

Test Report Serial No.:	061506KBC-T757-E24G	Report Issue Date:	August 24, 2006	
Date(s) of Evaluation:	June 21 - July 27, 2006	Report Revision No.:	Revision 1.0	
Test Standard(s):	FCC 47 CFR §2, §22H, §24E	CC 47 CFR §2, §22H, §24E Industry Canada RSS-		
Test Lab Registration(s):	FCC Lab Registration #714830	Industry Canada Lab File #3874		

Appendix D - Maximum Permissible Exposure Calculation

D.1 REFERENCES							
Normative Reference Standard	FCC CFR 47§1.1310 IEEE Std C95.1-1999						
Procedure Reference	FCC CFR 47§2.1091						

D.2 LIMITS							
	Frequency	Power Density					
FCC CFR 47§1.1310 Table 1(b)	300 - 1500 MHz	f/1500 mW/cm ²					
	1500 - 100,000 MHz	1.0 mW/cm ²					

D.3 ENVIRONMENTAL CONDITIONS					
Temperature	na				
Humidity	na				
Barometric Pressure	na				

D.4 MEASUREMENT EQUIPMENT SETUP					
	The results described herein were determined by calculations, so no measurement equipment was used. The power measurements for each radio used in these calculations were made as described in Appendix A of this report.				
MEASUREMENT EQUIPMENT SETTINGS	n/a				

D.5 DUT OPER/	D.5 DUT OPERATING DESCRIPTION								
Dual-Band GPRS The maximum GPRS RF conducted output power in each band used for these calculations we on Channel 251 for Cellular and Channel 661 for PCS.									
Dual-Band EDGE	The maximum EDGE RF conducted output power in each band used for these calculations was measured on Channel 190 for Cellular and Channel 661 for PCS.								
Dual-Band UMTS	The maximum UMTS RF conducted output power in each band used for these calculations was measured on Channel 4233 for Cellular and Channel 9400 for PCS.								

Company:	Itronix	Corporation	FCC ID:	KBCIX260PROAC860	Model(s):	IX260PROAC860	ITI	RONIX®
DUT Type:								
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vices Lab	Test Lab Registration(s):	FCC Lab Registration #714830	Industry Canada Lab File #3874	

D.6 TEST RES	ULTS
D.6.1 Calculation	ons:
<u>Swivel Dipole A</u>	ntenna (Max. Measured Conducted Power - Cellular GPRS Mode)
	Prediction of MPE Limit
	OET Bulletin 65, Edition 97-01
	Equation from page 18
	S = PG S= power density
	$\overline{4\pi R^2}$ P= power input to the antenna G= power gain of the antenna in the direction of
	PG interest relative to an isotropic radiator
	$R = \sqrt{\frac{TO}{4\pi S}}$ R= distance to the center of radiation of the antenna
	$\sqrt{4\pi S}$ SL= power density limit
	Ratio of Time On versus Total Transmit Time 0.25
	Choose
	ENTER
	Occupational/Controlled
	General Population/Uncontrolled 💿 🚽
	Tx Frequency:848.80 (MHz)
	Maximum Peak Power at Antenna Input Terminal: 32.28 (dBm)
	Source-Based Time-Average Factor:6.02 (dB) Antenna gain: 2.60 (dBi)
	SL= 0.57 (mW/cm^2)
	P= 422.6102 (mW)
	G= <u>1.82</u> (numeric)
	R = 10.40 (cm)
	S (mw/cm^2)
	at 20cm
	0.15282675
Formulae:	
S = <u>PG</u>	where: S = Power Density Limit
$4\pi R^2$	P = Power Output of the Device G = Numeric Antenna Gain
$R = \sqrt{\frac{P}{4\pi S}}$	R = Distance from Antenna
	me-Average Factor = 10 * log (Time On / (Time On + Time Off))
Power Output of	the Device (W) = 10 * log (RF Output Power (dBm) + Source-Based Time Average Factor (dB))
Company: It	tronix Corporation FCC ID: KBCIX260PROAC860 Model(s): IX260PROAC860 ITRONIX

