RADIATION TEST SUMMARY

PART TYPE : IRFY140

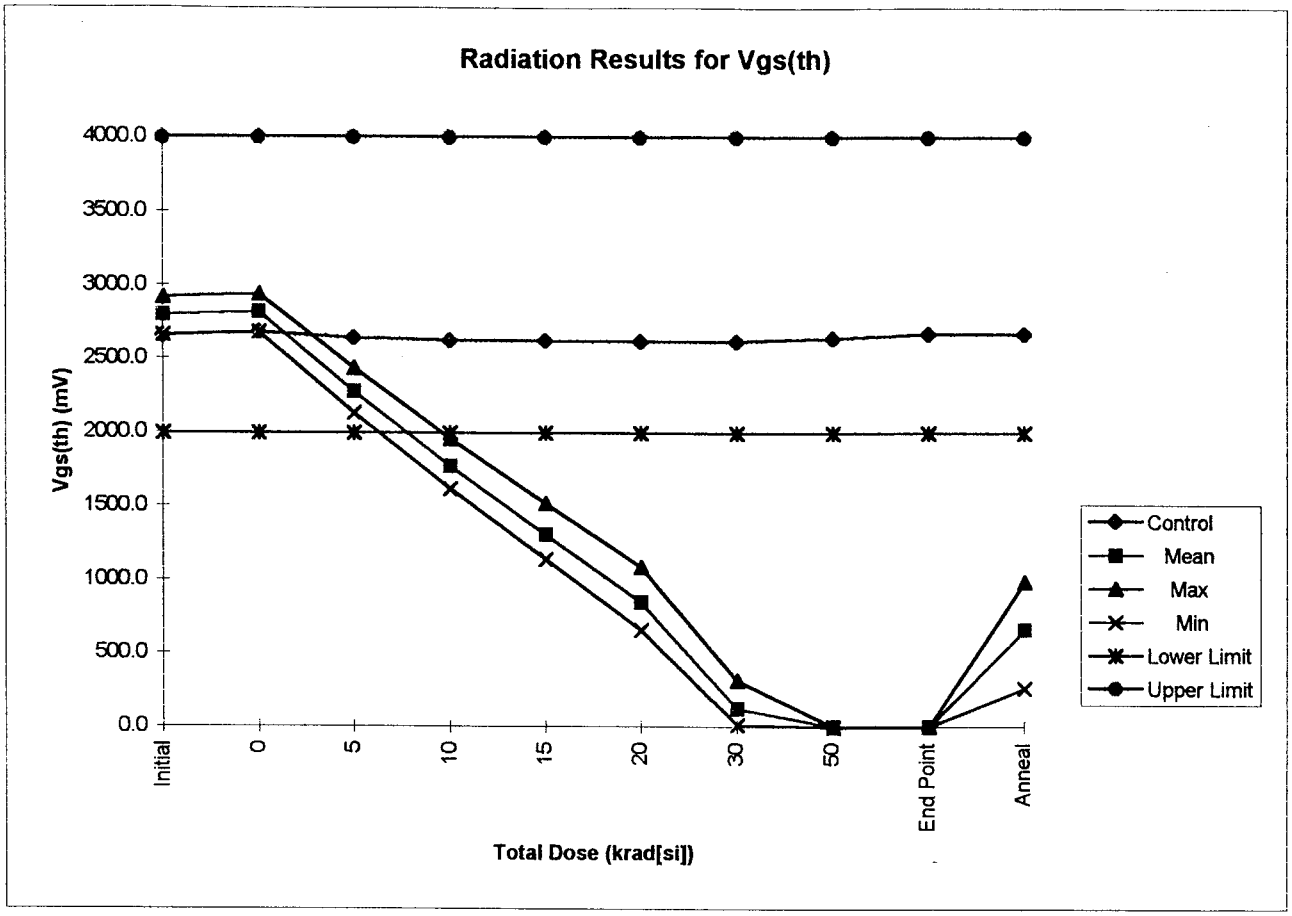
DESCRIPTION : N-CHANNEL POWER MOSFET

REPORT NO. : RD 247

PARAMETERS PLOTTED :

VGS(th)
IDSS
Bvdss

NOTE : The results for the remaining parameters showed no significant change and hence plots were not considered necessary.

