**DB Notes: HGCAL Si Wafers & Sensors**

**DB requirement:** Each Si Wafer (& Si Sensor) in the DB is uniquely defined by a

* a unique ‘**Kind of Part**’ name

and

* a unique **barcode** and/or a unique **‘serial number’** and/or a unique **‘name label’**
* A ‘name label’ is normally reserved for components mounted on the detector.

**Note:** A ‘name label’ is normally reserved for components mounted on the detector and normally has a hierarchical format. This enables users to quickly locate the placement of the component on the detector.

**HGCAL DB describes the following types of Si Sensor Wafers**

Wafers: **Kind of Part names**

120um HD Si Sensor Wafer

200um LD Si Sensor Wafer

300um LD Si Sensor Wafer

Wafer **Attributes:** Sensor Wafer Substrate

**Attribute Names** **Values**

Wafer Substrate STD, DD, FZ thin, Epi

Wafer Polarity n, p

Wafer Class prototype, pre-series, pre-production, production

**Sensor Attributes (Sensor only):**

* Sensors inherit wafer attributes.
* Sensor P-Stop: individual, common, none

**Module & Component Geometries**

**HD (high density) HGCAL Module Geometries -**

A picture containing drawing, door, kite

Description automatically generated Chart, treemap chart

Description automatically generated A picture containing chart

Description automatically generated

HD Full (**HD Type 0**) HD Top (**HD Type 1**) HD Bottom (**HD Type 2**)

Shape, polygon

Description automatically generated Shape, polygon

Description automatically generated Shape

Description automatically generated

HD Left (**HD Type 3**) HD Right (**HD Type 4**) HD Five (**HD Type 5**)

Left(-) Right(-)

* **HD module geometries**

HD Full HD Type 0 hexagonal

HD Top HD Type 1 half-hexagon (upper)

HD Bottom HD Type 2 ChopTwo

HD Left HD Type 3 Left (-)

HD Right HD Type 4 Right (-)

HD Five HD Type 5 Five

* Define in the DB
  + 6 types of HD EM Si Modules (120um Sensor)
  + 6 types of HD HAD Si modules (120um Sensor)

**LD (low density) HGCAL Module Geometries**

A picture containing drawing, door, kite

Description automatically generated Chart, treemap chart

Description automatically generated Chart, treemap chart

Description automatically generated

**LD Full (LD Type 0) LD Top (LD Type 1) LD Bottom (LD Type 2)**

Shape, polygon

Description automatically generated Shape, polygon

Description automatically generated Shape

Description automatically generated

**LD Left (LD Type 3) LD Right (LD Type 4) LD Five (LD Type 5)**

Left Right

A close up of a logo

Description automatically generated

**LD Three (LD Type 6) LD Full+Three (LD Type 7) - multiple versions to be defined**

* **LD module geometries**

LD Full LD Type 0 hexagonal

LD Top LD Type 1 half-hexagon (upper)

LD Bottom LD Type 2 half-hexagon (lower)

LD Left LD Type 3 Left (half)

LD Right LD Type 4 Right (half)

LD Five LD Type 5 Five

LD Three LD Type 6 valid **only for Si sensors**

LD (Full+Three) LD Type 7 valid for Module, Protomodule, PCB,

& Baseplate

* Define in the DB
  + 7 types of LD EM Si Modules (120um Sensor)
  + 7 types of LD HAD Si modules (120um Sensor)

**DB Definitions for Si Sensors – HD & LD**

**DB: Kind of Part Names – Si Sensor Wafers**

**Kind of part name** **- HD & LD Si Wafers**

120um HD Si Sensor Wafer

200um LD Si Sensor Wafer

300um LD Si Sensor Wafer

* Label Colours
  + **Blue: HD & LD geometries identical**
  + **Red: HD & LD geometries different**

