission tentatively concluded that relaxation should not be adopted based on belief that relaxation would "fail to provide an optimal level of interference protection" and rely on an "unenforceable expectation that licensees would purchase additional equipment to meet the optimal level of interference protection."

System Design Drives Filter Requirements

Limiting emissions into paired receive band necessary to avoid self interference

- -85 dBc proposal exceeds requirements in other bands by 17 dB for 100 watt transmitter

Attenuation beyond -100 dBc necessary for system operation

- TIA and Motorola demonstrated in filings

Licensees will deploy systems with "optimal interference protection" by necessity

Excessive ACP limit

- Drives up system cost by requiring multiple filters
- Limits system and site design options
- Limits licensees ability to reuse existing system components when expanding or upgrading systems (driving up costs)
- Limits competition for filter components

Filter Location

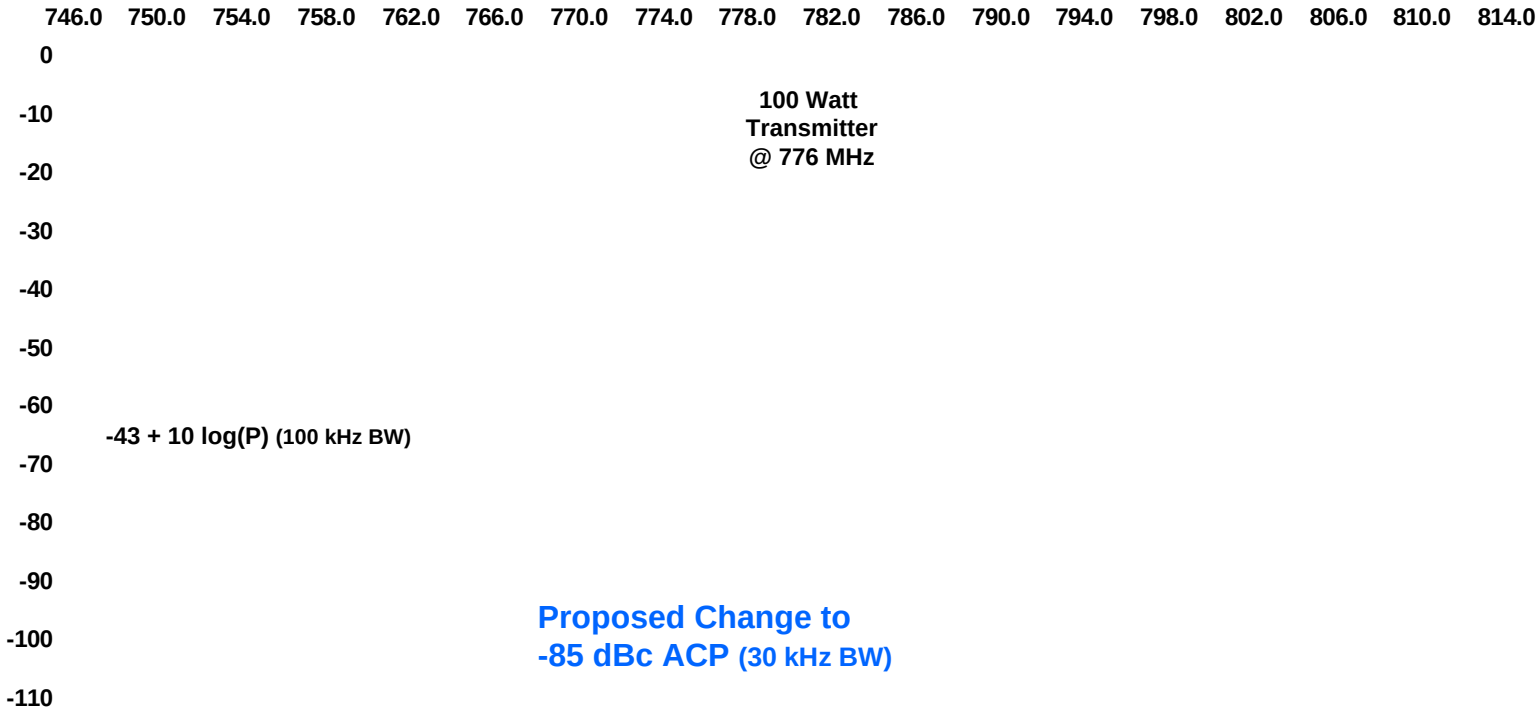