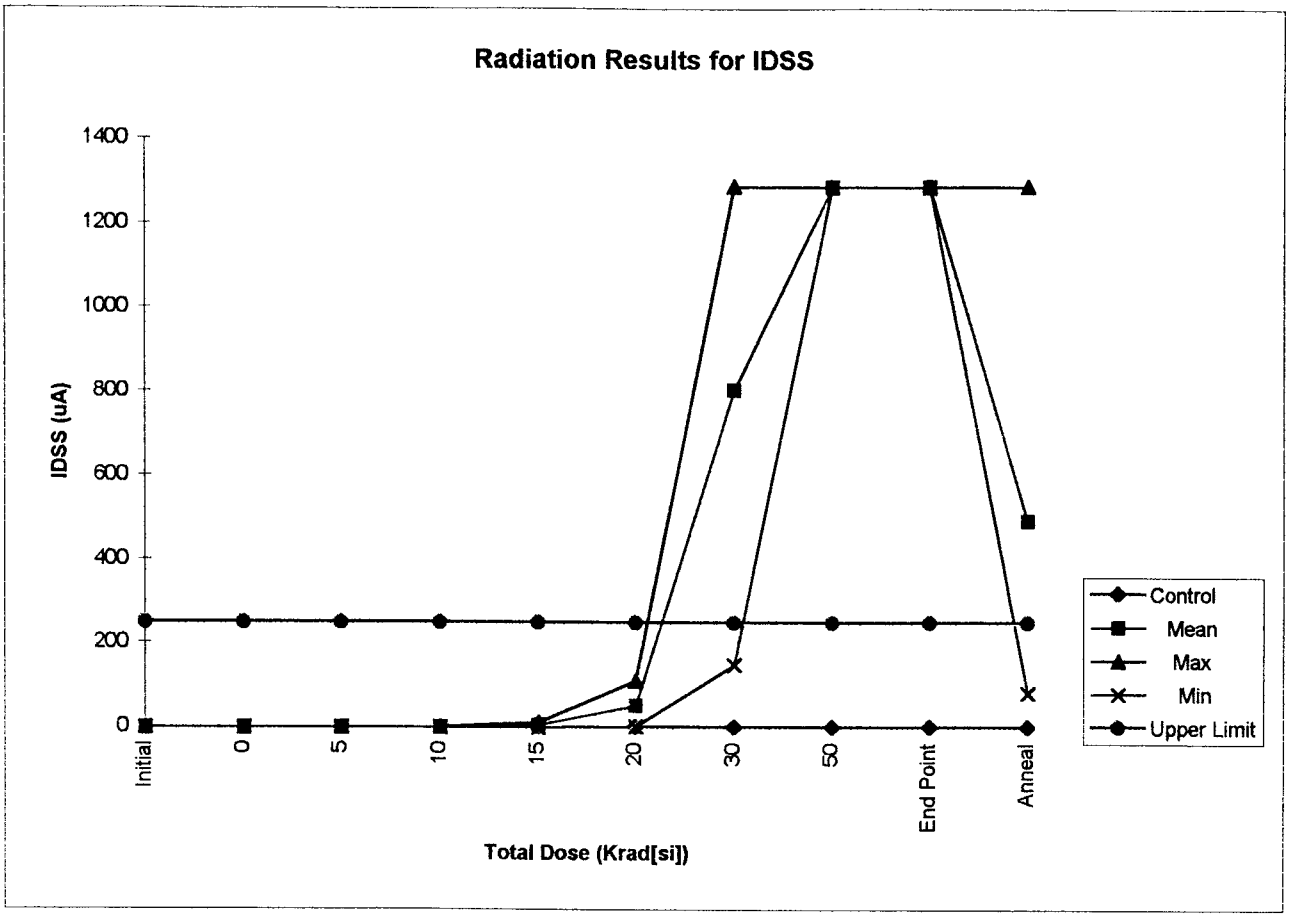


Dose (kRad)	Control	Mean	Max	Min	Lower Limit	Upper Limit	Std.Dev.
	(mV)	(mV)	(mV)	(mV)	(mV)	(mV)	
Initial	2655.6	2803.1	2922.4	2666.4	2000	4000	110.53
0	2674.2	2818.3	2940.5	2684.0	2000	4000	110.91
5	2635.0	2279.1	2438.2	2133.7	2000	4000	139.26
10	2618.6	1774.8	1961.5	1621.3	2000	4000	161.21
15	2618.1	1305.3	1521.8	1141.1	2000	4000	192.31
20	2615.5	847.9	1090.1	663.8	2000	4000	213.35
30	2615.8	128.4	316.6	16.9	2000	4000	142.67
50	2638.3	3.6	4.6	2.1	2000	4000	1.12
End Point	2666.2	4.5	5.6	3.4	2000	4000	1.02
Anneal	2667.5	660.6	987.9	265.8	2000	4000	309.61

Note : Results for both control samples (biased and unbiased) similar therefore average plotted.

