TT Electronics

New Space Electronics®

Tackling the challenges of new space flights with traceable, innovative solutions

Existing Concepts To Clean Up Space

Fishing Net Premise

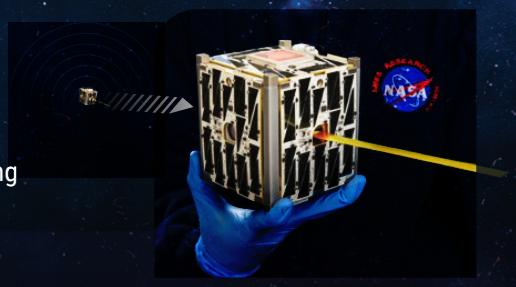
- Congested with space debris due to increasing frequency of launches and collisions.

Kessler Syndrome

NEW SPACE APPLICATIONS

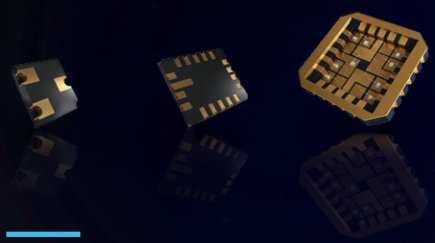
- Earth observation
- Urban traffic management
- Video conferencing
- Environment surveillance vehicle tracking
- High speed and bandwidth communications

THE NEW BIG THING



4-5 years operational life less extreme environment requirement beyond **COTS**

MULTI-CHIP ARRAY RANGE



- Transistors, Arrays
- 25 Part Numbers
- All available as NS1, NS2 or custom variants

DISCRETE RANGE

- BJT's, Diodes, JFET's, MOSFETs, Schottky Barrier
- 54 Part Numbers
- All available as NS1, NS2 or custom variants

TT Electronics has over 30 years experience of lowering the cost of space products

- Environmental screening as required for the mission
- Using packaging to meet mission requirements
- Fully traceable die with space heritage
- Giving the customer repeatable performance
- Testing to verify known radiation performance
- Element evaluation of aerospace grade die to lower the cost

CONTACT

www.ttelectronics.com

www.ttieurope.com

RELIABILITY AND COST PROVEN

TT Electronics provide the component solution required for customer and mission needs, for Deep Space, G.E.O or L.E.O orbits

BASELINE SCREENING OPTIONS

The sequence below provides an assurance basis with manufacture utilising robust, controlled, space proven processes and designs, including traceability to all materials and operations. NS2 adds baseline mechanical and electrical screening to provide the next level of assurance.

NEW SPACE SCREENING REQUIREMENTS [1,2]

Step	Screen	Condition	NS1	NS2
1	Internal visual inspection [5]		100%	100%
2	High temperature non-operating life (stabilization bake)	TSTG ≤ maximum rated storage temp t = as specified	100%	100%
3	Temperature cycling	5 cycles. -55°C to +125°C or as specified in maximum ratings		100%
4	Constant acceleration [4]	Y_1 direction		100%
5	Serialization	Constant acceleration	100%	100%
6	Initial electrical test	DC electrical attributes as specified		100%
7	Burn-in [3]	Operating or reverse biased as specified. 48 hours (minimum)		100%
8	Final electrical test	DC electrical attributes as specified	100%	100%
9	Hermetic seal [4]	Fine & Gross Leak Detection		100%
10	External visual examination		100%	100%

Notes:

1) All screening operations are performed in accordance with MIL-STD-750 or equivalent ESA methods.

2) All products can be screened in accordance with the full MIL-STD-19500 or ESA 5000 generic standard flows – contact TT Electronics Sales.

3) Conditions for burn-in are set according to the device type and standard operating conditions for ambient or case rated devices.

4) Applicable for cavity devices, plastics excluded.

5) Internal visual inspection carried out by TT Electronics in accordance with appropriate standard – only on cavity devices.