

Report No: R3051_RFEXP Issue No: 2

T4204

FCC IDs: XX6STP8040 / XX6STP8140 /

XX6STP8240

Test Report

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Testing



EMC Training Consultancy

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REPORT ON RF EXPOSURE CALCULATIONS

Performed at: TWENTY PENCE TEST SITE

> Twenty Pence Road, Cottenham, Cambridge U.K. **CB24 8PS**

> > on

Sepura PLC

STP8040/STP8140/STP8240 + Car Kit

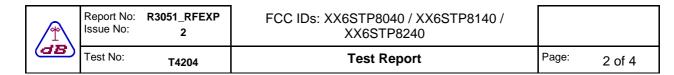
dated

28th August 2012

Document History

Issue	Date	Affected page(s)	Description of modifications	Revised by	Approved by
1	14/03/12		Initial release		
2	28/08/12	4	Changed to General Limits	DS	DB

Based on report template: v090319



Equipment Under	Test (EUT):	STP8040/STP81	140/STP8240 + Car Kit
Test Commission	ed by:	Sepura PLC Radio House St Andrews Roa Cambridge Cambridgeshire CB4 1GR	d
Representative:		Bob Allen	
Test Engineer:		Dave Smith	
Date of Report:		28th August 20	012
Written by:	Dave Smith	Checked by:	Derek Barlow
Signature:	D. A. Smitt	Signature:	D. Barbon
Date:	28th August 2012	Date:	28th August 2012

dB Technology can only report on the specific unit(s) tested at its site. The responsibility for extrapolating this data to a product line lies solely with the manufacturer.

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1 EUT Details

1.1 General

The EUT was a TETRA Voice + Data Hand Portable .

This report covers RF Exposure Calculations when used in a Car Kit configuration.



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OET Bulletin 65 97-01 CFR 47 1.1310 RF Exposure Evaluation:

T4204

Manufacturer: Sepura

Test No:

Product: STP8040 / STP8041 / STP8240

Numeric Gain

Antenna 1: 9525-800-41080 7dBi 5.01 Fitted to Car-Kit

Frequency (MHz)	450		470	
Output Pow er (mW):	1800		1800	
Numerical Antenna Gain:	5.01		5.01	
Duty cycle (%):	25		25	
Distance (cm):	25		25	
Pow er Density (mW/cm2):	0.287		0.287	
FCC Limits: (mW/cm2)				
General limit: (f/1500)	0.30	PASS	0.31	PASS
		ĺ		

Antenna gain is taken from the supplied data sheets.

Duty Cycle is based on Tetra System in which each channel is divided into 4 slots - with equal time allocation.

$$\textit{Total Power}, P(\textit{Watts}) = \textit{Output Power} \times \textit{Antenna Gain} \times \frac{\textit{Duty Cycle}}{100}$$

Power at a Distance,
$$d (metres) = \frac{P}{4 \Pi d^2}$$

Conclusion:

At a distance of 25cm the maximum power density is 0.287 mW/cm2 which is just below the general environment limit of 0.3 mW/cm2