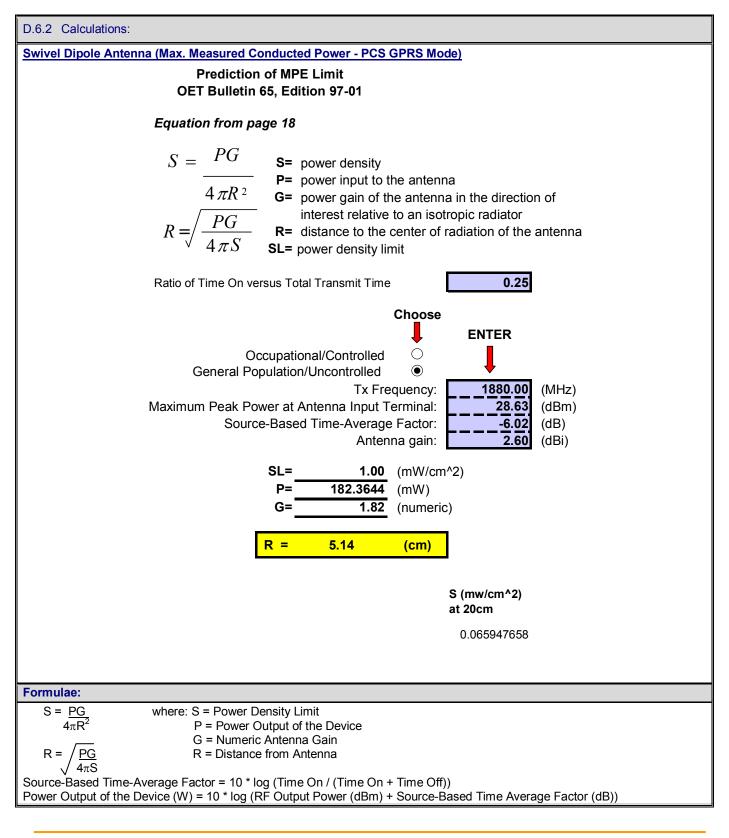
Laptop PC with Sierra Wireless AC860 Dual-Band GSM/GPRS/EDGE/UMTS PCMCIA Modem

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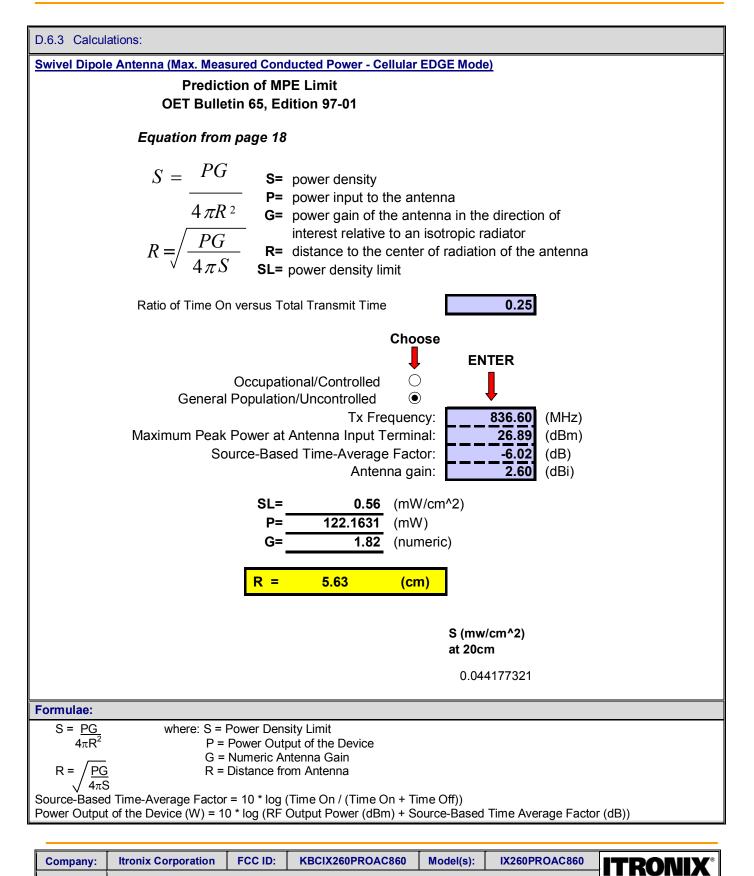
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ab	Test Lab Registration(s):	FCC Lab Registration #714830	Industry Canada Lab File #3874	



