

Tycho and Branislav,

below please find the SEPT power breakdown. This is based on info's from Peter Falkner/ESTEC who is the ESTEC project engineer for the SEPT electronics. This closes the action item on me from the telecon dated 6-JUL-00.

Best regards

Reinhold

***** START *****

Case A (quiet rate)

| Description | Number | Power/unit [mW] | Power total [mW] |
|---|--------|--------------------|---------------------|
| PDFE ASIC, both channels on, digital output | 8 | 67 | 536 |
| FPGA, 20 mA @ 5 V | 2 | 100 | 200 |
| SRAM, standby 5 mW | 2 | 5 | 10 |
| Remaining electronics | 2 | 150 | 300 |
| Total | | | 1,046 |

Case B (high rate)

| Description | Power total [mW] |
|--|---------------------|
| PDFE (no increase) | 536 |
| FPGA depends on design, assume modest increase of 10 % | 220 |
| SRAM 10 mW per MHz, 8 accesses per event (4 byte read and write) | 170 |
| Remaining electronics (no increase) | 300 |
| Total | 1,226 |

Note: Remaining electronics comprises:

- voltage reference for PDFEs
- inflight test pulse generator (standby)
- latch-up monitor
- power-switch-off circuit
- interface to SEP DPU circuits which is still tbd
(parallel, serial, symmetrical, opto couplers ?)

***** STOP *****