Part of Transmitter

- Adds to cost of each base station
  - **Customer pays for filter whether or not it is needed to meet site isolation**
- Station must be Type Certified w/ filter
  - **Change in filter vendor requires re-certification of equipment**
- Additional filtering still required after transmitter to meet isolation
  - **Transmit combiner or duplex filter still required**
  - **15 dB additional filtering is small part of > 175 dB site isolation**

After Transmitter

- Customize filtering to meet site isolation requirements
  - **Protection requirements can vary from 18 MHz to 30 MHz spacing resulting in different filtering requirements**
  - **Roof-top vs tower installations**
- Customer has more choices in picking type & location of filter
  - **Customer can specify filters vs vendor pre-packaged filters**
  - **Could use single cellular type band pass & band reject filter**
  - **Individual filters per transmitter**

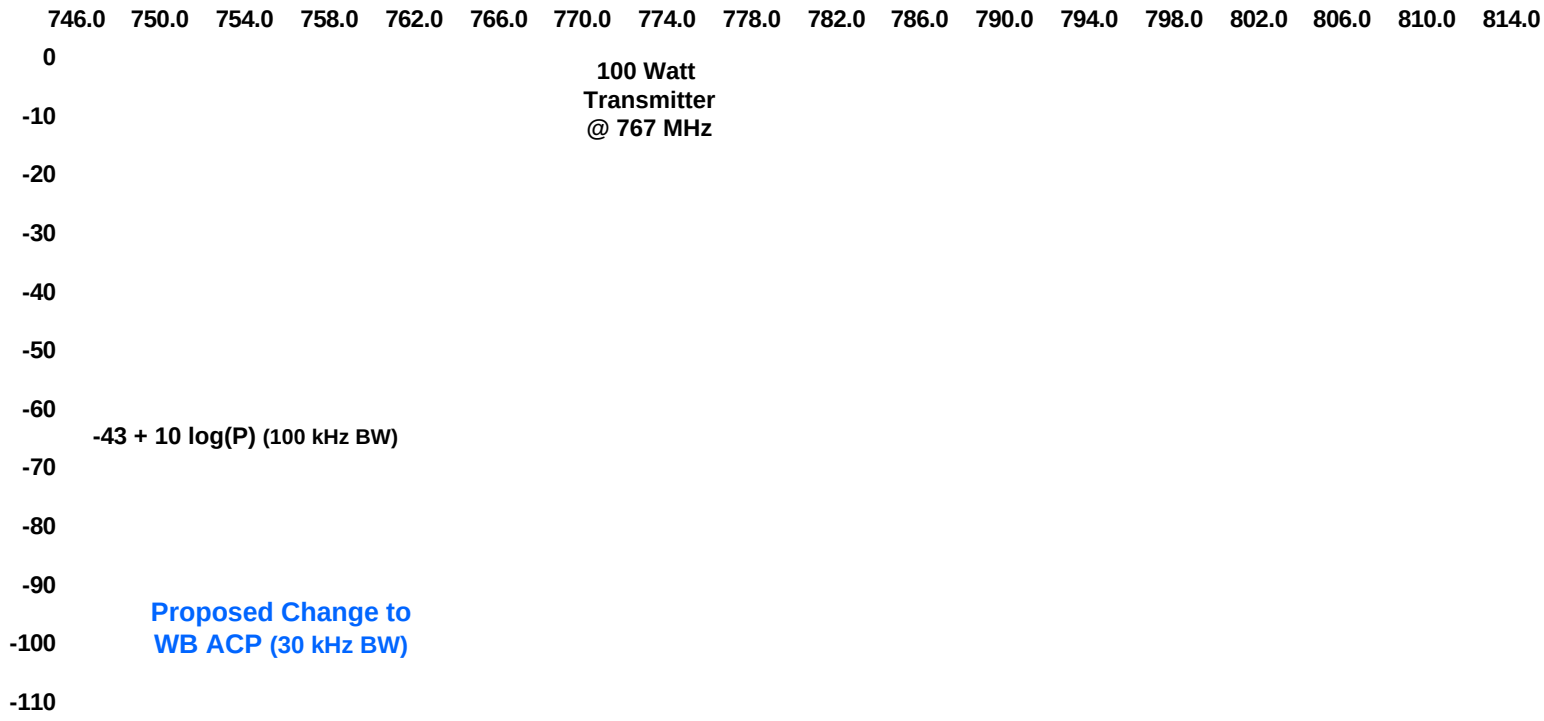
700 MHz Narrowband Base Transmitter ACP - 90.543(b) & (c)



