



RADIATION TEST SUMMARY

PART TYPE : 2N6849

DESCRIPTION : P-CHANNEL MOSFET

REPORT NO. : RD156

PARAMETERS PLOTTED :

V_{gs(th)}
R_{DS(on)}

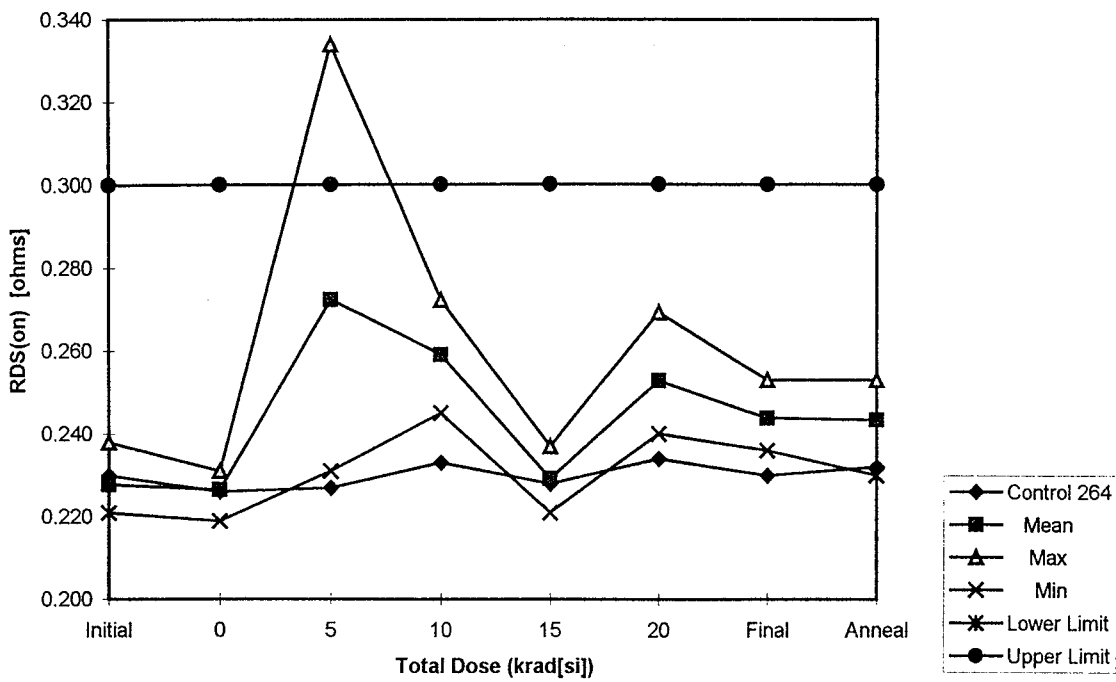
NOTE :

The results for I_{gss}, I_{dss} and V(BR)DSS showed no significant change and hence plots were not considered necessary. S/No. 279 showed R_{DS(on)} failed with a result of 0.334 ohms at 5 Krad, this was considered a spurious result as all subsequent results were within the test limit and was probably due to a bad test socket to device pin contact

Specification PO-PL-IGG-PL-0003, Appendix 2



Radiation Results for 2N6849



Dose (kRad)	Control 264 (ohms)	Mean (ohms)	Max (ohms)	Min (ohms)	Lower Limit (ohms)	Upper Limit (ohms)	Std.Dev.
Initial	0.230	0.228	0.238	0.221	0.000	0.300	0.008
0	0.226	0.227	0.231	0.219	0.000	0.300	0.006
5	0.227	0.272	0.334	0.231	0.000	0.300	0.044
10	0.233	0.259	0.272	0.245	0.000	0.300	0.013
15	0.228	0.229	0.237	0.221	0.000	0.300	0.008
20	0.234	0.253	0.269	0.240	0.000	0.300	0.015
Final	0.230	0.244	0.253	0.236	0.000	0.300	0.008
Anneal	0.232	0.243	0.253	0.230	0.000	0.300	0.010

