RF EXPOSURE ANALYSIS

Product	FCC ID
BGM13S32A/N and MGM13S22A/N Module	QOQ13

Analysis for FCC, portable use

Standalone SAR test exclusion considerations are defined in the KDB 447498 Chapter 4.3.1. 1-g head or body SAR exclusion threshold is defined with formula

[(max . power of channel, including tun-up tolerance, mW)/(min. separation distance, mm.)]* ($\sqrt{f(GHz)}$)≤3

For BGM13S3 the maximum peak TX power including tolerances is 100 mW and maximum TX frequency is 2.48 GHz. Using separation distance of 50 mm with the formula above results

(100mW/50mm)*SQRT(2.48)=3.14>3

Because the boave calculation results greater distance than 50mm, formula given in KDB 447498 Chapter 4.3.1 (b) is used with separation distance of 50.5mm

95mW+[(50.5mm-50mm)*10]mW=100mW

Thus BGM13S3 meets the SAR exclusion criteria with 50.5 mm separation and SAR evaluation is not needed if the separation distance to human body is greater than this.

Analysis for FCC, mobile use

S=EIRP/4*PI*R^2=163.7mW/(4*PI*20^2)= 0.0326mW/cm^2

E.I.R.P (mW)	Evaluation distance R (cm)	Power density S at prediction frequency (mW/cm^2)	MPE limit for uncontrolled exposure at prediction frequency (mW/cm^2)	Verdict
163	20	0.0326	1	PASS