700 ACP (dBc) (30 kHz BW)

Base Transmit					Base Receive				Base Receive	
CMRS	GB	PS NB	PS WB	PS NB	CMRS	GB	PS NB	PS WB	PS NB	PS	LMR

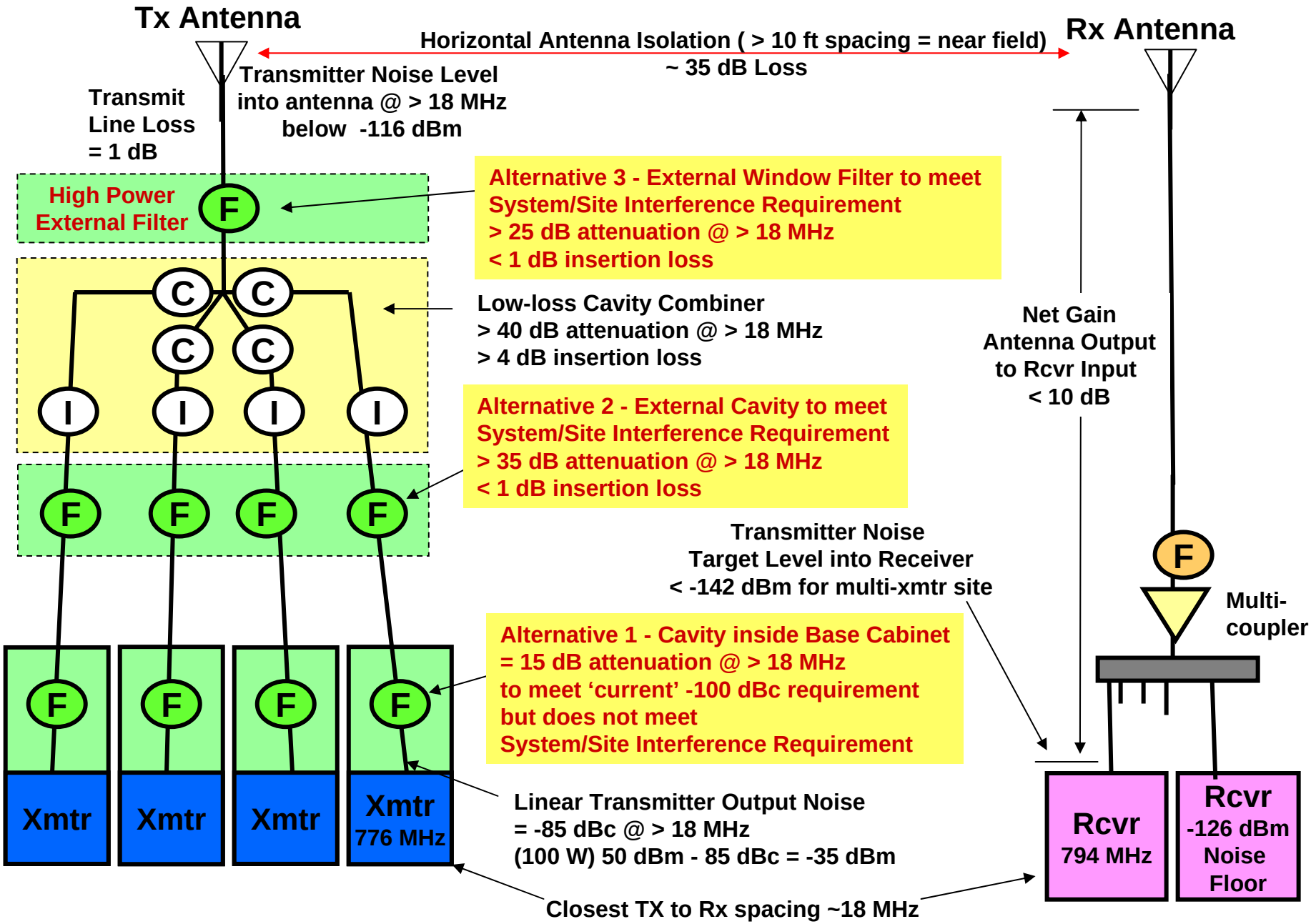
Current 700 MHz Wideband Base Transmitter ACP - 90.543(b) & (c)