Company:	Itronix	Corporation	FCC ID:	KBCIX260PROAC860	Model(s):	IX260PROAC860	ITI	SONIX
DUT Type:								
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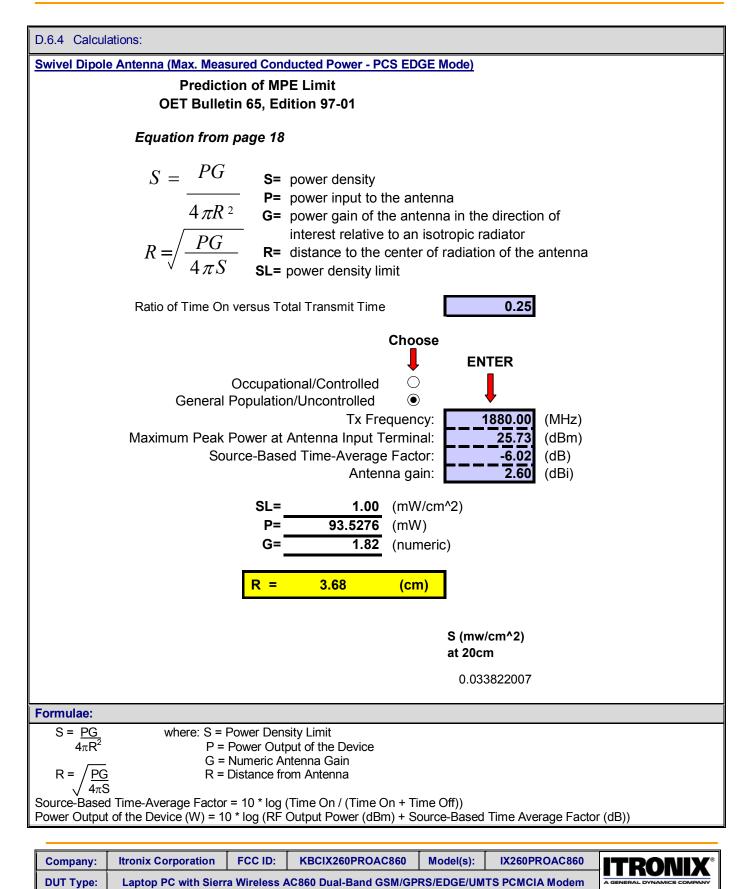
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Lab	Test Lab Registration(s):	FCC Lab Registration #714830	Industry Canada Lab File #3874	



