

Sensor Technologies Ltd

Leader In Detection and Sensing



DSt have established a successful business supplying markets requiring high performance detector and sensor technologies

Leader In Detection and Sensing



Strengths

- Interactive design optimisation with customers
- Strong technical support
- In-depth process knowledge
- Detailed understanding of X-ray sensor requirements
- Best performance ultra low noise JFETS and PIN diodes.
- Supplies JFETs/PIN Diodes to >50% end markets
- Familiar with MEMS sensor technologies for a broad set of applications

DSt Sensor Technologies Ltd



DSt Sensor Technologies is an expert developer and supplier of semiconductor sensor devices for the X-Ray detector and Radiation detector markets.

Products include

- High performance PIN diodes,
- Ultra low noise JFETs (3 pin for high transconductance
- Low noise amplifiers and 4 pin with integrated charge reset mechanism and feedback capacitor for large area nuclear detectors coupled with charge sensitive amplifiers available for both positive and negative charge collection)
- Neutron detectors

Registered Address: 7D Nikou Kranidioti Street, Tower 4, Suite 302, 2411 Engomi, Nicosia, Cyprus

Contact:: Allan James +44 7710 779697



Service and Product form factor



- Full custom design and manufacturing service
- Can supply in :
- Wafer form, as 100% tested die
- Die in waffle trays
- Devices in packages
- Fully assembled and tested modules





Products and Markets Served



Further Areas of Activity

- ✓ Packaged PiN diodes for Neutron radiation monitoring.
- ✓ Customer specific charged particle detectors.
- ✓ Medical dosimetry using Radfet devices.
- Mems based thermal conductivity gauge for O2 sensing
- ✓ Gas Sensing ; Micro hotplates, IR emitters
- ✓ Thin silicon PiN diodes for advanced medical dosimetry.
- ✓ MEMS breathing sensor for Sleep Apnea, COPD, Asthma

X-Ray & Other Detection Markets



Market Size

- End user market >\$500M p.a.
- Component Sales C. 100,000 p.a.
- Growth Rate >10% p.a.

Market Drivers

- RoHS Compliance
- Homeland Security
- Handheld Instrumentation
- In home medical diagnostic devices

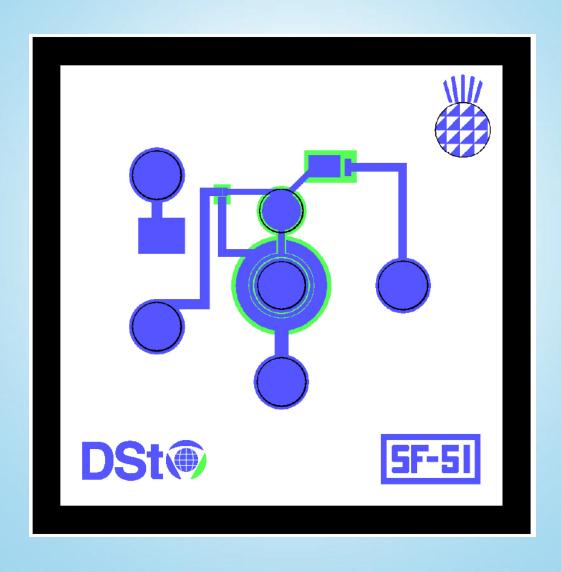
Design and Modelling Capability



- In house design and layout using LEDIT software
- Device modelling using Silvaco
- Characterisation using in house SEM and EDAX
- Detailed reverse engineering analysis at MCS for FIB, device cross sections and elemental analysis

