Client	**Kapsch TrafficCom Canada Inc**
Product	**FME Transponder**
Standard(s)	RSS-137 Issue 2:2009 / FCC Part 90 Subpart M:2015

GLOBAL EMC INC

Maximum Permissible Exposure

Purpose

The purpose of this test is to ensure that the RF energy intentionally transmitted, in terms of power density emitted from the EUT at a stated operating distance does not exceed the limits listed below as defined in the applicable test standard, as calculated based upon readings obtained during testing.   This helps protect human exposure to excessive RF fields.

Limit(s) and Method

The limits are defined in FCC 1.1310 Table 1 (B) limits for general public exposure was applied. The limit for the frequency range of 300 MHz to 1500 MHz was applied. This is a limit of 0.61 mW/ cm^2.

Results

The distance used for calculations was 20 cm, as this is the minimum distance an operator will be from the EUT during normal operation.

The EUT passed the requirements. The worst case calculated power density was 0.0007mW/cm^2, this is under the 0.61 mW/cm^2 requirement.

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Calculations

$$S = \frac{PG}{4\pi R^2}$$

where:
S = power density
P = power input to the antenna
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	-0.15	(dBm)
Maximum peak output power at antenna input terminal:	0.966050879	(mW)
Antenna gain(typical):	5.40	(dBi)
Maximum antenna gain:	3.467368505	(numeric)
Time Averaging:	100	(%)
Prediction distance:	20	(cm)
Prediction frequency:	915	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	0.61	(mW/cm^2)
Power density at prediction frequency:	0.000666	(mW/cm^2)
Margin of compliance:	29.6	(dB)
This equates to	0.006663926	W/m^2 PASS
For information This equates to	1.585023653	V/m

Note: This device does not exceed the 60 / f (GHz) in mW limit as per FCC KDB 447498 2(a)(i),
so it is allowable to be used in portable exposure conditions with no restrictions on host platforms