DUT Type:	DUT Type: Laptop PC with Sierra Wireless AC860 Dual-Band GSM/GPRS/EDGE/UMTS PCMCIA Modem				
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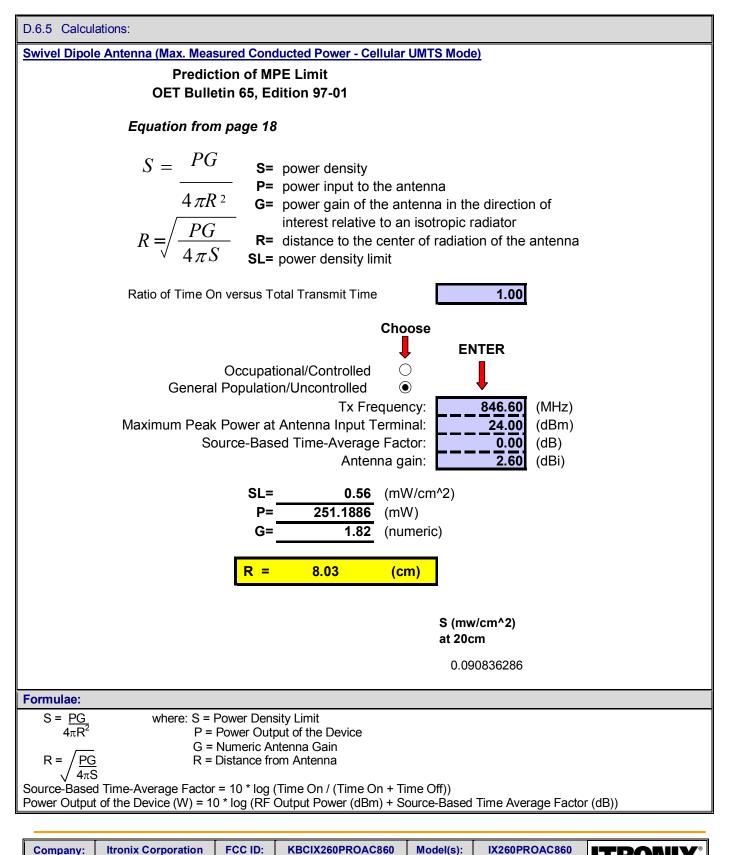
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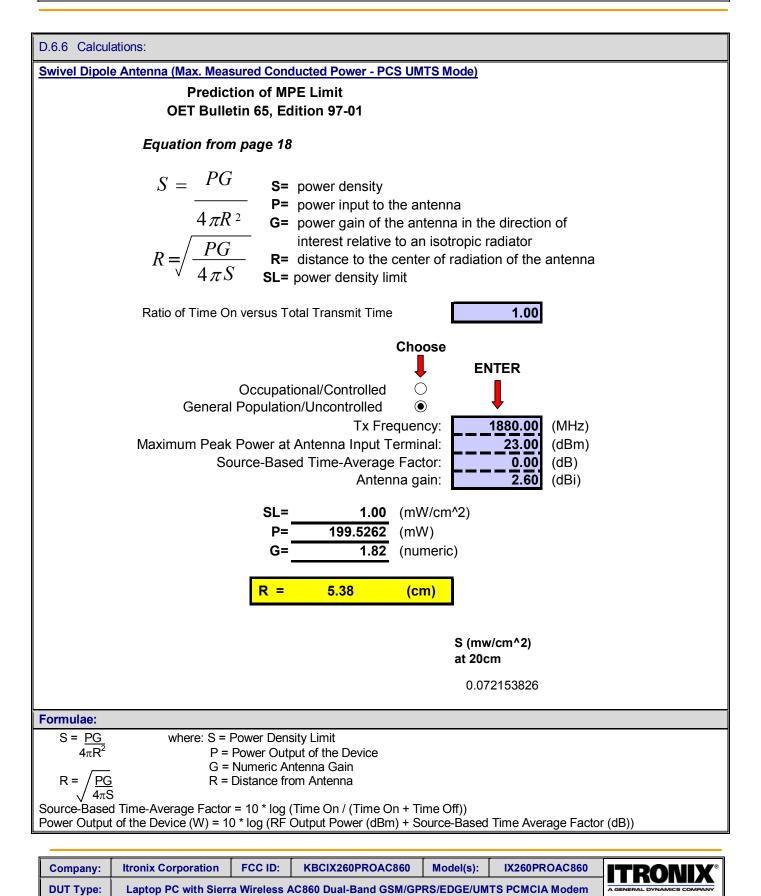


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s Lab	Test Lab Registration(s):	FCC Lab Registration #714830	Industry Canada L	ab File #3874