Lot size for statistics : 4 devices

RD 156 Date Code: 9518C

SZ-TESTSYSTEME Family Testadaptor TA07F 07.06.91 / 10:56:59

2N6849 PO-PL-IG6-PL-0003 ISS.3 / V1.0 SMR 24/10/95

Socket adapter type: SA07.03

Fets per device : 1 (P)

Pin assignment : 1

```
=====
 1. -V(BR)DSS          100.0 ... 700.0 V
Switch : off          | Pin assignment : 1
-ID          0.250 mA |
-----
 2. -VGS              2000.0 ... 4000.0 mV
Switch : off          | Pin assignment : 1
-ID          0.250 mA |
-----
 3. -IGSS (FWD)       ( 0.0 )... 100.0 nA
Switch : off          | Pin assignment : 1
-VGS         20.000 V | Add. time      0 ms |
-----
 4. -IDSS             ( 0 )... 250 uA
Switch : off          | Pin assignment : 1
-VDS         100.000 V | Add. time      0 ms |
-----
 5. RDS on            ( 0.000 )... 0.300 Ohm
Switch : off          | Pin assignment : 1
-VGS         10.000 V | -ID           4100.000 mA |
-----
```

=====
Results file : 2N6849_RD156_INIT_@_IG6 from: 08.01.96 / 15:26:28
Operator : S.M.RALPHS
Part number : 2N 6849
Lot number : D/C 9518C
Order number : RIR 62743 RD 156
Vendor : IR
: S/NOS.272,279,285,291 CONTROL S/NO.264
: TEST#3,INIT,ELEC.MEAS. AT IG6
: 2N6849 PO-PL-IG6-PL-0003 ISS.3 / V1.0 SMR 24/10/95
=====

Test steps

1. -V(BR)DSS	100.0	...	700.0	V
2. -VGS	2000.0	...	4000.0	mV
3. -IGSS (FWD)	(0.0)	...	100.0	nA
4. -IDSS	(0)	...	250	uA
5. RDS on	(0.000)	...	0.300	Ohm

	264	272	279	285	291
1.1 [V]	127.1	125.9	110.1	125.6	118.3
2.1 [mV]	2497.6	2582.8	2539.9	2474.4	2560.1
3.1 [nA]	1.2	1.2	1.2	1.3	1.2
4.1 [uA]	0	0	0	0	0
5.1 [Ohm]	0.230	0.238	0.222	0.230	0.221

SZ-TESTSYSTEME Statistics 03 Vers. 2.15 for TA07F
 /N6849_RD156_INIT @_IGG / V1.0 SMR 24/10/95

```

=====
Results file   : 2N6849_RD156_INIT @_ERA   from: 27.02.70 / 21:04:12
Operator      : Steve Young.
Part number   : 2N6849
Lot number    : D/C 9519C
Order number  : RIR 62743 RD 156
Vendor       : IR
              : S/NOS.272,279,285,291 CONTROL S/NO.264
              : TEST #4 INIT ELEC MEAS AT ERA
              : 2N6849 PO-PL-IGG-PL-0003 ISS.3 / V1.0 SMR 24/10/95
=====
  
```

Test steps

```

=====
1. -V(BR)DSS           100.0   ...   700.0   V
2. -VGS                2000.0   ...  4000.0  mV
3. -IGSS (FWD)        (  0.0   )...  100.0   nA
4. -IDSS              (  0   )...   250    uA
5. RDS on             (  0.000 )...   0.300  Ohm
=====
  
```

	264	272	279	285	291
1.1 [V]	126.6	125.1	109.3	125.1	118.4
2.1 [mV]	2511.9	2596.7	2553.9	2483.2	2562.5
3.1 [nA]	1.1	1.1	1.1	1.1	1.1
4.1 [uA]	0	0	0	0	0
5.1 [Ohm]	0.226	0.231	0.219	0.231	0.225