**>> DB Relationship:**

Parent: HD 120um Si Sensor Wafer

Children: HD 120um Si Sensors defined below

+ six 120um HD Halfmoons

**DB: Kind of Part Names – HD 120um Si Sensors**

**Kind of part name** **Geometry Description LPNAME**

120um Si Sensor HD Full Full **120um Sensor HD Type 0**

120um Si Sensor HD Top Top(half) **120um Sensor HD Type 1**

120um Si Sensor HD Bottom Bottom(ChopTwo) **120um Sensor HD Type 2**

120um Si Sensor HD Left Left(-) **120um Sensor HD Type 3**

120um Si Sensor HD Right Right(-) **120um Sensor HD Type 4**

120um Si Sensor HD Five Five **120um Sensor HD Type 5**

120um Si Sensor HD Halfmoon-N halfmoon-Top

120um Si Sensor HD Halfmoon-S halfmoon-Bot

120um Si Sensor HD Halfmoon-NW halfmoon-Tleft

120um Si Sensor HD Halfmoon-SW halfmoon-Bleft

120um Si Sensor HD Halfmoon-SE halfmoon-Bright

120um Si Sensor HD Halfmoon-NE halfmoon-Tright

**Kind of Part Names – LD 200um Sensors**

**>> DB Relationship:**

Parent: LD 200um Si Sensor Wafer

Children: LD 200um Si Sensors defined below

+ Six 200um HD Halfmoons

**Kind of part name Geometry Description LPNAME**

200um Si Sensor LD Full Full **200um Sensor LD Type 0**

200um Si Sensor LD Top Top(half) **200um Sensor LD Type 1**

200um Si Sensor LD Bottom Bottom(half) **200um Sensor LD Type 2**

200um Si Sensor LD Left Left(half) **200um Sensor LD Type 3**

200um Si Sensor LD Right Right(half) **200um Sensor LD Type 4**

200um Si Sensor LD Five Five **200um Sensor LD Type 5**

200um Si Sensor LD Three Three **200um Sensor LD Type 6**

200um Si Sensor LD Halfmoon-N halfmoon-Top

200um Si Sensor LD Halfmoon-S halfmoon-Bot

200um Si Sensor LD Halfmoon-NW halfmoon-Tleft

200um Si Sensor LD Halfmoon-SW halfmoon-Bleft

200um Si Sensor LD Halfmoon-SE halfmoon-Bright

200um Si Sensor LD Halfmoon-NE halfmoon-Tright

**Kind of Part Names – LD 300um Sensors**

**>> DB Relationship:**

Parent: LD 300um Si Sensor Wafer

Children: LD 300um Si Sensors defined below

+ Six 300um LD Si Halfmoons

**Kind of part name Geometry Description LPNAME**

300um Si Sensor LD Full Full **300um Sensor LD Type 0**

300um Si Sensor LD Top Top(half) **300um Sensor LD Type 1**

300um Si Sensor LD Bottom Bottom(half) **300um Sensor LD Type 2**

300um Si Sensor LD Left Left(half) **300um Sensor LD Type 3**

300um Si Sensor LD Right Right(half) **300um Sensor LD Type 4**

300um Si Sensor LD Five Five **300um Sensor LD Type 5**

300um Si Sensor LD Three Three **300um Sensor LD Type 6**

300um Si Sensor LD Halfmoon-N halfmoon-Top

300um Si Sensor LD Halfmoon-S halfmoon-Bot

300um Si Sensor LD Halfmoon-NW halfmoon-Tleft

300um Si Sensor LD Halfmoon-SW halfmoon-Bleft

300um Si Sensor LD Halfmoon-SE halfmoon-Bright

300um Si Sensor LD Halfmoon-NE halfmoon-Tright

**Tables to Store Si Sensor Data in DB**

**Kind of Condition Name Table Name**

HGC Sensor Manufacturer IV Test HGC\_SENSOR\_IV

HGC Sensor Manufacturer CV Test HGC\_SENSOR\_CV

HGC Sensor Irradiation Summary Data HGC\_SENSOR\_IRRADIATION\_SUMRY

HGC CERN Sensor IV HGC\_CERN\_SENSOR\_IV

HGC CERN Sensor CV HGC\_CERN\_SENSOR\_CV

HGC Sensor Defect Checks HGC\_SENSOR\_DEFECT\_CHKS

HGC CERN Sensor IV Summary HGC\_CERN\_SENSOR\_IV\_SUMRY

HGC CERN Sensor CV Summary HGC\_CERN\_SENSOR\_CV\_SUMRY

HGC PQC Summary HGC\_PQC\_SUMRY

HGC PQC Diode IV HGC\_PQC\_DIODE\_IV

HGC PQC Diode CV HGC\_PQC\_DIODE\_CV

HGC PQC Metal Oxide Semiconductor HGC\_PQC\_MOS

HGC PQC Field Effect Transistor HGC\_PQC\_FET

HGC PQC Gate Controlled Diode HGC\_PQC\_GCD

HGC PQC Van Der Pauw N HGC\_PQC\_VAN\_DER\_PAUW

HGC PQC Van Der Pauw PEdge HGC\_PQC\_VAN\_DER\_PAUW

HGC PQC Van Der Pauw PStop HGC\_PQC\_VAN\_DER\_PAUW

HGC PQC Linewidth N HGC\_PQC\_LINEWIDTH

HGC PQC Linewidth PEdge HGC\_PQC\_LINEWIDTH

HGC PQC Linewidth PStop HGC\_PQC\_LINEWIDTH

HGC PQC Oxide Breakdown HGC\_PQC\_OXIDE\_BREAKDOWN

**Sensor Wafer Attributes**

**Kind of Wafer Attr\_Name Value**

120um HD Si Sensor Wafer Sensor Wafer Substrate STD

120um HD Si Sensor Wafer Sensor Wafer Substrate DD

120um HD Si Sensor Wafer Sensor Wafer Substrate FZ thin

120um HD Si Sensor Wafer Sensor Wafer Substrate Epi

120um HD Si Sensor Wafer Sensor Wafer Polarity n

120um HD Si Sensor Wafer Sensor Wafer Polarity p

120um HD Si Sensor Wafer Sensor Wafer Class prototype

120um HD Si Sensor Wafer Sensor Wafer Class pre-series

120um HD Si Sensor Wafer Sensor Wafer Class pre-production

120um HD Si Sensor Wafer Sensor Wafer Class production

**Query for Above Results**

**SELECT KOP.DISPLAY\_NAME PART\_NAME, ATRCTLG.DISPLAY\_NAME ATTR\_NAME, POSN.NAME ATTR\_VALUE**

**FROM CMS\_HGC\_CORE\_CONSTRUCT.KINDS\_OF\_PARTS KOP**

**INNER JOIN CMS\_HGC\_CORE\_CONSTRUCT.PART\_TO\_ATTR\_RLTNSHPS ATRLTN**

**ON KOP.KIND\_OF\_PART\_ID = ATRLTN.KIND\_OF\_PART\_ID**

**INNER JOIN CMS\_HGC\_CORE\_ATTRIBUTE.ATTR\_BASES ATRBS**

**ON ATRLTN.ATTR\_CATALOG\_ID = ATRBS.ATTR\_CATALOG\_ID**

**INNER JOIN CMS\_HGC\_CORE\_ATTRIBUTE.ATTR\_CATALOGS ATRCTLG**

**ON ATRBS.ATTR\_CATALOG\_ID = ATRCTLG.ATTR\_CATALOG\_ID**

**INNER JOIN CMS\_HGC\_CORE\_ATTRIBUTE.POSITION\_SCHEMAS POSN**

**ON ATRBS.ATTRIBUTE\_ID = POSN.ATTRIBUTE\_ID**

**WHERE KOP.DISPLAY\_NAME = '120um HD Si Sensor Wafer' AND KOP.IS\_RECORD\_DELETED = 'F'**

**AND ATRLTN.IS\_RECORD\_DELETED = 'F'**

**AND ATRBS.IS\_RECORD\_DELETED = 'F'**

**AND ATRCTLG.IS\_RECORD\_DELETED = 'F'**

**AND POSN.IS\_RECORD\_DELETED = 'F';**

**Instructions to Load Data in DB**

Copy your XML files to the spool area of the HGCAL DB loader to load the data in the DB

**Command to Load Data in HGCAL INT2R database**

scp <file> xml [joshi@dbloader-hgcal.cern.ch:/home/dbspool/spool/hgcal/int2r](mailto:joshi@dbloader-hgcal.cern.ch:/home/dbspool/spool/hgcal/int2r)

**Command to Load Data in HGCAL CMSR database**

scp <file> xml [joshi@dbloader-hgcal.cern.ch:/home/dbspool/spool/hgcal/cmsr](mailto:joshi@dbloader-hgcal.cern.ch:/home/dbspool/spool/hgcal/cmsr)

1. Copy xml or zip file to spool area, e.g.

Development DB – int2r

scp <file> xml [joshi@dbloader-hgcal.cern.ch:/home/dbspool/spool/hgcal/int2r](mailto:joshi@dbloader-hgcal.cern.ch:/home/dbspool/spool/hgcal/int2r)

Production DB – cmsr

scp <file> xml [joshi@dbloader-hgcal.cern.ch:/home/dbspool/spool/hgcal/int2r](mailto:joshi@dbloader-hgcal.cern.ch:/home/dbspool/spool/hgcal/int2r)

The DB loader process will pick up the files, read the data contained, and write into the DB.

1. Check the state of your job

View the contents of the file */home/dbspool/state/hgcal/int2r/filename.xml*

0  success

Not 0  error

No such file  pending

1. Check the log file */home/dbspool/logs/hgcal/int2r/filename.xml* for log information.

**HGCAL DB: Si Sensor Kinds of Parts**

**XXXum HD Si Sensor Wafer**

**XXXum Si Sensor HD Bottom**

**XXXum Si Sensor HD Five**

**XXXum Si Sensor HD Full**

**XXXum Si Sensor HD Left**

**XXXum Si Sensor HD Right**

**XXXum Si Sensor HD Top**

**XXXum Si Sensor HD Halfmoon-N**

**XXXum Si Sensor HD Halfmoon-NE**

**XXXum Si Sensor HD Halfmoon-NW**

**XXXum Si Sensor HD Halfmoon-S**

**XXXum Si Sensor HD Halfmoon-SE**

**XXXum Si Sensor HD Halfmoon-SW**

where **XXX** = 120, 200, 300

Description of information listed below

* **Kind of condition name:** descriptive name of data type
* **Table:** name of table for the data

