



**MOTOROLA**

*Integrated Information Systems Group  
8201 E. McDowell Road  
Scottsdale, AZ 85252-1417*

## **Exhibit 11 – RF Exposure Information**

**Motorola BiStatix BXR-610**

**Access Control Reader**

FCC ID: E9UBXR610

Model No. BXR-610

### **11.0 RF Exposure Information**

The BXR-610 Access Control Reader complies with human radiation emission requirements. These requirements are based on the Maximum Permissible Exposure (MPE) levels of ANSI/IEEE C95.1-1992 and 47 CFR 1.1310, Table 1 for an uncontrolled environment.

The access control reader is a low power device intended to be used in a fixed location. The access control reader can arguably fit the definition of a portable device as defined in 47 CFR 2.1093(b) (i.e. "designed to be used so that the radiating structure of the device is within 20 cm of the body of the user", specifically the hand). However, it does not fit any of the equipment classification criteria for portable devices requiring SAR testing as defined in 47 CFR 2.1093(c). All other portable transmitting devices "are categorically excluded from routine environmental evaluation for RF exposure prior to equipment authorization or use" per 2.1093(c) which includes the Access Control Reader.

# RF Energy Exposure Assessment Record

Product or  
Equipment Name: BiStatix BXR-610 Access Control Reader Date: 5 July 2000

Program/Project  
Contact Person: Gilbert Roque Phone: (408) 383-4074

M/D: CA48

Location of  
Product/Equipment: Fixed locations

## 1. RF Emitting Product or Equipment Description

Manufacturer: Indala Corporation (subsidiary of Motorola, Inc.)

Model: BXR-610 Serial Number: DVT-84

**Describe the product or equipment, the environment(s) where it is used, and information about operators and others who might be exposed to its emitted RF energy.**

The access control reader is a low power device intended to be installed at a permanent or fixed location. The access control reader can arguably fit the definition of a portable device as defined in 47 CFR 2.1093(b) (i.e. "designed to be used so that the radiating structure of the device is within 20 cm of the body of the user", specifically the hand). However, it does not fit any of the equipment classification criteria for portable devices requiring SAR testing as defined in 47 CFR 2.1093(c). All other portable transmitting devices "are categorically excluded from routine environmental evaluation for RF exposure prior to equipment authorization or use" per 2.1093(c) which includes the Access Control Reader.

Frequencies of Operation (MHz): 125 kHz

Maximum Output Power Level  
(Watts): Unknown

Modulation Characteristics: N/A

If pulsed; Pulse duration: N/A Pulse repetition frequency (PRF): N/A

Duty cycle: 100%

Antenna  
description: E-Field PCB Antenna Plate (4" x 5")

Antenna gain: N/A

### Failure Modes

Are there credible failure modes in the product or equipment (hardware, software) or operations (controls, procedures, human error) that could cause the average output power to increase above the normal operating level?

Yes \_\_\_\_\_ No  If Yes, describe the failure mode, probability of occurrence of the failure, and the expected level of output power.

## 2. Maximum Permissible Exposure (MPE) Levels

MPE Levels based on ANSI/IEEE C95.1-1992 and 47 CFR 1.1310, Table 1 requirements, unless otherwise specified.

	Frequency (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Plane Wave Equiv. Power Density (S) (mW/cm <sup>2</sup> )	Specific Absorption Rate (SAR) (mW/g)
Controlled Environment	N/A	N/A	N/A	N/A	N/A
Uncontrolled Environment	0.125	614	130.4	N/A	N/A
Induced Current (mA)	Both Feet	90	Each Foot	N/A	Frequency 125 kHz
Contact Current (mA)	45	Frequency	125 kHz		

## 3. Measurement Results

Applicable Document: Radio Frequency (RF) Energy Exposure Test Procedure, Rev E.

	Frequency (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Plane Wave Equiv. Power Density (S) (mW/cm <sup>2</sup> )	Specific Absorption Rate (SAR) (mW/g)
Controlled Environment	N/A	N/A	N/A	N/A	N/A
Uncontrolled Environment	0.125	120	0.01	N/A	N/A
Induced Current (mA)	Both Feet	0.5	Each Foot	N/A	Frequency 125 kHz
Contact Current (mA)	0.11	Frequency	125 kHz		

Is the Maximum Permissible Exposure Level for an uncontrolled environment exceeded?

Yes \_\_\_\_\_ No  If Yes, provide drawings to show the boundaries of the Restricted Access Area.

Is the Maximum Permissible Exposure Level for a controlled environment exceeded?

Yes \_\_\_\_\_ No  If Yes, define and implement necessary controls.

**Figure 11-2 RF Energy Exposure Assessment Record (2 of 3)**

**4. RF Energy Measurement Equipment**

Manufacturer	Description	Model	Asset No.	Date of Last Cal.	Cal. Due Date
Narda	Probe, H-Field, 10MHz-300MHz	8731	G52449	06/22/00	06/30/01
Narda	Probe, E-Field, 300kHz-40GHz	8741	T57980	04/26/00	04/30/01
Narda	Electromagnetic Survey Meter	8718	G58802	04/06/00	04/30/01
Narda	Human Body Antenna	8858	N/A	N/A	N/A
Narda	Induced Current Meter	8850	G52446	02/02/00	02/28/01
Boonton	RMS Voltmeter	92EA	G52041	11/10/99	05/31/01

Measurements made by: Steve Gooding Date: 5 July 2000

**5. Required Hazard Controls**

Fully describe all hazard controls to be implemented. Provide drawings and other attachments, as necessary, to describe Restricted Access Areas.

**None required for its present configuration and intended state of use.**

**6. Review & Approval**

_____	Date: _____
Project Leader	
_____	Date: _____
Program / Product Manager	
_____	Date: _____
Division Product Safety Representative	
_____	Date: _____
Responsible Area Manager	
_____	Date: _____
SSS RF Engineer	
_____	Date: _____
Radiation Safety Officer	

**Figure 11-3 RF Energy Exposure Assessment Record (3 of 3)**