Lot size for statistics : 4 devices

RD 247 Date code 9730

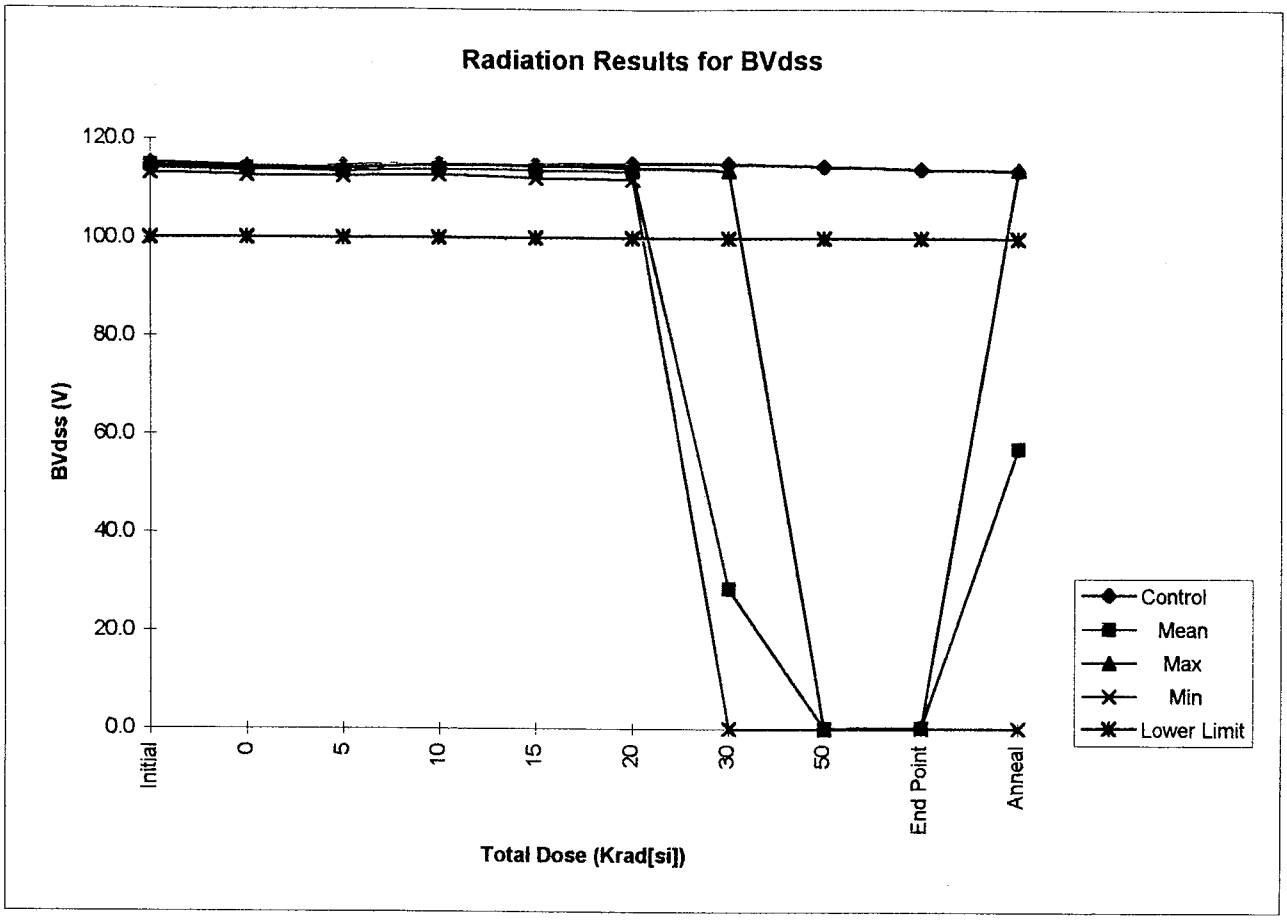


Dose (kRad)	Control	Mean	Max	Min	Upper Limit	Lower Limit	Std.Dev.
	(uA)	(uA)	(uA)	(uA)	(uA)	(uA)	
Initial	0	0	0	0	250	-	0.00
0	0	0	0	0	250	-	0.00
5	0	0	0	0	250	-	0.00
10	0	0	1	0	250	-	0.50
15	0	7	12	0	250	-	6.40
20	0	52	112	3	250	-	51.79
30	0	805	1290	150	250	-	577.16
50	0	1288	1288	1288	250	-	0.00
End Point	0	1290	1290	1289	250	-	0.58
Anneal	0	493	1292	82	250	-	566.45

Note : Results for both control samples (biased and unbiased) similar therefore average plotted.

Lot size for statistics : 4 devices

RD 247 Date code 9730



Dose (kRad)	Control	Mean	Max	Min	Lower Limit	Upper Limit	Std.Dev.
	(V)	(V)	(V)	(V)	(V)	(V)	
Initial	114.3	114.9	115.5	113.4	100	-	1.02
0	113.7	114.2	114.8	113.0	100	-	0.83
5	114.7	113.7	114.4	112.8	100	-	0.67
10	115.0	114.3	115.2	113.1	100	-	0.95
15	114.9	114.0	114.9	112.4	100	-	1.16
20	115.2	113.8	114.5	112.2	100	-	1.05
30	115.2	28.7	114.0	0.2	100	-	56.85
50	114.7	0.2	0.3	0.1	100	-	0.10
End Point	114.1	0.4	0.5	0.3	100	-	0.10
Anneal	113.9	57.3	114.3	0.3	100	-	65.73

Note : Results for both control samples (biased and unbiased) similar therefore average plotted.

Lot size for statistics : 4 devices

RD 247 Date code 9730

ENVISAT-1 RIR 79603 RD247	IRRADIATION TEST PLAN NO. PO-PL-IGG-PL-0016 1	Issue No. 2 Date: OCTOBER 1995 Page: 1/4 2	Rev. NA Date: NA

Component No. POIG003104B 3	Component Designation:TRANSISTOR, MOSFET, N-CHANNEL, POWER TYPE IRFY140 4	Irradiation Spec No. NA Iss. Rev. 5

Specifications Generic ESA/SCC 5000 Iss. 7 Rev. B Detail PO-PS-IGG-PL-0031 Iss. 3 6	Acceptance Evaluation ___ Element Diffusion ___ Lot X 7	Electrical Measurements In-situ ___ Remote X 8	Project/Programme ENVISAT-1 9