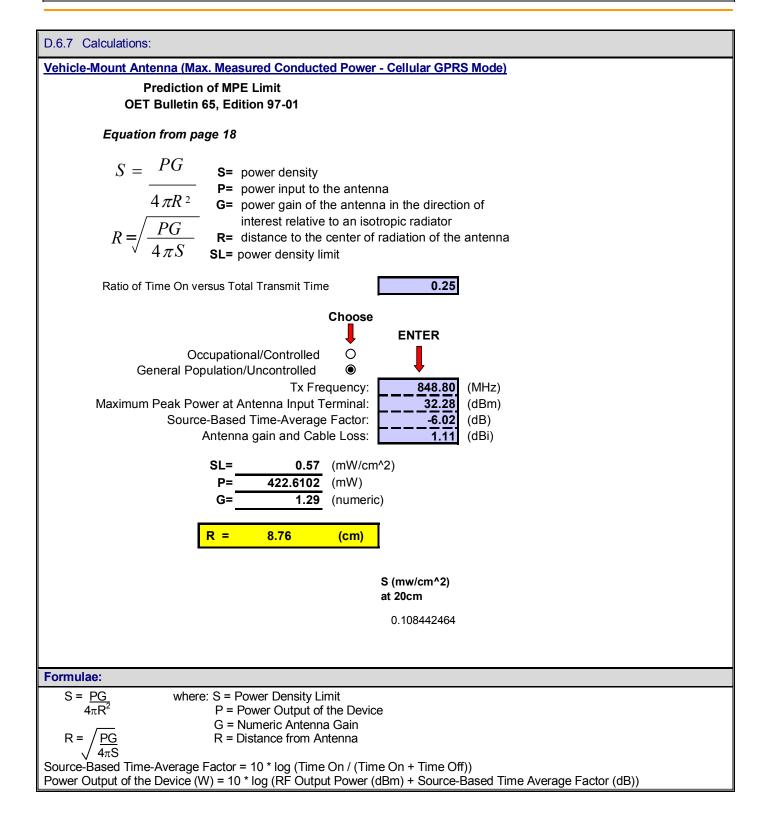


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Company:	Itronix	Corporation	FCC ID:	KBCIX260PROAC860	Model(s):	IX260PROAC860	ITI	RONIX®
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Valiale Manuel Antonno (Manuel Manuel Operatori 10	
Vehicle-Mount Antenna (Max. Measured Conducted Power	- PCS GPRS Mode)
Prediction of MPE Limit OET Bulletin 65, Edition 97-01	
Equation from page 18	
$S = \frac{PG}{4\pi R^2}$ $R = \sqrt{\frac{PG}{4\pi S}}$ $S = \text{ power density}$ $P = \text{ power input to the antend}$ $G = \text{ power gain of the antend}$ $R = \text{ distance to the center of }$ $S = \text{ power density}$	na in the direction of otropic radiator
Ratio of Time On versus Total Transmit Time	0.25
Occupational/Controlled General Population/Uncontrolled Tx Frequency: Maximum Peak Power at Antenna Input Terminal: Source-Based Time-Average Factor: Antenna gain and Cable Loss: SL= 1.00 (mW/cn P= 182.3644 (mW) G= 1.05 (numeri	
	S (mw/cm^2)
	at 20cm
	0.037948916
Formulae:	
$S = \frac{PG}{4\pi R^2}$ where: S = Power Density Limit P = Power Output of the Devic G = Numeric Antenna Gain R = $\sqrt{\frac{PG}{4\pi S}}$ Source-Based Time-Average Factor = 10 * log (Time On / (Time	
Source-pased time-average Factor = 10° for time on / time	

