

# Smar Research ASIC Family

## Reliability Data

### HART/Fieldbus/Profibus



Data for FB4050-TQ, HT2012-DP, HT2012-PL, HT3012-TQ

Process Device FIT rate estimate & MTBF life ranking ( $T_{use} = 55^{\circ}\text{C}$ ,  $T_{stress} = 125^{\circ}\text{C}$ )

Process Geometry	S/S	Hrs	Device Hr	Est Use Hour	FIT Target	FIT Actual	MTBF Target	MTBF Actual
0.5um (Foundry 1)	10992	1000	10,992,000	1.19E+05	<125	0.10	100khr	104,379khr

Data for HT2015-LQ and HT2015-PL

The current long time failure rates are calculated by generic data in the test period 01/00 – 12/04 of life tests at 125°C / 150°C respectively.

With accumulated 4,528,000 device hours the long time failure rate is better than:

4 FIT per 10mm<sup>2</sup> chip area (MTTF 2.5\*10<sup>8</sup> hrs per 10mm<sup>2</sup> chip area)  
Reference temperature: 55°C, confidence level 60%

For a reference temperature of 125°C the long time failure rate is better than 318 FIT per 10mm<sup>2</sup> chip area (MTTF 3.14\*10<sup>6</sup> hrs per 10mm<sup>2</sup>)

Data for FB2050-PQ, FB3050-TQ, LCD160

Contact sales@smarresearch.com for more details.

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