Manufacturer: Name: Int. Rectifier Address: Hurst Green, Oxted Surrey, England 10	Test Facility: Name: ERA Address: LEATHERHEAD, SURREY ENGLAND 11	Originator: IGG CT Name: S THACKER 12

Radiation Source COBALT 60 13	Sample Size: 4 Control Device: 1 (Each Test) 14	Exposure Single ___ Multiple X 15	Annealing Test YES X NO ___ 16	Radiation Level: See Below 17

Single Exposure
Dose [Krad(Si)]
Dose Rate [rad(Si)/s]
Exposure Time

Not applicable 18

Multiple Exposure:

Irradiation Steps	In accordance with the applicable Appendix to this Plan for each test.
Dose [Krad(Si)]	
Dose Rate [rad(Si)/s]	
Exposure Time(s)	

19

Bias Requirements: During and after Exposure (for remote Electrical Measurements): YES

Bias Conditions:
Test Circuits: The Electrical Bias circuit is given in Figure 1 in the applicable Appendix to this Plan.

Shielding: Shielding is required to minimize dose enhancement effects caused by low energy, scattered radiation. The test units shall be enclosed in a Pb/Al container of Pb 1.5mm minimum, surrounding on inner shield of 0.7 to 1.0mm Al. 20

Irradiation Test Sequence(applied for each radiation test per the applicable Appendix to this plan). 21

Test Step	Description	Requirements
1	Irradiation Test Samples Selection	Quantity 5 devices shall be selected from the lot delivered to IGG.
2	Serialisation	Serialisation - (if the devices are not already serialised) Test units shall be serialised 1 to 4 and the control unit shall be 5.
3	Initial Electrical Measurements (at IGG)	Per Table A herein - (Read-and-Record) - on all 5 parts at IGG. (See Remarks 1 and 2).
4	Initial Electrical Measurements (at ERA)	Per Table A herein - (Read-and-Record) - on all 5 parts at ERA. (See Remarks 1 and 2).
5	Set-up of Test	Verify Bias Circuit and Voltages (In-situ) for 4 test units.

Irradiation Test Sequence (Cont.) 21

Test Step	Description	Requirements
6	Irradiation Exposure	Verify radiation dose rate and position in the chamber to achieve required dose. Verify and witness duration of exposure to achieve required dose.
7	Intermediate Electrical Measurement (at ERA)	Bias to be maintained until test is performed. Test per Table A herein - (Read-and-Record) - on all 5 parts. Test to be performed immediately upon removal from chamber (less than 10 mins interval). Upon completion of test 4 test units shall be replaced in bias circuit and returned to chamber. Maximum interval between two consecutive exposures to be 30 mins. (See Remark 2).
8 to 7 + 3n	Repeat Set-up/Exposure/Test sequence upto a Final Total Dose as per the applicable Appendix	Repeat Steps 5, 6, 7 for a total of n cycles (see applicable Appendix). (See Remark 3)
8 + 3n	End Point Electrical Measurements (at IGG)	Per Table A herein - (Read-and-Record) - on all 5 parts at IGG. (See Remarks 2 and 4).
9 + 3n	Annealing	Bias shall be maintained during Annealing for 4 test units. Annealing shall be at room temperature for 168 hours.
10 + 3n	Final Electrical Measurements (at IGG)	Per Table A herein - (Read-and-Record) - on all 5 parts at IGG (See Remark 2).
11 + 3n	Total Dose Irradiation Test Report	ESA/SCC No. 22900

Remarks 22

1. The initial electrical measurements performed at IGG (Test Step 3) shall be performed within 24 hours of the initial electrical measurements at ERA (Test Step 4).
2. All electrical testing shall be performed on the same set of equipment in order to achieve correlation of results both at IGG and ERA. All results plus details of any failures shall be advised to Project.
3. The set-up/exposure/test sequence shall be stopped for any device that exhibits repeated functional failure.
4. The End Point electrical measurements (Test Step 8 + 3n) performed at IGG shall be performed within 24 hours of the last electrical measurement at ERA (Test Step 7 + 3n).

TABLE A - ELECTRICAL MEASUREMENTS AT ROOM TEMPERATURE - T_{amb} = +25 ±5°C BEFORE, AT INTERMEDIATE POINTS, AND ON COMPLETION OF IRRADIATION.

NO.	CHARACTERISTICS	SYMBOL	MIL-STD-750 TEST METHOD	TEST CONDITIONS	LIMITS		UNIT
					MIN.	MAX.	
1	Breakdown Voltage Drain to Source	BV_{DSS}	3407 Bias Cond. C	I_D = 0.25mAdc V_{GS} = 0	100	-	Vdc
2	Gate Threshold Voltage	$V_{GS(th)}$	3403	V_{DS} = V_{GS} I_D = 1.0mAdc	2.0	4.0	Vdc
3	Gate Current	I_{GSS}	3411 Bias Cond. C	V_{GS} = 20Vdc V_{DS} = 0	-	100	nAdc
4	Drain Current	I_{DSS}	3413 Bias Cond C	V_{DS} = 20Vdc V_{GS} = 0	-	0.25	mAdc
5	Drain Source ON Resistance	$r_{DS(ON)}$	3421	V_{GS} = 10Vdc I_D = 12Adc (Notes 2 and 3)	-	0.092	Ω

NOTES

1. The limits specified in this Table only apply to the first intermediate electrical measurements at dose 5Krad(Si). For all other intermediate, end point and final electrical measurements, these limits shall not apply but the tests shall be performed and the result recorded for information and characterisation purposes.