**Table: HGC\_SENSOR\_IV**

**Kind of condition: HGC Sensor Manufacturer IV Test**

**TABLE CMS\_HGC\_HGCAL\_COND.HGC\_SENSOR\_IV**

**(**

**RECORD\_ID NUMBER(38) NOT NULL,**

**CONDITION\_DATA\_SET\_ID NUMBER(38) NOT NULL,**

**VOLTS FLOAT(126) NOT NULL,**

**CURRNT\_AMP FLOAT(126) NOT NULL**

**)**

**XML Template**

**<?xml version="1.0" encoding="UTF-8" standalone="yes"?>**

**<ROOT xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">**

**<HEADER>**

**<TYPE>**

**<EXTENSION\_TABLE\_NAME> HGC\_SENSOR\_IV</EXTENSION\_TABLE\_NAME>**

**<NAME> HGC Sensor Manufacturer IV Test</NAME>**

**</TYPE>**

**<RUN>**

**<RUN\_TYPE>Run Name</RUN\_TYPE>**

**<RUN\_NUMBER>Run Name</RUN\_NUMBER>**

**<!***-- Enter your timestamp -->*

**<RUN\_BEGIN\_TIMESTAMP>2018-05-14 00:00:00</RUN\_BEGIN\_TIMESTAMP>**

**<RUN\_END\_TIMESTAMP>2018-05-14 00:00:00</RUN\_END\_TIMESTAMP>**

**<INITIATED\_BY\_USER>Your Name</INITIATED\_BY\_USER>**

**<LOCATION>CERN</LOCATION>**

**<COMMENT\_DESCRIPTION>Your Comments</COMMENT\_DESCRIPTION>**

**</RUN>**

**</HEADER>**

**<DATA\_SET>**

**<PART>**

**<KIND\_OF\_PART>120um Si Sensor HD Full</KIND\_OF\_PART>**

**<SERIAL\_NUMBER>XXXXXXXXXXXXXXXXXXX</SERIAL\_NUMBER>**

**</PART>**

**<DATA>**

**<VOLTS>-25</VOLTS>**

**<CURRENT>5.2</CURRENT>**

**</DATA>**

**.**

**.**

**.**

**<DATA>**

**<VOLTS>-50</VOLTS>**

**<CURRENT>10.2</CURRENT>**

**</DATA>**

**</DATA\_SET>**

**</ROOT>**

**Table: HGC\_SENSOR\_CV**

**Kind of condition: HGC Sensor Manufacturer CV Test**

**TABLE CMS\_HGC\_HGCAL\_COND.HGC\_SENSOR\_CV**

**(**

**RECORD\_ID NUMBER(38) NOT NULL,**

**CONDITION\_DATA\_SET\_ID NUMBER(38) NOT NULL,**

**VOLTS FLOAT(126) NOT NULL,**

**CAPACITANCE\_PFRD FLOAT(126) NOT NULL**

**)**

**XML Template**

**<?xml version="1.0" encoding="UTF-8" standalone="yes"?>**

**<ROOT xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">**

**<HEADER>**

**<TYPE>**

**<EXTENSION\_TABLE\_NAME> HGC\_SENSOR\_CV</EXTENSION\_TABLE\_NAME>**

**<NAME> HGC Sensor Manufacturer CV Test</NAME>**

**</TYPE>**

**<RUN>**

**<RUN\_NAME>Your Run Name</RUN\_NAME>**

**<!***-- Enter your timestamp -->*

**<RUN\_BEGIN\_TIMESTAMP>2018-05-14 00:00:00</RUN\_BEGIN\_TIMESTAMP>**

**<RUN\_END\_TIMESTAMP>2018-05-14 00:00:00</RUN\_END\_TIMESTAMP>**

**<INITIATED\_BY\_USER>Your Name</INITIATED\_BY\_USER>**

**<LOCATION>CERN</LOCATION>**

**<COMMENT\_DESCRIPTION>Your Comments</COMMENT\_DESCRIPTION>**

**</RUN>**

**</HEADER>**

**<DATA\_SET>**

**<PART>**

**<KIND\_OF\_PART>120um Si Sensor HD Full</KIND\_OF\_PART>**

**<SERIAL\_NUMBER>XXXXXXXXXXXXXXXXXXX</SERIAL\_NUMBER>**

**</PART>**

**<DATA>**

**<VOLTS>-25</VOLTS>**

**<CAPACITANCE\_PFRD>5.2</CAPACITANCE\_PFRD>**

**</DATA>**

**.**

**.**

**.**

**<DATA>**

**<VOLTS>-50</VOLTS>**

**<CAPACITANCE\_PFRD>5.2</CAPACITANCE\_PFRD>**

**</DATA>**

**</DATA\_SET>**

**</ROOT>**

**Table: HGC\_SENSOR\_IRRADIATION\_SUMRY**

**Kind of condition: HGC Sensor Irradiation Summary Data**

CREATE TABLE CMS\_HGC\_HGCAL\_COND.HGC\_SENSOR\_IRRADIATION\_SUMRY

(

RECORD\_ID NUMBER(38) NOT NULL,

CONDITION\_DATA\_SET\_ID NUMBER(38) NOT NULL,

DOPING VARCHAR2(32 Byte) NULL,

IRRAD\_FACILITY VARCHAR2(126 Byte) NULL,

FLUNCE\_TARGET\_NEQV FLOAT(126) NULL,

FLUNCE\_NOMNL\_NEQV FLOAT(126) NULL,

ERR\_FLUNCE\_NOMNL FLOAT(126) NULL,

FULL\_DPLTN\_VOLT FLOAT(126) NULL,

LKCURNT\_DNSTY\_MA\_CM3 FLOAT(126) NULL,

ERR\_LKCURNT\_DNSTY FLOAT(126) NULL,

ANNEALED VARCHAR2(16 Byte) NULL,

FLUNCE\_XTRACTD\_NEQV FLOAT(126) NULL,

ERR\_FLUNCE\_XTRACTD FLOAT(126) NULL

)

