

Cruise 77-81 GHz band Radar Experiment Proposal

Reference:

Call Sign: WK2XYU

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1. Introduction

Cruise¹ is building the world's most advanced self-driving vehicles to safely connect people with the places, things and experiences they care about. Since its founding in 2013, Cruise has grown to over 1600 employees and last year drove 770,049 autonomous miles in California.

Cruise is planning to conduct 77-81 GHz band radar field testing using frequency modulated continuous wave Radar Front-End Units ("FEU") installed on moving vehicles to evaluate these millimeter-wave radar technologies. Cruise's testing location is within a 100 km radius of urban field located in 1201 Bryant St, San Francisco, CA 94103 or 3300 General Motors Road, Milford, MI 48380 or 4410 E Cotton Ctr Blvd, Phoenix, AZ 85040. Radar units will utilize 4 GHz in the 77-81 GHz frequency band.

In this modification request, Cruise is seeking to add an area of operation in the Phoenix, AZ area.

2. Transmitter Information

Radar unit information such as the maximum output power and bandwidth are denoted in the table below.

Type	Frequency (GHz)	Power			Bandwidth (GHz)	Emissions Designator
		EIRP (dBm)	EIRP (mW)	ERP (mW)		
Mobile	77-81	20	100	N/A	4	4G00F1N

Up to 100 units will be tested around the Cruise test locations identified in the table below.

¹ Cruise LLC

Address	Latitude	Longitude	Radius (km)
1201 Bryant St, San Francisco, CA 94103	37° 46' 9.084" N	122° 24' 38.844" W	100
3300 General Motors Road, Millford, MI 48380	42° 34' 34.608" N	83° 39' 53.712" W	100
4410 E Cotton Ctr Blvd, Phoenix, AZ 85040	33° 24' 11.246" N	111° 59' 11.328" W	100

3. Contact Information

George Daniel
 Cruise LLC
 1201 Bryant St., San Francisco, CA 94103
 Phone: 206-669-8444
 Email: george.daniel@getcruise.com

4. Applicant Information

George Daniel
 Cruise LLC
 333 Brannan St., San Francisco, CA 94107
 Email: george.daniel@getcruise.com