   Parametric failures to the limits given in this Table could possibly occur at any irradiation level greater than 5Krad(Si).

2. Pulsed: Pulse Width ≤ 300uS, Duty Cycle ≤2%.

3. Measured within 2mm of case.

This appendix defines the specific radiation test requirements applicable to the following ENVISAT-1 user(s):-

USER CODE	USER COMMENT
MEICSA, SRDSSA, MPIDGA	Ref. PO-DAS-1365/95

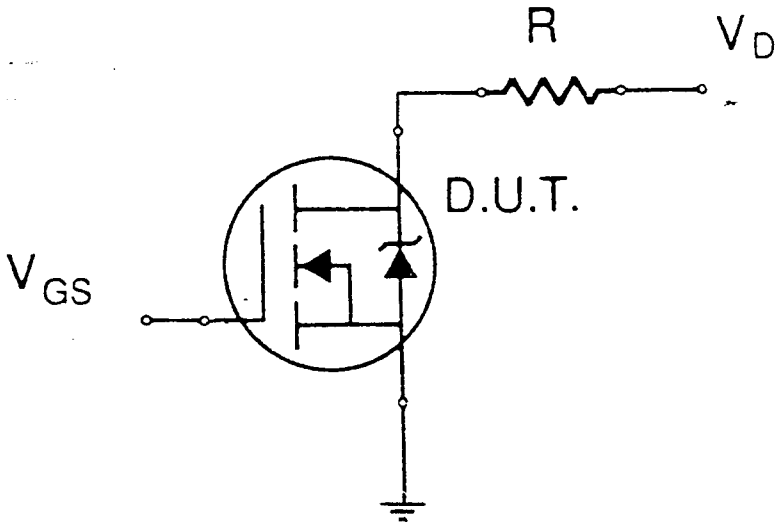
The following specific requirements shall apply:-

a) MULTIPLE EXPOSURE/IRRADIATION STEPS:

Irradiation Steps (n)	1	2	3	4	5	6
Dose [Krad(Si)]	5	5	5	5	10	20
Accumulated Dose[Krad(Si)]	5	10	15	20	30	50
Dose Rate [rad(Si)/s] (See note)	3	3	3	3	3	3
Exposure Time(s) (See note)	1667	1667	1667	1667	3333	6667

Note: The dose rates and exposure times given are nominal conditions and may be adjusted during irradiation testing to achieve convenient test points. The actual dose rate shall not exceed 3rad(Si)/s. The dose rates and exposure times used during the testing shall be recorded for each test step.

b) ELECTRICAL BIAS CIRCUIT FOR IRRADIATION TESTING:-



NOTES: i) Bias conditions V_{GS} = 10Vdc, V_D = 30Vdc

ii) R = 300Ω ± 1% to give I_D = 100mAdc

SZ-TESTSYSTEME Statistics 03 Vers. 2.15 for TA07F
RD247_IRFY140_INIT_EMS_@_IGS / V1.0 16/5/95 PAR

Results file : RD247_IRFY140_INIT_EMS_@_IGS from: 14.10.97 / 15:25:33
Operator : PAUL RUSSELL
Part number : IRFY140
Lot number : RD247
Order number : D/C 9730
Vendor : IR
: CONTROL 353 (BIASED), 354 (UNBIASED) ; RAD 355,356,358,360
: INITIAL EMS @ IGS
: IRFY140 PO-PL-IGS-PL-0015 ISS.2 / V1.0 16/5/95 PAR

Test steps

1.	-VGS		2000.0	4000.0	mV
2.	-IGSS (FWD)	(	0.0)	100.0	nA
3.	-IGSS (REV)	(	0.0)	100.0	nA
4.	-IDSS	(	0)	250	uA
5.	RDS on	(	0.000)	0.092	Ohm
6.	-V(BR)DSS		100.0	700.0	V

	353	354	355	356	358	360
1.1 [mV]	2716.2	2594.9	2922.4	2854.1	2666.4	2759.5
2.1 [nA]	1.9	2.0	2.0	1.9	1.9	2.0
3.1 [nA]	2.1	2.2	2.2	2.1	2.1	2.2
4.1 [uA]	0	0	0	0	0	0
5.1 [Ohm]	0.059	0.057	0.059	0.059	0.059	0.059
6.1 [V]	115.2	113.4	115.3	115.5	113.4	115.5

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SZ-TESTSYSTEME  Statistics 03   Vers. 2.15  for TA07F
RD247_IRFY140_INIT_EMS_@_ERA      / V1.0 16/5/96 PAR
================================================================================
Results file    : RD247_IRFY140_INIT_EMS_@_ERA   from: 15.10.97 / 12:12:48
Operator        : PAUL RUSSELL
Part number     : IRFY140
Lot number      : RD247
Order number    : D/C 9730
Vendor          : IR
                : CONTROL 353 (BIASED), 354 (UNBIASED) ; RAD 355,356,358,360
                : INITIAL EMS @ ERA
                : IRFY140 PO-PL-IGG-PL-0016 ISS.2 / V1.0 16/5/96 PAR
--------------------------------------------------------------------------------
Test steps

