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COMMERCIAL-IN-CONFIDENCE

SAR EXCLUSION DOCUMENT

Document 75952029-23 Issue 01
FCC ID: 2AFMS-BLEDID

2400 MHz Transmitter: Bluetooth HOS Driver ID

FCC Standalone SAR Test Exclusion Considerations (KDB 447498 D01 v06) Section 4.3.1 a)

100 MHz – 6 GHz – Separation Distance ≤ 50 mm

The 1g SAR Test exclusion thresholds for 100 MHz to 6 GHz test separation distances ≤ 50 mm are determined by:

$[(\text{max power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] [\sqrt{f} \text{ (GHz)}] \leq 3.0$ for 1g SAR and ≤ 7.5 for 10g extremity SAR.

- f (GHz) is the RF channel transmit frequency in GHz.
- Power and distance are rounded to the nearest mW and mm before calculation.
- The result is rounded to one decimal place for comparison
- When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied.

SAR Exclusion Result: (use spreadsheet calculator)

Frequency (GHz)	Power Output mW	Duty Cycle %	Maximum Power (Tune up Value) * (mW)	Test Separation Distance (mm)	SAR Test Exclusion Threshold	Limit**	SAR Test Exclusion (Yes/No)
2.40	3	10	0.3	10	0.0	3.0	Yes
2.48	3	10	0.3	10	0.0	3.0	Yes

* Maximum power including tolerance of the time averaged declared conducted output power of the device.

** Select ≤ 3.0 for 1g SAR and ≤ 7.5 for 10g extremity SAR.

The SAR exclusion threshold has been evaluated using the formula described above from information supplied by the manufacturer below. Based on the calculation above, the EUT is categorically excluded from SAR testing.

Approved by 
Name
Authorised Signatory

Date 21 September 2022



Manufacturer's Declaration of Product Information:

Technical Description: (Please provide a brief description of the intended use of the equipment)	The Bluetooth Driver ID (BT DID) comprises: a) Green Button (upper): Transmit the Driver Identification message in order to identify the driver in the vehicle. b) Red Button (lower): Road Side Assist/Panic The product is designed with an RF range that limits it to in-cab use of the Driver ID and Roadside Assist/Panic buttons only. The BT DID forms part of the MiX6000, MiX 3000, and MiX 4000 range of products, and soon to be integrated with other products, such as MiX Vision. It communicates with the mobile host (e.g. MiX3000 or MiX4000) via a bi-directional Bluetooth LE RF link. There is also a variant with more memory that supports Hours of Service (HOS) functionality. Both product variants use the same PCB.
Manufacturer:	MiX Telematics International (Pty) Ltd.
Model:	Bluetooth Driver ID Bluetooth HOS Driver ID
Part Number:	P0022MT P0032MT
If more than one frequency band is supported, please confirm which combinations of bands are capable of Simultaneous Transmit.	BLE2400

Frequency Band :

Antenna Model:	PCB : Meandering IFA antenna	
Antenna length:	0.766 x 1.4 x 0.15	cm
Bottom frequency:	2400	MHz
Middle frequency:	2440	MHz
Top frequency:	2480	MHz
Maximum power (input to the antenna including a tolerance):	4	dBm
Antenna gain (or maximum gain allowed):	2.5	dBi
Or		
Field Strength Measurement:		dBμA/M
Measurement Distance:		cm
Separation distance from antenna to the user/bystander	1	cm
Transmitter Duty Cycle:	<10	%