**XML Template**

**<?xml version="1.0" encoding="UTF-8" standalone="yes"?>**

**<ROOT xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">**

**<HEADER>**

**<TYPE>**

**<EXTENSION\_TABLE\_NAME>**HGC\_SENSOR\_IRRADIATION\_SUMRY**</EXTENSION\_TABLE\_NAME>**

**<NAME>HGC CERN Sensor IV Test</NAME>**

**</TYPE>**

**<RUN>**

**<RUN\_NAME>Your Run Name</RUN\_NAME>**

**<!***-- Enter your timestamp -->*

**<RUN\_BEGIN\_TIMESTAMP>2018-05-14 00:00:00</RUN\_BEGIN\_TIMESTAMP>**

**<RUN\_END\_TIMESTAMP>2018-05-14 00:00:00</RUN\_END\_TIMESTAMP>**

**<INITIATED\_BY\_USER>Your Name</INITIATED\_BY\_USER>**

**<LOCATION>CERN</LOCATION>**

**<COMMENT\_DESCRIPTION>Your Comments</COMMENT\_DESCRIPTION>**

**</RUN>**

**</HEADER>**

**<DATA\_SET>**

**<PART>**

**<KIND\_OF\_PART>120um Si Sensor HD Full</KIND\_OF\_PART>**

**<SERIAL\_NUMBER>XXXXXXXXXXXXXXXXXXX</SERIAL\_NUMBER>**

**</PART>**

**<DATA>**

**<DOPING>-25</DOPING>**

**<**IRRAD\_FACILITY**>Name</CURNT\_NANOAMP>**

**<ERR\_CURNT\_NANOAMP>0.01653122</ERR\_CURNT\_NANOAMP>**

**<TOT\_CURNT\_NANOAMP>-2000</TOT\_CURNT\_NANOAMP>**

**<ACTUAL\_VOLTS>-25</ACTUAL\_VOLTS>**

**<TIME\_SECS>7.609905</TIME\_SECS>**

**<TEMP\_DEGC>23</TEMP\_DEGC>**

**<HUMIDITY\_PRCNT>7.609905</HUMIDITY\_PRCNT>**

**<CELL\_NR>YYYY</CELL\_NR>**

**</DATA>**

**.**

**.**

**.**

**<DATA>**

**<VOLTS>-225</VOLTS>**

**<CURNT\_NANOAMP>7.609905</CURNT\_NANOAMP>**

**<ERR\_CURNT\_NANOAMP>0.01653122</ERR\_CURNT\_NANOAMP>**

**<TOT\_CURNT\_NANOAMP>-2000</TOT\_CURNT\_NANOAMP>**

**<ACTUAL\_VOLTS>-25</ACTUAL\_VOLTS>**

**<TIME\_SECS>7.609905</TIME\_SECS>**

**<TEMP\_DEGC>23</TEMP\_DEGC>**

**<HUMIDITY\_PRCNT>7.609905</HUMIDITY\_PRCNT>**

**<CELL\_NR>YYYY</CELL\_NR>**

**</DATA>**

**</DATA\_SET>**

**</ROOT>**

**Kind of condition: HGC CERN Sensor IV Test**

**Table: HGC\_CERN\_SENSOR\_IV**

**TABLE CMS\_HGC\_HGCAL\_COND.HGC\_CERN\_SENSOR\_IV**

**(**

**RECORD\_ID NUMBER(38) NOT NULL,**

**CONDITION\_DATA\_SET\_ID NUMBER(38) NOT NULL,**

**VOLTS FLOAT(126) NOT NULL,**

**CURNT\_NANOAMP FLOAT(126) NOT NULL,**

**ERR\_CURNT\_NANOAMP FLOAT(126),**

**TOT\_CURNT\_NANOAMP FLOAT(126),**

**ACTUAL\_VOLTS FLOAT(126),**

**TIME\_SECS FLOAT(126),**

**TEMP\_DEGC FLOAT(126),**

**HUMIDITY\_PRCNT FLOAT(126),**

**CELL\_NR NUMBER(10)**

**)**

**XML Template for Table: HGC\_CERN\_SENSOR\_IV**

**Kind of condition: HGC CERN Sensor IV Test**

**<?xml version="1.0" encoding="UTF-8" standalone="yes"?>**

**<ROOT xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">**

**<HEADER>**

**<TYPE>**

**<EXTENSION\_TABLE\_NAME>HGC\_CERN\_SENSOR\_IV</EXTENSION\_TABLE\_NAME>**

**<NAME>HGC CERN Sensor IV Test</NAME>**

**</TYPE>**

**<RUN>**

**<RUN\_NAME>Your Run Name</RUN\_NAME>**

**<!***-- Enter your timestamp -->*

**<RUN\_BEGIN\_TIMESTAMP>2018-05-14 00:00:00</RUN\_BEGIN\_TIMESTAMP>**

**<RUN\_END\_TIMESTAMP>2018-05-14 00:00:00</RUN\_END\_TIMESTAMP>**

**<INITIATED\_BY\_USER>Your Name</INITIATED\_BY\_USER>**

**<LOCATION>CERN</LOCATION>**

**<COMMENT\_DESCRIPTION>Your Comments</COMMENT\_DESCRIPTION>**

**</RUN>**

**</HEADER>**

**<DATA\_SET>**

**<PART>**

**<KIND\_OF\_PART>120um Si Sensor HD Full</KIND\_OF\_PART>**

**<SERIAL\_NUMBER>XXXXXXXXXXXXXXXXXXX</SERIAL\_NUMBER>**

**</PART>**

**<DATA>**

**<VOLTS>-25</VOLTS>**

**<CURNT\_NANOAMP>7.609905</CURNT\_NANOAMP>**

**<ERR\_CURNT\_NANOAMP>0.01653122</ERR\_CURNT\_NANOAMP>**

**<TOT\_CURNT\_NANOAMP>-2000</TOT\_CURNT\_NANOAMP>**

**<ACTUAL\_VOLTS>-25</ACTUAL\_VOLTS>**

**<TIME\_SECS>7.609905</TIME\_SECS>**

**<TEMP\_DEGC>23</TEMP\_DEGC>**

**<HUMIDITY\_PRCNT>7.609905</HUMIDITY\_PRCNT>**

**<CELL\_NR>YYYY</CELL\_NR>**

**</DATA>**

**.**

**.**

**.**

**<DATA>**

**<VOLTS>-225</VOLTS>**

**<CURNT\_NANOAMP>7.609905</CURNT\_NANOAMP>**

**<ERR\_CURNT\_NANOAMP>0.01653122</ERR\_CURNT\_NANOAMP>**

**<TOT\_CURNT\_NANOAMP>-2000</TOT\_CURNT\_NANOAMP>**

**<ACTUAL\_VOLTS>-25</ACTUAL\_VOLTS>**

**<TIME\_SECS>7.609905</TIME\_SECS>**

**<TEMP\_DEGC>23</TEMP\_DEGC>**

**<HUMIDITY\_PRCNT>7.609905</HUMIDITY\_PRCNT>**

**<CELL\_NR>YYYY</CELL\_NR>**

**</DATA>**

**</DATA\_SET>**

**</ROOT>**

**Kind of condition: HGC CERN Sensor IV Summary**

**Table: HGC\_CERN\_SENSOR\_IV\_SUMRY**

**CREATE TABLE CMS\_HGC\_HGCAL\_COND.HGC\_CERN\_SENSOR\_IV\_SUMRY**

**(**

**RECORD\_ID NUMBER(38) NOT NULL,**

**CONDITION\_DATA\_SET\_ID NUMBER(38) NOT NULL,**

**TOT\_CURNT\_NANOAMP\_600V FLOAT(126),**

**TOT\_CURNT\_NANOAMP\_800V FLOAT(126),**

**NUM\_BAD\_CELLS NUMBER(10),**

**PASS CHAR(1 BYTE),**

**GRADE CHAR(10 BYTE),**

**NUM\_BAD\_ADJ\_CELLS NUMBER(10)**

**)**

**<?xml version="1.0" encoding="UTF-8" standalone="yes"?>**

**<ROOT xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">**

**<HEADER>**

**<TYPE>**

**<EXTENSION\_TABLE\_NAME> HGC\_CERN\_SENSOR\_IV\_SUMRY</EXTENSION\_TABLE\_NAME>**

**<NAME>HGC CERN Sensor IV Summary</NAME>**

**</TYPE>**

**<RUN>**

**<RUN\_NAME>Your Run Name</RUN\_NAME>**

**<!