  1. -VGS                              2000.0    ...     4000.0     mV
  2. -IGSS (FWD)                  (      0.0    )...      100.0     nA
  3. -IGSS (REV)                  (      0.0    )...      100.0     nA
  4. -IDSS                        (      0      )...      250       uA
  5.  RDS on                      (      0.000  )...        0.092   Ohm
  6. -V(BR)DSS                         100.0     ...      700.0      V
--------------------------------------------------------------------------------
```

	353	354	355	356	358	360
1.1 [mV]	2736.1	2812.2	2940.5	2868.3	2684.0	2780.4
2.1 [nA]	2.1	2.4	2.4	2.4	2.4	2.4
3.1 [nA]	2.4	2.6	2.7	2.6	2.7	2.7
4.1 [uA]	0	0	0	0	0	0
5.1 [Ohm]	0.057	0.055	0.057	0.057	0.057	0.056
6.1 [V]	114.6	112.8	114.5	114.8	113.0	114.6

SZ-TESTSYSTEME Statistics 03 Vers. 2.15 for TA07F
RD247_IRFY140_EMS_@_5_KRAD / V1.0 16/5/96 PAR

Results file : RD247_IRFY140_EMS_@_5_KRAD from: 15.10.97 / 13:11:43
Operator : PAUL RUSSELL
Part number : IRFY140
Lot number : RD247
Order number : D/C 9730
Vendor : IR
: CONTROL 353 (BIASED), 354 (UNBIASED) ; RAD 355,356,358,360
: EMS @ 5 KRAD
: IRFY140 PO-PL-IGG-PL-0016 ISS.2 / V1.0 16/5/96 PAR

Test steps

1.	-VGS		2000.0	...	4000.0	mV
2.	-IGSS (FWD)	(	0.0	)...	100.0	nA
3.	-IGSS (REV)	(	0.0	)...	100.0	nA
4.	-IDSS	(	0	)...	250	uA
5.	RDS on	(	0.000	)...	0.092	Ohm
6.	-V(BR)DSS		100.0	...	700.0	V

	353	354	355	356	359	360
1.1 [mV]	2645.1	2624.9	2438.2	2348.4	2133.7	2195.8
2.1 [nA]	2.0	2.0	2.0	2.0	1.9	1.9
3.1 [nA]	2.2	2.2	2.2	2.2	2.2	2.2
4.1 [uA]	0	0	0	0	0	0
5.1 [Ohm]	0.062	0.056	0.055	0.056	0.062	0.055
6.1 [V]	116.8	112.5	113.9	114.4	112.8	113.8

SZ-TESTSYSTEME Statistics 03 Vers. 2.15 for TA07F
RD247_IRFY140_EMS_@_10_KRAD / V1.0 16/5/96 PAR

Results file : RD247_IRFY140_EMS_@_10_KRAD from: 16.10.97 / 10:16:47
Operator : PAUL RUSSELL
Part number : IRFY140
Lot number : RD247
Order number : D/C 9730
Vendor : IR
: CONTROL 353 (BIASED), 354 (UNBIASED) ; RAD 355,356,358,360
: EMS @ 10 KRAD
: IRFY140 PO-PL-IGG-PL-0016 ISS.2 / V1.0 16/5/96 PAR

Test steps

1.	-VGS		2000.0	...	4000.0	mV
2.	-IGSS (FWD)	(	0.0	)...	100.0	nA
3.	-IGSS (REV)	(	0.0	)...	100.0	nA
4.	-IDSS	(	0	)...	250	uA
5.	RDS on	(	0.000	)...	0.092	Ohm
6.	-V(BR)DSS		100.0	...	700.0	V

	353	354	355	356	359	360
1.1 [mV]	2623.9	2613.3	1961.5 F	1855.6 F	1621.3 F	1660.7 F
2.1 [nA]	2.1	2.1	2.0	2.0	2.0	2.0
3.1 [nA]	2.4	2.3	2.3	2.3	2.3	2.3
4.1 [uA]	0	0	0	0	0	1
5.1 [Ohm]	0.064	0.056	0.056	0.058	0.069	0.056
6.1 [V]	117.0	113.0	114.0	114.9	113.1	115.2

SZ-TESTSYSTEME Statistics 03 Vers. 2.15 for TA07F
RD247_IRFY140_EMS_@_15_KRAD / V1.0 16/5/96 PAR

Results file : RD247_IRFY140_EMS_@_15_KRAD from: 16.10.97 / 10:47:34
Operator : PAUL RUSSELL
Part number : IRFY140
Lot number : RD247
Order number : D/C 9730
Vendor : IR
: CONTROL 353 (BIASED), 354 (UNBIASED) ; RAD 355,356,358,360
: EMS @ 15 KRAD
: IRFY140 PO-PL-IGG-PL-0016 ISS.2 / V1.0 16/5/96 PAR

Test steps

1.	-VGS	2000.0	...	4000.0	mV
2.	-IGSS (FWD)	(0.0) ...		100.0	nA
3.	-IGSS (REV)	(0.0) ...		100.0	nA
4.	-IDSS	(0) ...		250	uA
5.	RDS on	(0.000) ...		0.092	Ohm
6.	-V(BR)DSS	100.0	...	700.0	V

	353	354	355	356	358	360
1.1 [mV]	2624.0	2612.2	1521.8 F	1412.9 F	1145.5 F	1141.1 F
2.1 [nA]	2.2	2.1	2.1	2.1	2.1	2.1
3.1 [nA]	2.5	2.4	2.3	2.4	2.4	2.3
4.1 [uA]	0	0	0	2	12	12
5.1 [Ohm]	0.064	0.056	0.055	0.056	0.056	0.056
6.1 [V]	116.8	113.0	114.0	114.8	112.4	114.9

SI-TESTSYSTEME Statistics 03 Vers. 2.15 for TA07F
RD247_IRFY140_EMS_@_20_KRAD / V1.0 16/5/96 PAR

Results file : RD247_IRFY140_EMS_@_20_KRAD from: 18.10.97 / 11:17:55
Operator : PAUL RUSSELL
Part number : IRFY140
Lot number : RD247
Order number : D/C 9730
Vendor : IR
: CONTROL 353 (BIASED), 354 (UNBIASED) ; RAD 355,356,358,360
: EMS @ 20 KRAD
: IRFY140 PO-PL-IGG-PL-0016 ISS.2 / V1.0 16/5/96 PAR

Test steps

1. -VGS		2000.0	...	4000.0	mV
2. -IGSS (FWD)	(	0.0	)...	100.0	nA
3. -IGSS (REV)	(	0.0	)...	100.0	nA
4. -IDSS	(	0	)...	250	uA
5. RDS on	(	0.000	)...	0.092	Ohm
6. -V(BR)DSS		100.0	...	700.0	V

	353	354	355	356	358	360
1.1 [mV]	2622.7	2608.2	1090.1 F!	964.3 F!	663.8 F!	673.4 F!
2.1 [nA]	2.2	2.2	2.2	2.1	2.1	2.1
3.1 [nA]	2.4	2.4	2.5	2.4	2.4	2.4
4.1 [uA]	0	0	3	15	112	78
5.1 [Ohm]	0.063	0.056	0.054	0.056	0.056	0.056
6.1 [V]	117.3	113.1	114.0	114.5	112.2	114.3

