



DUTY CYCLE CORRECTION FACTOR FOR RADIATED SPURIOUS EMISSIONS

Jan. 19, 2009

Re. FCC ID: EROCEN-RFGW-EX
IC: 5683C-CENRFGWEX

This product uses an 802.15.4 compliant stack located in Ember integrated circuit EM260-RTR. As specified in "Tips for FCC certification on the EM250 or EM260" (<http://portal.ember.com/node/959>) which directly applies to the EM260-RTR, and as supported by the Ember data summarized below, the worst case amount of time in the TX Mode in any 100ms window is 27%. A 27% Duty Cycle correction factor is therefore applied to the measured radiated spurious emissions results (effectively a -11dB reduction);
 $20 * \text{LOG}(0.27) = 11.373 \text{ dB}$.

Summary: Transmit Power Duty Cycle

Version	1.2		
Date of Release	6/28/2007		
Network TX Duty Cycle (On /total)	25.45%		Calculated Network Performance
Alternative calculation			
Max radio throughput	250000	bps	
Measured throughput single hop	66816	bps	Max test network results 44544 (packet payload)
Network TX Duty Cycle (On /total)	26.73%		Measured Network Performance
Use for FCC Calculations	27%		In TX Mode 27ms worst case in any 100ms window.

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