***-- Enter your timestamp -->*

**<RUN\_BEGIN\_TIMESTAMP>2018-05-14 00:00:00</RUN\_BEGIN\_TIMESTAMP>**

**<RUN\_END\_TIMESTAMP>2018-05-14 00:00:00</RUN\_END\_TIMESTAMP>**

**<INITIATED\_BY\_USER>Your Name</INITIATED\_BY\_USER>**

**<LOCATION>CERN</LOCATION>**

**<COMMENT\_DESCRIPTION>Your Comments</COMMENT\_DESCRIPTION>**

**</RUN>**

**</HEADER>**

**<DATA\_SET>**

**<PART>**

**<KIND\_OF\_PART>120um Si Sensor HD Full</KIND\_OF\_PART>**

**<SERIAL\_NUMBER>XXXXXXXXXXXXXXXXXXX</SERIAL\_NUMBER>**

**</PART>**

**</PART>**

**<DATA>**

**<VOLTS>-25</VOLTS>**

**<TOT\_CURNT\_NANOAMP\_600V>7.609905</TOT\_CURNT\_NANOAMP\_600V>**

**<TOT\_CURNT\_NANOAMP\_800V>0.01653122</TOT\_CURNT\_NANOAMP\_800V>**

**<NUM\_BAD\_CELLS>25</NUM\_BAD\_CELLS>**

**<PASS>N</PASS>**

**<GRADE>FAIL</GRADE>**

**<NUM\_BAD\_ADJ\_CELLS>5</NUM\_BAD\_ADJ\_CELLS>**

**</DATA>**

**.**

**.**

**.**

**<DATA>**

**<VOLTS>-25</VOLTS>**

**<TOT\_CURNT\_NANOAMP\_600V>7.609905</TOT\_CURNT\_NANOAMP\_600V>**

**<TOT\_CURNT\_NANOAMP\_800V>0.01653122</TOT\_CURNT\_NANOAMP\_800V>**

**<NUM\_BAD\_CELLS>25</NUM\_BAD\_CELLS>**

**<PASS>N</PASS>**

**<GRADE>FAIL</GRADE>**

**<NUM\_BAD\_ADJ\_CELLS>5</NUM\_BAD\_ADJ\_CELLS>**

**</DATA>**

**</DATA>**

**</DATA\_SET>**

**</ROOT>**

**Kind of condition: HGC CERN Sensor CV Test**

**Table: HGC\_CERN\_SENSOR\_CV**

**CREATE TABLE CMS\_HGC\_HGCAL\_COND.HGC\_CERN\_SENSOR\_CV**

**(**

**RECORD\_ID NUMBER(38) NOT NULL,**

**CONDITION\_DATA\_SET\_ID NUMBER(38) NOT NULL,**

**VOLTS FLOAT(126) NOT NULL,**

**CPCTNCE\_PFRD FLOAT(126) NOT NULL,**

**ERR\_CPCTNC\_PFRD FLOAT(126),**

**TOT\_CURNT\_NANOAMP FLOAT(126),**

**ACTUAL\_VOLTS FLOAT(126),**

**ORG\_CPCTNC\_PFRD FLOAT(126),**

**TEMP\_DEGC FLOAT(126),**

**HUMIDITY\_PRCNT FLOAT(126),**

**IMP\_OHM FLOAT(126),**

**PHS\_RAD FLOAT(126),**

**TIME\_SECS FLOAT(126),**

**CELL\_NR NUMBER(10)**

**)**

**XML Template for Table: HGC\_CERN\_SENSOR\_CV**

**<?xml version="1.0" encoding="UTF-8" standalone="yes"?>**

**<ROOT xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">**

**<HEADER>**

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**<NAME>HGC CERN Sensor CV Test</NAME>**

**</TYPE>**

**<RUN>**

**<RUN\_NAME>CERN HPK\_8in\_271\_4003 CV Test</RUN\_NAME>**

**<RUN\_BEGIN\_TIMESTAMP>2018-05-14 00:00:00</RUN\_BEGIN\_TIMESTAMP>**

**<RUN\_END\_TIMESTAMP>2018-05-14 00:00:00</RUN\_END\_TIMESTAMP>**

**<INITIATED\_BY\_USER>Florian Pitters</INITIATED\_BY\_USER>**

**<LOCATION>CERN</LOCATION>**

**<COMMENT\_DESCRIPTION>CV Test at CERN</COMMENT\_DESCRIPTION>**

**</RUN>**

**</HEADER>**

**<DATA\_SET>**

**<PART>**

**<KIND\_OF\_PART>HPK Eight Inch 271 Sensor Cell</KIND\_OF\_PART>**

**<SERIAL\_NUMBER>HPK\_8in\_271\_4003-010</SERIAL\_NUMBER>**

**</PART>**

**<DATA>**

**<VOLTS>25</VOLTS>**

**<CPCTNCE\_PFRD>103.752</CPCTNCE\_PFRD>**

**<ERR\_CPCTNC\_PFRD>0.00333346</ERR\_CPCTNC\_PFRD>**

**<TOT\_CURNT\_NANOAMP>-1980</TOT\_CURNT\_NANOAMP>**

**<ACTUAL\_VOLTS>-25</ACTUAL\_VOLTS>**

**<ORG\_CPCTNC\_PFRD>207.857</ORG\_CPCTNC\_PFRD>**

**<TEMP\_DEGC>23.5</TEMP\_DEGC>**

**<HUMIDITY\_PRCNT>44.7</HUMIDITY\_PRCNT>**

**<IMP\_OHM>207.857</IMP\_OHM>**

**<PHS\_RAD>23.5</PHS\_RAD>**

**<TIME\_SEC>44.7</TIME\_SEC>**

**<CELL\_NR>40</CELL\_NR>**

**</DATA>**

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**/\* . \*/**

**/\* . \*/**

**<DATA>**

**<VOLTS>25</VOLTS>**

**<CPCTNCE\_PFRD>103.752</CPCTNCE\_PFRD>**

**<ERR\_CPCTNC\_PFRD>0.00333346</ERR\_CPCTNC\_PFRD>**

**<TOT\_CURNT\_NANOAMP>-1980</TOT\_CURNT\_NANOAMP>**

**<ACTUAL\_VOLTS>-25</ACTUAL\_VOLTS>**

**<ORG\_CPCTNC\_PFRD>207.857</ORG\_CPCTNC\_PFRD>**

**<TEMP\_DEGC>23.5</TEMP\_DEGC>**

**<HUMIDITY\_PRCNT>44.7</HUMIDITY\_PRCNT>**

**<IMP\_OHM>207.857</IMP\_OHM>**

**<PHS\_RAD>23.5</PHS\_RAD>**

**<TIME\_SEC>44.7</TIME\_SEC>**

**<CELL\_NR>40</CELL\_NR>**

**</DATA>**

**</DATA\_SET>**

**</ROOT>**

**Kind of condition: HGC CERN Sensor CV Test**

**Table: HGC\_CERN\_SENSOR\_CV**

**TABLE CMS\_HGC\_HGCAL\_COND.HGC\_CERN\_SENSOR\_CV**

**(**

**RECORD\_ID NUMBER(38) NOT NULL,**

**CONDITION\_DATA\_SET\_ID NUMBER(38) NOT NULL,**

**VOLTS FLOAT(126) NOT NULL,**

**CPCTNCE\_PFRD FLOAT(126) NOT NULL,**

**ERR\_CPCTNC\_PFRD FLOAT(126),**

**TOT\_CURNT\_NANOAMP FLOAT(126),**

**ACTUAL\_VOLTS FLOAT(126),**

**ORG\_CPCTNC\_PFRD FLOAT(126),**

**TEMP\_DEGC FLOAT(126),**

**HUMIDITY\_PRCNT FLOAT(126),**

**IMP\_OHM FLOAT(126),**

**PHS\_RAD FLOAT(126),**

**TIME\_SECS FLOAT(126),**

**CELL\_NR NUMBER(10)**

**)**

**XML Template for Table: HGC\_CERN\_SENSOR\_CV**

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**<NAME>HGC CERN Sensor CV</NAME>**