```
SZ-TESTSYSTEME  Statistics 03    Vers. 2.15  for TA07F
RD247_IRFY140_EMS_@_30_KRAD       / V1.0 16/5/96 PAR
```

Results file : RD247_IRFY140_EMS_@_30_KRAD from: 16.10.97 / 12:01:30
Operator : PAUL RUSSELL
Part number : IRFY140
Lot number : RD247
Order number : D/C 9730
Vendor : IR
: CONTROL 353 (BIASED), 354 (UNBIASED) ; RAD 355,356,358,360
: EMS @ 30 KRAD
: IRFY140 PO-PL-IGG-PL-0016 ISS.2 / V1.0 16/5/96 PAR

Test steps

1. -VGS		2000.0	...	4000.0	mV
2. -IGSS (FWD)	(	0.0	)...	100.0	nA
3. -IGSS (REV)	(	0.0	)...	100.0	nA
4. -IDSS	(	@	)...	250	uA
5. RDS on	(	0.000	)...	0.092	Ohm
6. -V(BR)DSS		100.0	...	700.0	V

	353	354	355	356	359	360
1.1 [mV]	2622.6	2609.9	316.6 F!	161.8 F!	16.9 F!	10.4 F!
2.1 [nA]	2.3	2.3	2.3	2.2	2.2	2.2
3.1 [nA]	2.6	2.6	2.6	2.5	2.6	2.6
4.1 [uA]	0	0	150	489 F!	1290 F!	1290 F!
5.1 [Ohm]	0.065	0.056	0.053	0.057	0.057	0.055
5.1 [V]	117.4	113.0	114.0	0.3 F!	0.4 F!	0.2 F!

SI-TESTSYSTEME Statistics 03 Vers. 2.15 for TA07F
RD247_IRFY140_EMS_@_50_KRAD / V1.0 16/5/96 PAR

Results file : RD247_IRFY140_EMS_@_50_KRAD from: 16.10.97 / 12:46:23
Operator : PAUL RUSSELL
Part number : IRFY140
Lot number : RD247
Order number : D/C 9730
Vendor : IR
: CONTROL 353 (BIASED), 354 (UNBIASED) ; RAD 355,356,358,360
: EMS @ 50 KRAD
: IRFY140 P0-PL-IG6-PL-0016 ISS.2 / V1.0 16/5/96 PAR

Test steps

1.	-VGS		2000.0 ...	4000.0	mV
2.	-IGSS (FWD)	(	0.0)...	100.0	nA
3.	-IGSS (REV)	(	0.0)...	100.0	nA
4.	-IDSS	(	0)...	250	uA
5.	RDS on	(	0.000)...	0.092	Ohm
6.	-V(BR)DSS		100.0 ...	700.0	V

	353	354	355	356	358	360
1.1 [mV]	2650.4	2626.2	2.1 F!	4.6 F!	3.5 F!	4.3 F!
2.1 [nA]	2.3	2.3	2.2	2.2	2.2	2.1
3.1 [nA]	2.6	2.6	2.6	2.6	2.7	2.6
4.1 [uA]	0	0	1288 F!	1288 F!	1288 F!	1288 F!
5.1 [Ohm]	0.052	0.054	0.067	0.054	0.070	0.053
6.1 [V]	116.9	112.5	0.3 F!	0.3 F!	0.2 F!	0.1 F!

SZ-TESTSYSTEME Statistics 03 Vers. 2.15 for TA07F
RD247_IRFY140_END_POINT_EMS / V1.0 16/5/96 PAR

Results file : RD247_IRFY140_END_POINT_EMS from: 17.10.97 / 08:59:15
Operator : PAUL RUSSELL
Part number : IRFY140
Lot number : RD247
Order number : D/C 9730
Vendor : IR
: CONTROL 353 (BIASED), 354 (UNBIASED) ; RAD 355,356,358,360
: END POINT EMS
: IRFY140 PO-PL-IGG-PL-0016 ISS.2 / V1.0 16/5/96 PAR

Test steps

1. -VGS		2000.0	...	4000.0	mV
2. -IGSS (FWD)	(	0.0	)...	100.0	nA
3. -IGSS (REV)	(	0.0	)...	100.0	nA
4. -IDSS	(	0	)...	250	uA