SZ-TESTSYSTEME Statistics 03 Vers. 2.15 for TA07F
/N6849_RD156_INIT @_I66 / V1.0 SMR 24/10/95

```

=====
Results file   : 2N6849_RD156_EMS @_5_KRAD   from: 27.02.70 / 21:38:03
Operator      : Steve Young.
Part number   : 2N6849
Lot number    : D/C 95180
Order number  : RIR 62743 RD 156
Vendor       : IR
              : S/NOS.272,279,285,291 CONTROL S/NO.264
              : TEST #7(i) EMS @ 5 KRAD
              : 2N6849 PO-PL-I66-PL-0003 ISS.3 / V1.0 SMR 24/10/95
=====

```

Test steps

1. -V(BR)DSS	100.0	...	700.0	V
2. -VGS	2000.0	...	4000.0	mV
3. -IGSS (FWD)	(0.0)	...	100.0	nA
4. -IDSS	(0)	...	250	uA
5. RDS on	(0.000)	...	0.300	Ohm

	264	272	279	285	291
1.1 [V]	126.8	127.8	111.0	127.2	118.9
2.1 [mV]	2505.0	2773.4	2800.4	2690.5	2839.3
3.1 [nA]	1.2	1.3	1.3	1.3	1.2
4.1 [uA]	0	1	1	1	0
5.1 [Ohm]	0.227	0.267	0.334F	0.257	0.231

SZ-TESTSYSTEME Statistics 03 Vers. 2.15 for TA07F
/N6849_RD156_INIT @_IG6 / V1.0 SMR 24/10/95

```

=====
Results file   : 2N6849_RD156_EMS @_10_KRAD   from: 27.02.70 / 22:10:14
Operator      : Steve Young.
Part number   : 2N6849
Lot number    : D/C 9518C
Order number  : RIR 62743 RD 156
Vendor       : IR
              : S/N06.272,279,285,291 CONTROL S/N0.264
              : TEST #7(ii) EMS @ 10 KRAD
              : 2N6849 PO-PL-IG6-PL-0003 ISS.3 / V1.0 SMR 24/10/95
=====

```

Test steps

1. -V(BR)DSS	100.0	...	700.0	V
2. -VGS	2000.0	...	4000.0	mV
3. -IGSS (FWD)	(0.0)	...	100.0	nA
4. -IDSS	(0)	...	250	uA
5. RDS on	(0.000)	...	0.300	Ohm

	264	272	279	285	291
1.1 [V]	126.9	127.9	111.1	127.6	119.0
2.1 [mV]	2498.6	3029.8	3072.5	2925.9	3126.2
3.1 [nA]	1.3	1.3	1.3	1.3	1.3
4.1 [uA]	0	2	3	4	1
5.1 [Ohm]	0.233	0.272	0.250	0.269	0.245

SZ-TESTSYSTEME Statistics 03 Vers. 2.15 for TA07F
/N6849_RD156_INIT @_IG6 / V1.0 SMR 24/10/95

=====
Results file : 2N6849_RD156_EMS @_15_KRAD from: 27.02.70 / 22:52:30
Operator : Steve Young.
Part number : 2N6849
Lot number : D/C 9518C
Order number : RIR 62743 RD 156
Vendor : IR
: S/NOS.272,279,285,291 CONTROL S/NO.2B4
: TEST #7(iii) EMS @ 15 KRAD
: 2N6849 PO-PL-IG6-PL-0003 ISS.3 / V1.0 SMR 24/10/95
=====

Test steps

1. -V(BR)DSS	100.0	...	700.0	V
2. -VGS	2000.0	...	4000.0	mV
3. -IGSS (FWD)	(0.0)	...	100.0	nA
4. -IDSS	(0)	...	250	uA
5. RDS on	(0.000)	...	0.300	Ohm

SZ-TESTSYSTEME Statistics 03 Vers. 2.15 for TA07F
/N6849_RD156_INIT @_IGG / V1.0 SMR 24/10/95