**</TYPE>**

**<RUN>**

**<RUN\_NAME>Your Run Name</RUN\_NAME>**

**<!***-- Enter your timestamp -->*

**<RUN\_BEGIN\_TIMESTAMP>2018-05-14 00:00:00</RUN\_BEGIN\_TIMESTAMP>**

**<RUN\_END\_TIMESTAMP>2018-05-14 00:00:00</RUN\_END\_TIMESTAMP>**

**<INITIATED\_BY\_USER>Your Name</INITIATED\_BY\_USER>**

**<LOCATION>CERN</LOCATION>**

**<COMMENT\_DESCRIPTION>Your Comments</COMMENT\_DESCRIPTION>**

**</RUN>**

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**<DATA\_SET>**

**<PART>**

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**<SERIAL\_NUMBER>XXXXXXXXXXXXXXXXXXX</SERIAL\_NUMBER>**

**</PART>**

**<DATA>**

**<VOLTS>-25</VOLTS>**

**<CPCTNCE\_PFRD>-7.609905</CPCTNCE\_PFRD>**

**<ERR\_CPCTNC\_PFRD>0.01653122</ERR\_CURNT\_CPCTNC\_PFRD>**

**<TOT\_CURNT\_NANOAMP>-2000</TOT\_CURNT\_NANOAMP>**

**<ACTUAL\_VOLTS>-25</ACTUAL\_VOLTS>**

**<ORG\_CPCTNCE\_PFRD>-7.609905</ORG\_CPCTNCE\_PFRD>**

**<TEMP\_DEGC>23</TEMP\_DEGC>**

**<IMP\_OHM>7.609905</IMP\_OHM>**

**<PHS\_RAD>7.609905</PHS\_RAD>**

**<TIME\_SECS>7.609905</TIME\_SECS>**

**<CELL\_NR>YYYY</CELL\_NR>**

**</DATA>**

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**/\* . \*/**

**<DATA>**

**<VOLTS>-25</VOLTS>**

**<CPCTNCE\_PFRD>-7.609905</CPCTNCE\_PFRD>**

**<ERR\_CPCTNC\_PFRD>0.01653122</ERR\_CURNT\_CPCTNC\_PFRD>**

**<TOT\_CURNT\_NANOAMP>-2000</TOT\_CURNT\_NANOAMP>**

**<ACTUAL\_VOLTS>-25</ACTUAL\_VOLTS>**

**<ORG\_CPCTNCE\_PFRD>-7.609905</ORG\_CPCTNCE\_PFRD>**

**<TEMP\_DEGC>23</TEMP\_DEGC>**

**<IMP\_OHM>7.609905</IMP\_OHM>**

**<PHS\_RAD>7.609905</PHS\_RAD>**

**<TIME\_SECS>7.609905</TIME\_SECS>**

**<CELL\_NR>YYYY</CELL\_NR>**

**</DATA>**

**</DATA\_SET>**

**</ROOT>**

**Kind of condition: HGC CERN Sensor CV Summary**

**Table: HGC\_CERN\_SENSOR\_CV\_SUMRY**

**TABLE CMS\_HGC\_HGCAL\_COND.HGC\_CERN\_SENSOR\_CV\_SUMRY**

**(**

**RECORD\_ID NUMBER(38) NOT NULL,**

**CONDITION\_DATA\_SET\_ID NUMBER(38) NOT NULL,**

**SNSR\_THCKNESS FLOAT(126),**

**DEPL\_VOLTS FLOAT(126),**

**MAX\_DEPL\_VOLTS FLOAT(126),**

**DEPL\_UNIF\_VOLTS FLOAT(126),**

**SNSR\_THKNES\_UNIF FLOAT(126),**

**PASS CHAR(1 BYTE),**

**GRADE CHAR(10 BYTE)**

**)**

**XML Template**

**<?xml version="1.0" encoding="UTF-8" standalone="yes"?>**

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**<NAME>HGC CERN Sensor CV Summary</NAME>**

**</TYPE>**

**<RUN>**

**<RUN\_NAME>Your Run Name</RUN\_NAME>**

**<!***-- Enter your timestamp -->*

**<RUN\_BEGIN\_TIMESTAMP>2018-05-14 00:00:00</RUN\_BEGIN\_TIMESTAMP>**

**<RUN\_END\_TIMESTAMP>2018-05-14 00:00:00</RUN\_END\_TIMESTAMP>**

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**</RUN>**

**</HEADER>**

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**<PART>**

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**<SERIAL\_NUMBER>XXXXXXXXXXXXXXXXXXX</SERIAL\_NUMBER>**

**</PART>**

**<DATA>**

**<SNSR\_THCKNESS>120</SNSR\_THCKNESS>**

**<DEPL\_VOLTS>200</DEPL\_VOLTS>**

**<MAX\_DEPL\_VOLTS>250</MAX\_DEPL\_VOLTS>**

**<DEPL\_UNIF\_VOLTS>200</DEPL\_UNIF\_VOLTS>**

**<SNSR\_THKNES\_UNIF>120</SNSR\_THKNES\_UNIF>**

**<PASS>Y</PASS>**

**<GRADE>23</GRADE>**

**</DATA>**

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**<DEPL\_UNIF\_VOLTS>200</DEPL\_UNIF\_VOLTS>**

**<SNSR\_THKNES\_UNIF>120</SNSR\_THKNES\_UNIF>**

**<PASS>Y</PASS>**

**<GRADE>23</GRADE>**

**</DATA>**

**</DATA\_SET>**

**</ROOT>**

**Kind of condition: HGC CERN Sensor IV Test**

**Table: HGC\_CERN\_SENSOR\_IV**

**TABLE CMS\_HGC\_HGCAL\_COND.HGC\_CERN\_SENSOR\_IV**

**(**

**RECORD\_ID NUMBER(38) NOT NULL,**

**CONDITION\_DATA\_SET\_ID NUMBER(38) NOT NULL,**

**VOLTS FLOAT(126) NOT NULL,**

**CURNT\_NANOAMP FLOAT(126) NOT NULL,**

**ERR\_CURNT\_NANOAMP FLOAT(126),**

**TOT\_CURNT\_NANOAMP FLOAT(126),**

**ACTUAL\_VOLTS FLOAT(126),**

**TIME\_SECS FLOAT(126),**

**TEMP\_DEGC FLOAT(126),**

**HUMIDITY\_PRCNT FLOAT(126),**

**CELL\_NR NUMBER(10)**

**)**

**XML Template for Table: HGC\_CERN\_SENSOR\_IV**

**Kind of condition: HGC CERN Sensor IV Test**

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**<NAME>HGC CERN Sensor IV</NAME>**

**</TYPE>**

**<RUN>**

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**<RUN\_END\_TIMESTAMP>2018-05-14 00:00:00</RUN\_END\_TIMESTAMP>**