Company:	Itronix	Corporation	FCC ID:	KBCIX260PROAC860	Model(s):	IX260PROAC860	ITC	RONIX®
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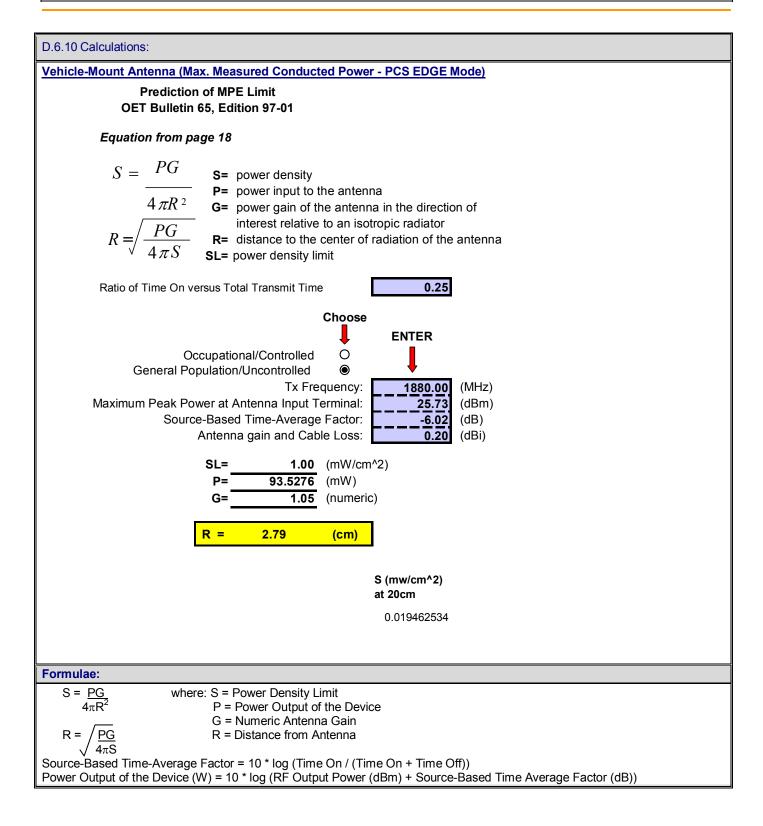
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D.6.9 Calculations:
Vehicle-Mount Antenna (Max. Measured Conducted Power - Cellular EDGE Mode)
Prediction of MPE Limit OET Bulletin 65, Edition 97-01
Equation from page 18
$S = \frac{PG}{4\pi R^2}$ $R = \sqrt{\frac{PG}{4\pi S}}$ $S = \text{ power density}$ $P = \text{ power input to the antenna}$ $G = \text{ power gain of the antenna in the direction of interest relative to an isotropic radiator}$ $R = \text{ distance to the center of radiation of the antenna}$ $SL = \text{ power density limit}$
Ratio of Time On versus Total Transmit Time 0.25
Choose P ENTER Occupational/Controlled General Population/Uncontrolled Tx Frequency: Maximum Peak Power at Antenna Input Terminal: Source-Based Time-Average Factor: Antenna gain and Cable Loss: $SL = 0.56 (mW/cm^{2})$ P = 122.1631 (mW) G = 1.29 (numeric) R = 4.74 (cm)
S (mw/cm^2)
at 20cm
0.031347245
Formulae: S = PG where: S = Power Density Limit
$4\pi R^2$ P = Power Output of the Device
$R = \sqrt{\frac{PG}{4\pi S}}$ $G = Numeric Antenna Gain R = Distance from Antenna$
Source-Based Time-Average Factor = 10 * log (Time On / (Time On + Time Off)) Power Output of the Device (W) = 10 * log (RF Output Power (dBm) + Source-Based Time Average Factor (dB))