=====
Results file : 2N6849_RD156_EMS @_20_KRAD from: 27.02.70 / 23:36:33
Operator : Steve Young.
Part number : 2N6849
Lot number : D/C 95180
Order number : RIR 62743 RD 156
Vendor : IR
: S/NOS.272,279,285,291 CONTROL S/NO.264
: TEST #7(iv) EMS @ 20 KRAD
: 2N6849 PO-PL-IGG-PL-0003 ISS.3 / V1.0 SMR 24/10/95
=====

Test steps

1. -V(BR)DSS	100.0	...	700.0	V
2. -VGS	2000.0	...	4000.0	mV
3. -IGSS (FWD)	(0.0)...		100.0	nA
4. -IDSS	(0)...		250	uA
5. RDS on	(0.000)...		0.300	Ohm

	264	272	279	285	291
1.1 [V]	126.9	126.9	110.1	126.4	118.8
2.1 [mV]	2499.1	3570.6	3680.6	3508.9	3704.7
3.1 [nA]	1.3	1.3	1.3	1.3	1.3
4.1 [uA]	0	3	3	4	2
5.1 [Ohm]	0.234	0.269	0.240	0.262	0.240

SZ-TESTSYSTEME Statistics 03 Vers. 2.15 for TA07F
/N6849_RD156_INIT_@_IG6 / V1.0 SMR 24/10/95

```

=====
Results file   : 2N6849_RD156_END_POINT_EMS   from: 28.02.70 / 21:07:01
Operator      : Steve Young.
Part number   : 2N6849
Lot number    : D/C 95180
Order number  : RIR 62743 RD 156
Vendor       : IR
              : S/NOS.272,279,285,291 CONTROL S/NO.264
              : TEST #8 END POINT EMS
              : 2N6849 PO-PL-IG6-PL-0003 ISS.3 / V1.0 SMR 24/10/95
=====

```

Test steps

1. -V(BR)DSS	100.0	...	700.0	V
2. -VGS	2000.0	...	4000.0	mV
3. -IGSS (FWD)	(0.0)	...	100.0	nA
4. -IDSS	(0)	...	250	uA
5. RDS on	(0.000)	...	0.300	Ohm

	264	272	279	285	291
1.1 [V]	126.7	125.6	110.0	125.4	118.4
2.1 [mV]	2502.7	3632.7	3682.3	3542.3	3717.0
3.1 [nA]	1.2	1.2	1.3	1.3	1.3
4.1 [uA]	0	2	2	3	1
5.1 [Ohm]	0.230	0.253	0.236	0.248	0.238

SZ-TESTSYSTEME Statistics 03 Vers. 2.15 for TA07F
 RD156-2N6849-FINAL / V1.0 SMR 24/10/95

```
=====
Results file   : RD156-2N6849-FINAL   from: 19.01.96 / 17:53:09
Operator      : S.M.RALPHS
Part number   : 2N6849
Lot number    : D/C 9518C
Order number  : RIR 62743 RD 156
Vendor        : IR
               : S/NOS.272,279,285,291 CONTROL S/NO.264
               : TEST #23 FINAL ELEC.MEAS.
               : 2N6849 PO-PL-I66-PL-0003 ISS.3 / V1.0 SMR 24/10/95
=====
```

Test steps

```
=====
1. -V(BR)DSS           100.0   ...   700.0   V
2. -VGS                2000.0  ...   4000.0  mV
3. -IGSS (FWD)        (  0.0  )...   100.0   nA
4. -IDSS               (   0   )...   250     uA
5. RDS on              ( 0.000 )...   0.300   Ohm
=====
```

	264	272	279	285	291
1.1 [V]	126.9	125.6	109.8	125.4	118.7
2.1 [mV]	2501.8	3958.1	3683.3	3668.7	3829.0
3.1 [nA]	1.3	1.3	1.3	1.3	1.3
4.1 [uA]	0	2	2	3	1
5.1 [Ohm]	0.232	0.253	0.230	0.249	0.241