**<INITIATED\_BY\_USER>Your Name</INITIATED\_BY\_USER>**

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**<PART>**

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**<SERIAL\_NUMBER>XXXXXXXXXXXXXXXXXXX</SERIAL\_NUMBER>**

**</PART>**

**<DATA>**

**<VOLTS>-25</VOLTS>**

**<CURNT\_NANOAMP>7.609905</CURNT\_NANOAMP>**

**<ERR\_CURNT\_NANOAMP>0.01653122</ERR\_CURNT\_NANOAMP>**

**<TOT\_CURNT\_NANOAMP>-2000</TOT\_CURNT\_NANOAMP>**

**<ACTUAL\_VOLTS>-25</ACTUAL\_VOLTS>**

**<TIME\_SECS>7.609905</TIME\_SECS>**

**<TEMP\_DEGC>23</TEMP\_DEGC>**

**<HUMIDITY\_PRCNT>7.609905</HUMIDITY\_PRCNT>**

**<CELL\_NR>YYYY</CELL\_NR>**

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**<DATA>**

**<VOLTS>-225</VOLTS>**

**<CURNT\_NANOAMP>7.609905</CURNT\_NANOAMP>**

**<ERR\_CURNT\_NANOAMP>0.01653122</ERR\_CURNT\_NANOAMP>**

**<TOT\_CURNT\_NANOAMP>-2000</TOT\_CURNT\_NANOAMP>**

**<ACTUAL\_VOLTS>-25</ACTUAL\_VOLTS>**

**<TIME\_SECS>7.609905</TIME\_SECS>**

**<TEMP\_DEGC>23</TEMP\_DEGC>**

**<HUMIDITY\_PRCNT>7.609905</HUMIDITY\_PRCNT>**

**<CELL\_NR>YYYY</CELL\_NR>**

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**</ROOT>**

**Kind of condition: HGC CERN Sensor IV Summary**

**Table: HGC\_CERN\_SENSOR\_IV\_SUMRY**

**TABLE CMS\_HGC\_HGCAL\_COND.HGC\_CERN\_SENSOR\_IV\_SUMRY**

**(**

**RECORD\_ID NUMBER(38) NOT NULL,**

**CONDITION\_DATA\_SET\_ID NUMBER(38) NOT NULL,**

**TOT\_CURNT\_NANOAMP\_600V FLOAT(126),**

**TOT\_CURNT\_NANOAMP\_800V FLOAT(126),**

**NUM\_BAD\_CELLS NUMBER(10),**

**PASS CHAR(1 BYTE),**

**GRADE CHAR(10 BYTE),**

**NUM\_BAD\_ADJ\_CELLS NUMBER(10)**

**)**

**<?xml version="1.0" encoding="UTF-8" standalone="yes"?>**

**<ROOT xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">**

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**<NAME>HGC CERN Sensor IV</NAME>**

**</TYPE>**

**<RUN>**

**<RUN\_NAME>Your Run Name</RUN\_NAME>**

**<!***-- Enter your timestamp -->*

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**<RUN\_END\_TIMESTAMP>2018-05-14 00:00:00</RUN\_END\_TIMESTAMP>**

**<INITIATED\_BY\_USER>Your Name</INITIATED\_BY\_USER>**

**<LOCATION>CERN</LOCATION>**

**<COMMENT\_DESCRIPTION>Your Comments</COMMENT\_DESCRIPTION>**

**</RUN>**

**</HEADER>**

**<DATA\_SET>**

**<PART>**

**<KIND\_OF\_PART>120um Si Sensor HD Full</KIND\_OF\_PART>**

**<SERIAL\_NUMBER>XXXXXXXXXXXXXXXXXXX</SERIAL\_NUMBER>**

**</PART>**

**<DATA>**

**<TOT\_CURNT\_NANOAMP\_600V>7.609905</TOT\_CURNT\_NANOAMP\_600V>**

**<TOT\_CURNT\_NANOAMP\_800V>0.01653122</TOT\_CURNT\_NANOAMP\_800V>**

**<NUM\_BAD\_CELLS>25</NUM\_BAD\_CELLS>**

**<PASS>N</PASS>**

**<GRADE>FAIL</GRADE>**

**<NUM\_BAD\_ADJ\_CELLS>5</NUM\_BAD\_ADJ\_CELLS>**

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**<DATA>**

**<TOT\_CURNT\_NANOAMP\_600V>7.609905</TOT\_CURNT\_NANOAMP\_600V>**

**<TOT\_CURNT\_NANOAMP\_800V>0.01653122</TOT\_CURNT\_NANOAMP\_800V>**

**<NUM\_BAD\_CELLS>25</NUM\_BAD\_CELLS>**

**<PASS>N</PASS>**

**<GRADE>FAIL</GRADE>**

**<NUM\_BAD\_ADJ\_CELLS>5</NUM\_BAD\_ADJ\_CELLS>**

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**</DATA\_SET>**

**</ROOT>**

**Kind of Condition Name: HGC Sensor Manufacturer CV Test**

**Table: HGC\_ SENSOR\_CV**

**TABLE CMS\_HGC\_HGCAL\_COND.HGC\_SENSOR\_CV**

**(**

**RECORD\_ID NUMBER(38) NOT NULL,**

**CONDITION\_DATA\_SET\_ID NUMBER(38) NOT NULL,**

**VOLTS FLOAT(126) NOT NULL,**

**CAPACITANCE\_PFRD FLOAT(126) NOT NULL**

**)**

**XML Template**

**<?xml version="1.0" encoding="UTF-8" standalone="yes"?>**

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**<NAME> HGC Sensor Manufacturer CV Test</NAME>**

**</TYPE>**

**<RUN>**

**<RUN\_NAME>Your Run Name</RUN\_NAME>**

**<!***-- Enter your timestamp -->*

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**<RUN\_END\_TIMESTAMP>2018-05-14 00:00:00</RUN\_END\_TIMESTAMP>**

**<INITIATED\_BY\_USER>Your Name</INITIATED\_BY\_USER>**

**<LOCATION>CERN</LOCATION>**

**<COMMENT\_DESCRIPTION>Your Comments</COMMENT\_DESCRIPTION>**

**</RUN>**

**</HEADER>**

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**<PART>**

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**<SERIAL\_NUMBER>XXXXXXXXXXXXXXXXXXX</SERIAL\_NUMBER>**

**</PART>**

**<DATA>**

**<VOLTS>-25</VOLTS>**

**<CAPACITANCE\_PFRD>5.2</CAPACITANCE\_PFRD>**

**</DATA>**

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**<DATA>**

**<VOLTS>-50</VOLTS>**

**<CAPACITANCE\_PFRD>5.2</CAPACITANCE\_PFRD>**

**</DATA>**

**</DATA\_SET>**

**</ROOT>**

**Kind of Condition Name: HGC Sensor Manufacturer IV Test**

**Table: HGC\_ SENSOR\_IV**

**TABLE CMS\_HGC\_HGCAL\_COND.HGC\_SENSOR\_IV**

**(**

**RECORD\_ID NUMBER(38) NOT NULL,**

**CONDITION\_DATA\_SET\_ID NUMBER(38) NOT NULL,**

**VOLTS FLOAT(126) NOT NULL,**

**CURRNT\_AMP FLOAT(126) NOT NULL**

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**<?xml version="1.0" encoding="UTF-8" standalone="yes"?>**

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**<NAME> HGC Sensor Manufacturer IV Test</NAME>**

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**<RUN>**

**<RUN\_NAME>Your Run Name</RUN\_NAME>**

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**<RUN\_END\_TIMESTAMP>2018-05-14 00:00:00</RUN\_END\_TIMESTAMP>**