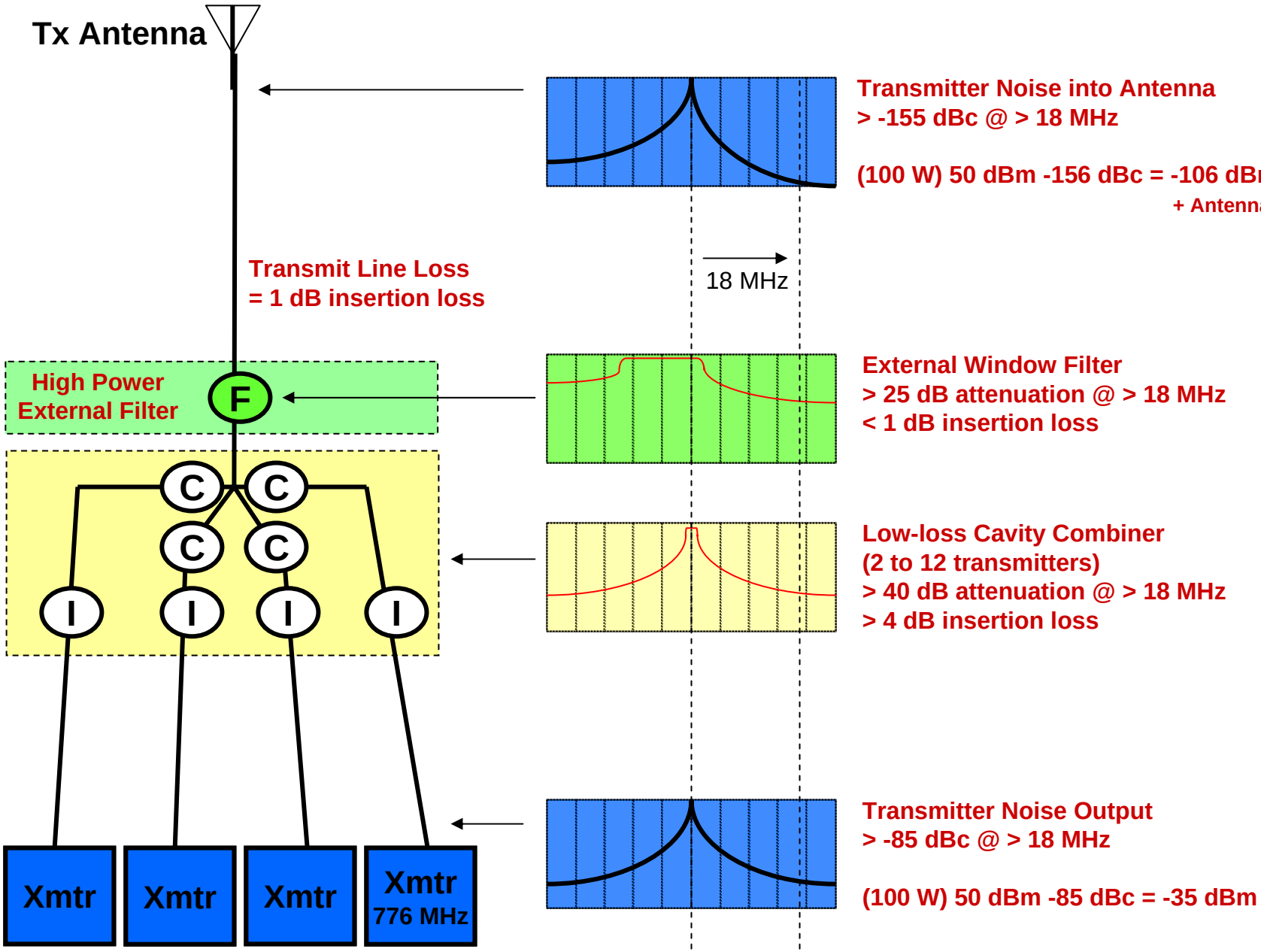
700 ACP (dBc) (30 kHz BW)