5. RDS on	(	0.000	)...	0.092	Ohm
6. -V(BR)DSS		100.0	...	700.0	V

	353	354	355	356	358	360
1.1 [mV]	2728.0	2604.4	5.6 F	3.4 F	3.9 F	5.1 F
2.1 [nA]	1.8	1.9	1.9	1.8	1.7	1.9
3.1 [nA]	2.0	2.1	2.3	2.2	2.2	2.1
4.1 [uA]	0	0	1290 F	1290 F	1289 F	1289 F
5.1 [Ohm]	0.057	0.056	0.075	0.055	0.056	0.066
6.1 [V]	114.9	113.2	0.3 F	0.4 F	0.5 F	0.3 F

SZ-TESTSYSTEME Statistics 03 Vers. 2.15 for TA07F
RD247_IRFY140_FINAL_EMS / V1.0 16/5/96 PAR

Results file : RD247_IRFY140_FINAL_EMS from: 24.10.97 / 11:07:48
Operator : PAUL RUSSELL
Part number : IRFY140
Lot number : RD247
Order number : D/C 9730
Vendor : IR
: CONTROL 353 (BIASED), 354 (UNBIASED) ; RAD 355,356,358,360
: FINAL EMS
: IRFY140 PO-PL-IGG-PL-0016 ISS.2 / V1.0 16/5/96 PAR

Test steps

1. -VGS		2000.0	...	4000.0	mV
2. -IGSS (FWD)	(	0.0	)...	100.0	nA
3. -IGSS (REV)	(	0.0	)...	100.0	nA
4. -IDSS	(	0	)...	250	uA
5. RDS on	(	0.000	)...	0.092	Ohm
6. -V(BR)DSS		100.0	...	700.0	V

	353	354	355	356	358	360
1.1 [mV]	2729.9	2605.0	800.0 F!	987.9 F!	265.8 F!	588.8 F!
2.1 [mA]	1.6	1.7	1.7	1.7	1.7	1.7
3.1 [mA]	1.9	1.8	1.9	1.9	1.9	1.9
4.1 [uA]	0	0	82	99	1292 F!	500 F!
5.1 [Ohm]	0.057	0.056	0.061	0.062	0.060	0.061
6.1 [V]	114.9	112.9	114.1	114.3	0.3 F!	0.4 F!

I G G
Component Technology

RECEIVING INSPECTION RECORD

RIR No: 79603

Section 1 Goods Inwards

		Date	15Sep1997	Priority	19971231
Supplier	INR/G INTERNATIONAL RECTIFIER G.B. Ltd.	Manu	INR/U INTERNATIONAL RECTIFIER	Doc	
Part Type	TRANSISTOR IRFY140	Value	IRFY140CSCS		
Spec No/Option	MIL-PRF-19500 IRFY140CSCS	Issue	K - - 00	Date	
PO No	CT12520 item 2	PO Qty	131 FLIGHT	Adv Qty	8

Section 2 Project Authorisation

		Project/PLIN	000800 / 109905
SAR No	N/A	Part Family	TRANSISTOR
WAR No			
Related RIR Nos			

Section 3 Results

Date Codes	9730	Act Qty	8

Action	Reference	Qty Pass	Qty Rej	N C R	LOT QTY
Travel Visual	100%	8			18-9-97 IGG 105 CT 8
Visual Inspection	~~100%~~				
Solderability	–				
Data Review	~~100%~~				
Electrical Measurements	~~100%~~				
D P A	~~8~~ –				
Radiation	~~8~~ 4+2				
I.A.W. Test Plan	PO-PL-166 - PL-00 16/2 Appl				

Section 4 Disposition	Reference	Qty	Authorisation	Date
Project Store				
Reject-Credit/Replacement				
Scrap Store				
D P A (Report No)				
VOQ/Lot Acceptance				
Quarantine (Category)				
RADIATION TEST	RD 247	6	[signature]	24/9/97

Section 6 Stores

Signed..... Date.....