**<INITIATED\_BY\_USER>Your Name</INITIATED\_BY\_USER>**

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**</RUN>**

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**<PART>**

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**<SERIAL\_NUMBER>XXXXXXXXXXXXXXXXXXX</SERIAL\_NUMBER>**

**</PART>**

**<DATA>**

**<VOLTS>-25</VOLTS>**

**<CURRNT\_AMP>5.2</CURRNT\_AMP >**

**</DATA>**

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**<DATA>**

**<VOLTS>-50</VOLTS>**

**<CURRNT\_AMP>5.2</CURRNT\_AMP>**

**</DATA>**

**</DATA\_SET>**

**</ROOT>**

**Kind of Condition Name: HGC PQC Diode CV**

**Table: HGC\_PQC\_DIODE\_CV**

**TABLE CMS\_HGC\_HGCAL\_COND.HGC\_PQC\_DIODE\_CV**

**(**

**RECORD\_ID NUMBER(38) NOT NULL,**

**CONDITION\_DATA\_SET\_ID NUMBER(38) NOT NULL,**

**VOLTS FLOAT(126) NOT NULL,**

**CPCTNCE\_FRD FLOAT(126) NOT NULL,**

**RESISTANCE\_OHM FLOAT(126),**

**TEMP\_DEGC FLOAT(126),**

**HUMIDITY\_PRCNT FLOAT(126),**

**TIME\_SECS FLOAT(126)**

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**<?xml version="1.0" encoding="UTF-8" standalone="yes"?>**

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**<TYPE>**

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**<NAME>HGC PQC Diode CV</NAME>**

**</TYPE>**

**<RUN>**

**<RUN\_NAME>Your Run Name</RUN\_NAME>**

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**<RUN\_END\_TIMESTAMP>2018-05-14 00:00:00</RUN\_END\_TIMESTAMP>**

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**<LOCATION>CERN</LOCATION>**

**<COMMENT\_DESCRIPTION>Your Comments</COMMENT\_DESCRIPTION>**

**</RUN>**

**</HEADER>**

**<DATA\_SET>**

**<PART>**

**<KIND\_OF\_PART>120um Si Sensor HD Full</KIND\_OF\_PART>**

**<SERIAL\_NUMBER>XXXXXXXXXXXXXXXXXXX</SERIAL\_NUMBER>**

**</PART>**

**<DATA>**

**<VOLTS>-25</VOLTS>**

**<CPCTNCE\_FRD>5.2</CPCTNCE\_FRD>**

**<RESISTANCE\_OHM>0.05</RESISTANCE\_OHM>**

**<TEMP\_DEGC>2.5</TEMP\_DEGC>**

**<HUMIDITY\_PRCNT>15</HUMIDITY\_PRCNT>**

**<TIME\_SECS>20.5</TIME\_SECS>**

**</DATA>**

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**<DATA>**

**<VOLTS>-25</VOLTS>**

**<CPCTNCE\_FRD>5.2</CPCTNCE\_FRD>**

**<RESISTANCE\_OHM>0.05</RESISTANCE\_OHM>**

**<TEMP\_DEGC>2.5</TEMP\_DEGC>**

**<HUMIDITY\_PRCNT>15</HUMIDITY\_PRCNT>**

**<TIME\_SECS>20.5</TIME\_SECS>**

**</DATA>**

**</DATA\_SET>**

**</ROOT>**

**Kind of Condition Name: HGC PQC Diode IV**

**Table: HGC\_PQC\_DIODE\_IV**

**TABLE CMS\_HGC\_HGCAL\_COND.HGC\_PQC\_DIODE\_IV**

**(**

**RECORD\_ID NUMBER(38) NOT NULL,**

**CONDITION\_DATA\_SET\_ID NUMBER(38) NOT NULL,**

**VOLTS FLOAT(126) NOT NULL,**

**CURNT\_NANOAMP FLOAT(126) NOT NULL,**

**TEMP\_DEGC FLOAT(126),**

**HUMIDITY\_PRCNT FLOAT(126),**

**TIME\_SECS FLOAT(126)**

**)**

**<?xml version="1.0" encoding="UTF-8" standalone="yes"?>**

**<ROOT xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">**

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**<TYPE>**

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**<NAME>HGC PQC Diode IV</NAME>**

**</TYPE>**

**<RUN>**

**<RUN\_NAME>Your Run Name</RUN\_NAME>**

**<!***-- Enter your timestamp -->*

**<RUN\_BEGIN\_TIMESTAMP>2018-05-14 00:00:00</RUN\_BEGIN\_TIMESTAMP>**

**<RUN\_END\_TIMESTAMP>2018-05-14 00:00:00</RUN\_END\_TIMESTAMP>**

**<INITIATED\_BY\_USER>Your Name</INITIATED\_BY\_USER>**

**<LOCATION>CERN</LOCATION>**

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**Kind of Condition Name: HGC PQC Field Effect Transistor**

**Table: HGC\_PQC\_FET**

**TABLE CMS\_HGC\_HGCAL\_COND.HGC\_PQC\_FET**

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**CONDITION\_DATA\_SET\_ID NUMBER(38) NOT NULL,**

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**CURNT\_AMP FLOAT(126) NOT NULL,**

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**Kind of Condition Name: HGC PQC Gate Controlled Diode**

**Table: HGC\_PQC\_GCD**

**TABLE CMS\_HGC\_HGCAL\_COND.HGC\_PQC\_GCD**

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**RECORD\_ID NUMBER(38) NOT NULL,**

**CONDITION\_DATA\_SET\_ID NUMBER(38) NOT NULL,**

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**Kind of Condition Name: HGC PQC Linewidth N**

**HGC PQC Linewidth PEdge**

**HGC PQC Linewidth PStop**

**Table: HGC\_PQC\_LINEWIDTH**

**TABLE CMS\_HGC\_HGCAL\_COND.HGC\_PQC\_LINEWIDTH**

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**Kind of Condition Name: HGC PQC Metal Oxide Semiconductor**

**Table: HGC\_PQC\_MOS**

**TABLE CMS\_HGC\_HGCAL\_COND.HGC\_PQC\_MOS**

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**Kind of Condition Name: HGC PQC Oxide Breakdown**

**Table: HGC\_PQC\_OXIDE\_BREAKDOWN**

**TABLE CMS\_HGC\_HGCAL\_COND.HGC\_PQC\_OXIDE\_BREAKDOWN**

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**RECORD\_ID NUMBER(38) NOT NULL,**

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**Kind of Condition Name: HGC PQC Summary**

**Table: HGC\_PQC\_SUMRY**

**TABLE CMS\_HGC\_HGCAL\_COND.HGC\_PQC\_SUMRY**

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**RECORD\_ID NUMBER(38) NOT NULL,**

**CONDITION\_DATA\_SET\_ID NUMBER(38) NOT NULL,**

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**ISURF\_AMP FLOAT(126),**

**RSHEET\_N\_OHMSQ FLOAT(126),**

**RSHEET\_P\_OHMSQ FLOAT(126),**

**RSHEET\_PSTOP\_OHMSQ FLOAT(126),**

**VBD\_DIODE\_VOLT FLOAT(126),**

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**Kind of Condition Name: HGC PQC Van Der Pauw N**

**HGC PQC Van Der Pauw PEdge**

**HGC PQC Van Der Pauw PStop**

**Table: HGC\_PQC\_VAN\_DER\_PAUW**

**TABLE CMS\_HGC\_HGCAL\_COND.HGC\_PQC\_VAN\_DER\_PAUW**

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**RECORD\_ID NUMBER(38) NOT NULL,**

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