Base Transmit					Base Receive					Base Receive	
CMRS	GB	PS NB	PS WB	PS NB	CMRS	GB	PS NB	PS WB	PS NB	PS	LMR

Alternate Filter Locations



Single External Filter



Typical Land Mobile Roof-top Site Design

Narrowband Transmitter Noise Protection needed:

Assuming Receiver Internal Noise Floor = -126 dBm (kTB + NF or Static Sensitivity – S/No)

-119 dBm Static Sensitivity – 7 dB S/No = -126 dBm
(Note: -119 dBm is typical and 3 dB better than TIA 603 or TIA 102 Class A receiver sensitivity)

-126 dBm – 6 dB = -132 dBm = TN level into receiver for < 1 dB degradation from one active transmitter

100 watt transmitter
OOBE @ -100 dBc >18 MHz away
At Roof-top site

50 dBm	100 watt linear transmitter
-100 dB	minimum OOBE into receive band (>18 MHz away in 700 MHz band)
-0 dB	external filter rejection
-40 dB	transmit combiner rejection
-4 dB	combiner & filter insertion loss
-1 dB	transmit line loss
0 dB	transmit antenna gain (near field)
-35 dB	10 ft horz antenna separation = FSL
0 dB	receive antenna gain (near field)
5 dB	receiver network net gain

-125 dBm = 7 dB short of -132 dBm

100 watt transmitter
OOBE @ -85 dBc > 18 MHz away
At Roof-top site

50 dBm	100 watt linear transmitter
-85 dB	minimum OOBE into receive band (>18 MHz away in 700 MHz band)
-25 dB	external filter rejection
-40 dB	transmit combiner rejection
-5 dB	combiner & filter insertion loss
-1 dB	transmit line loss
0 dB	transmit antenna gain (near field)
-35 dB	10 ft horz antenna separation = FSL
0 dB	receive antenna gain (near field)
5 dB	receiver network net gain

-136 dBm = exceeds -132 dBm by 4 dB

Might need more filtering for multiple transmitter site:
-126 dBm – 6 dB – 10 dB = -142 dBm = TN level into Rcvr for < 1 dB degradation from 10 active xmtrs

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Conclusion

Adoption of -85 dBc attenuation requirement into paired receive band provides:

- **Greatest flexibility for system design**
- **Lowest cost for licensees**
- **Maximum competition between filter manufacturers**