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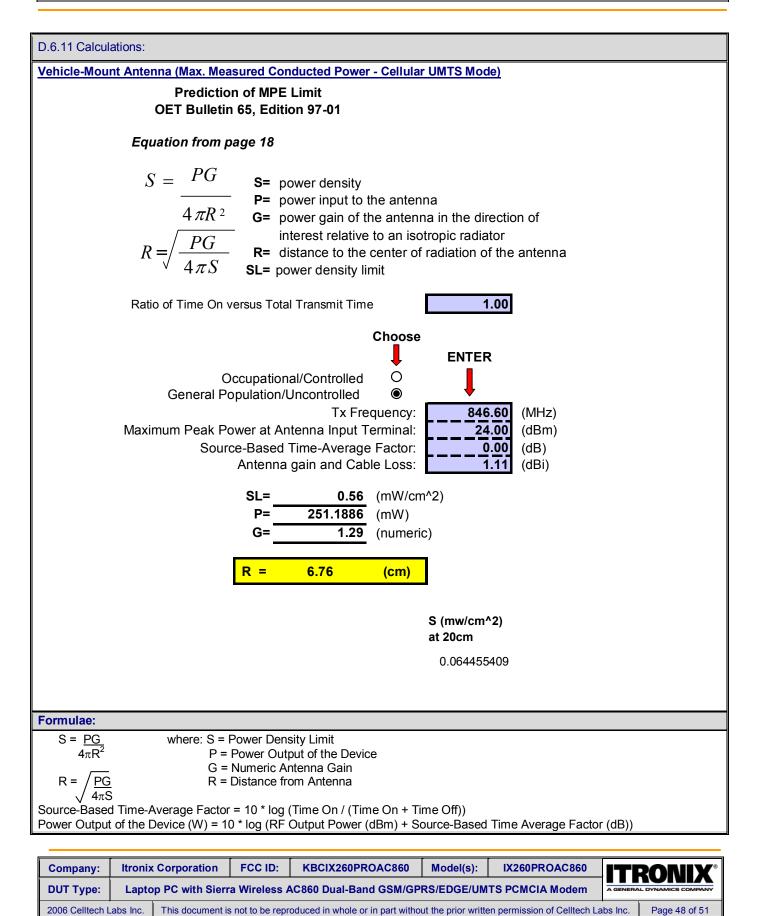
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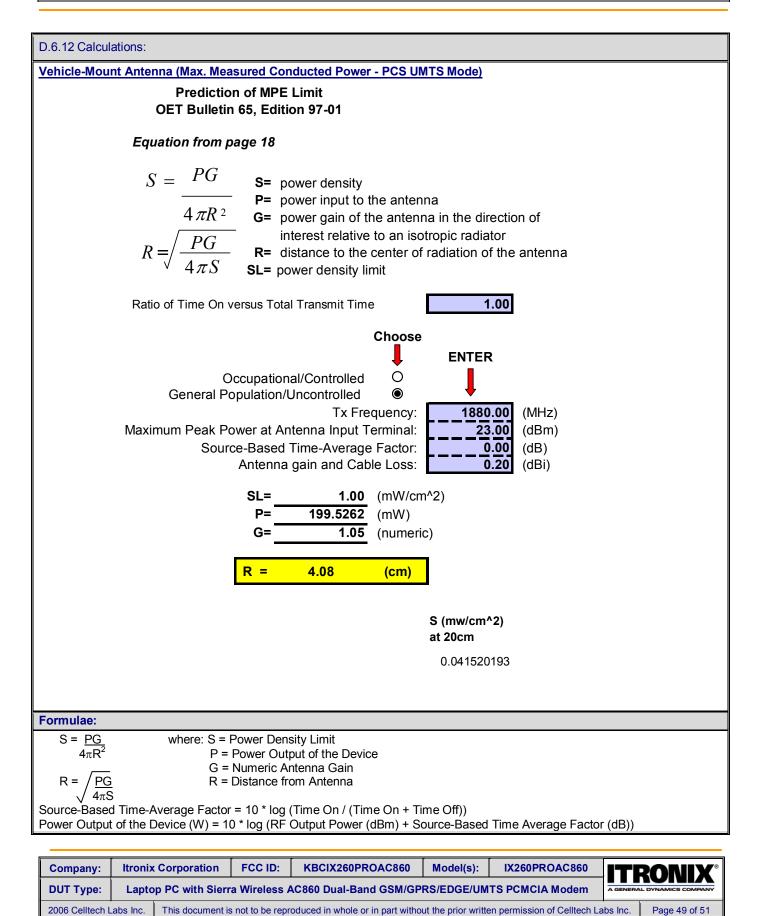


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s Lab	Test Lab Registration(s):	FCC Lab Registration #714830	gistration #714830 Industry Canada Lab File #38		





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Testing and Engineering Services Lab	Test Lab Registration(s):	FCC Lab Registration #714830	Industry Canada L	ab File #3874

D.7 PASS/FAIL

In reference to the results outlined in D6 the DUT passes the requirements as stated in the reference standards as follows: 1) The DUT must comply with the minimum spacing requirement of 20 cm to ensure an exposure of not more than f/1500 mW/cm² for frequencies between 300 and 1500 MHz and 1 mW/cm² for frequencies between 1500 and 100,000 MHz.

D.8 SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.

Spencer Watow

Spencer Watson EMC Manager Celltech Labs Inc.

> June 27, 2006 Date

Company:	Itronix	Corporation	FCC ID:	KBCIX260PROAC860	Model(s):	IX260PROAC860	ITI	RONIX [®]
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