SF51-75 JFET Layout





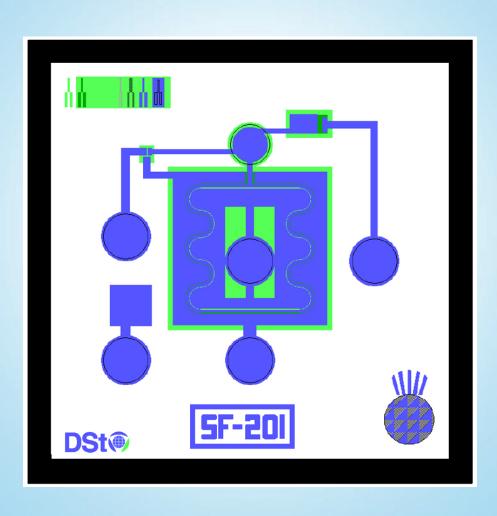
SF181 JFET Layout





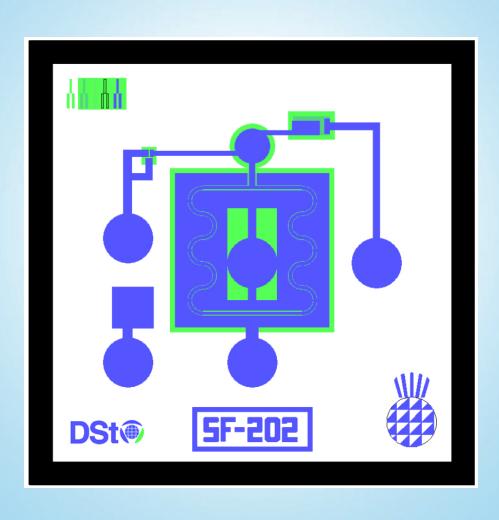
SF201 JFET Layout





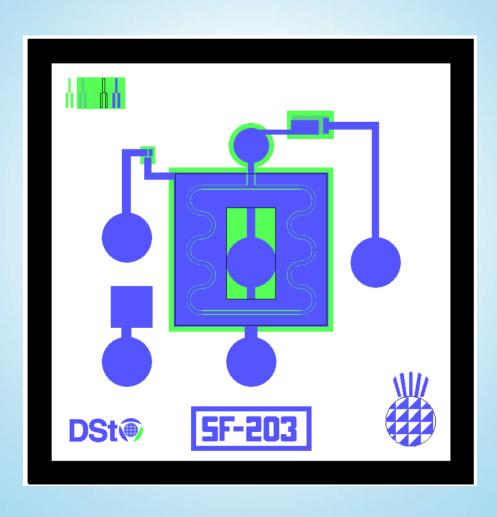
SF202 JFET Layout





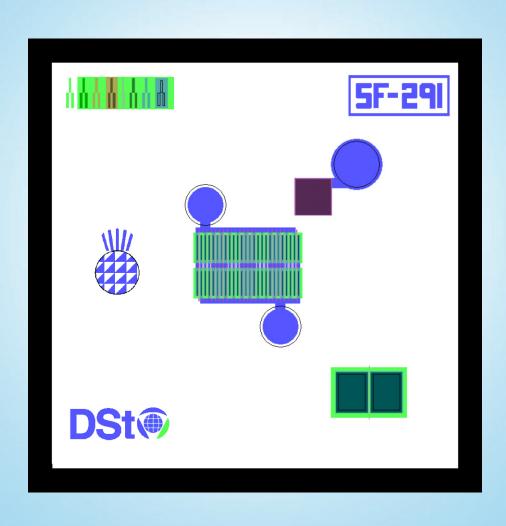
SF203 JFET Layout





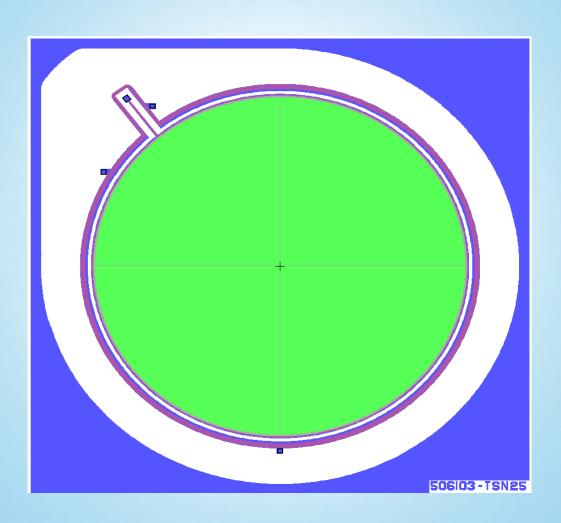
SF291 JFET Layout





506103 PiN diode layout





DST Silicon Detector Products



Silicon Detectors PiN

Device No.	Active area (sqmm)	Thickness	Capacitance	Leakage current at full Depletion	Mn Energy Resolution at -40C	Additional Information
506103	25	500um	5.5pF	1nA typical	170eV	Large area circular silicon PiN diode suitable for X-ray, and electron detection.
506104	13	500um	3.0pF	600pA typical	156eV	Medium area circular silicon PiN diode suitable for X-ray, and electron detection
506101	6	500um	1.3pF	350pA typical	149eV	Small area circular silicon PiN diode suitable for X-ray, and electron detection
501102	4.1x4.1	380um	3.2pF	600pA typical		Supplied in 18ld LCC package with Kapton window for use as Neutron detector.

DST Low Noise JFET Products



 Noise J	
MAICA	
MO125	

Device No.	Input Cap. Ciss (pF) Vds=0V, Vgs=0V	Gm (mS) Vds=3V Vgs=0V	Noise, En nV /Root HZ Vds=3V, f=100kHz	Additional Information
SF51	0.4	2.3	2.2	Four terminal device with an integrated charge reset mechanism and feedback capacitance. Suitable for small area nuclear detectors coupled to charge sensitive amplifiers. For electron charge collection (negative biased detectors)
SF181	0.8	5	1.8	Four terminal device with an integrated charge reset mechanism and feedback capacitance. Suitable for medium area nuclear detectors coupled to charge sensitive amplifiers. For electron charge collection (negative biased detectors)
SF201	1.6	10	1.3	Four terminal device with an integrated charge reset mechanism and feedback capacitance. Suitable for medium area nuclear detectors coupled to charge sensitive amplifiers. For electron charge collection (negative biased detectors)
SF202	1.6	10	1.3	Four terminal device with an integrated charge reset mechanism and feedback capacitance. Suitable for large area nuclear detectors coupled to charge sensitive amplifiers. For hole charge collection (positive biased detectors)
SF203	1.6	10	1.3	Four terminal device without an integrated charge reset mechanism and feedback capacitance. Suitable for large area nuclear detectors coupled to charge sensitive amplifiers.









Contacts:



DST Sensor Technologies Limited:

Registration Number HE 394685, VAT # 10394685D

- HQ & Registered Address: 7D Nikou Kranidioti Street, Tower 4,
 Suite 302, Engomi, Nicosia, Cyprus.
- Directors: N. Meherje, A. Meherje, A. James
- For further information, please contact:
 Daniel James: daniel.james@dstsensor.eu +357 97868765
 Address: 8 Riza, Aristo Risas, 8560 Pegeia, Paphos, Cyprus