

silicon transistors

UHF/VHF power transistors

NPN type

T-37-01

| Type | Rated Breakdown Voltages | | | Power Out | | | | C _{OB} (pF) | f _P (MHz) (Min.) | Case |
|--------|--------------------------|-----------------|-----------------|-----------------|----------------------|---------------------|--------------------|----------------------|-----------------------------|--------|
| | V _{CB} | V _{CE} | V _{EB} | V _{CE} | f _o (MHz) | P _{IE} (W) | P _O (W) | | | |
| 2N3375 | 65 | 40 | 4.0 | 28 | 400 | 1.0 | 3.0 | 12.0 | 500 Typ | TO-60 |
| 2N3553 | 65 | 40 | 4.0 | 28 | 175 | .25 | 2.5 | 12.0 | 350 | TO-5 |
| 2N3632 | 65 | 40 | 4.0 | 28 | 175 | 3.5 | 13.5 | 25.0 | 250 | TO-60 |
| 2N3733 | 65 | 40 | 4.0 | 28 | 400 | 4.0 | 10.0 | 25.0 | 250 | TO-60 |
| 2N3866 | 55 | 30 | 3.5 | 28 | 400 | 0.1 | 1.0 | 3.0 | 500 | TO-5 |
| 2N3924 | 36 | 18 | 4.0 | 13.6 | 175 | 1.0 | 4.0 | 20.0 | 250 | TO-5 |
| 2N3928 | 36 | 18 | 4.0 | 13.6 | 175 | 2.0 | 7.0 | 20.0 | 250 | TO-60 |
| 2N3927 | 36 | 18 | 4.0 | 13.6 | 175 | 4.0 | 12.0 | 45.0 | 200 | TO-60 |
| 2N4012 | 65 | 40 | 4.0 | 13.6 | 1000 | 1.0 | 2.5 | 10.0 | 350 | TO-60 |
| 2N4040 | 60 | 40 | 4.0 | 28 | 400 | 3.0 | 8.0 | 15.0 | 400 | MT-72j |
| 2N4041 | 60 | 40 | 4.0 | 28 | 400 | 1.0 | 3.3 | 8.0 | 400 | MT-72j |
| 2N4127 | 60 | 40 | 4.0 | 25 | 175 | 2.5 | 13.5 | 25.0 | 300 | MT-72j |
| 2N4128 | 60 | 40 | 4.0 | 25 | 175 | 6.0 | 24.0 | 45.0 | 200 | MT-72j |
| 2N4427 | 40 | 20 | 2.0 | 12 | 175 | 0.1 | 1.0 | 4.0 | 500 | TO-5 |
| 2N4428 | 55 | 35 | 3.5 | 28 | 500 | .075 | .75 | 3.5 | 700 | TO-5 |
| 2N4429 | 55 | 35 | 3.5 | 28 | 1000 | .25 | 1.0 | 3.5 | 700 | MT-72j |
| 2N4430 | 55 | 40 | 3.5 | 28 | 1000 | .7 | 2.5 | 5.0 | 600 | MT-66 |
| 2N4431 | 55 | 40 | 3.5 | 28 | 1000 | 1.15 | 5.0 | 10.0 | 600 | MT-66 |
| 2N4440 | 65 | 40 | 4.0 | 28 | 400 | 1.7 | 5.0 | 12.0 | 500 Typ | TO-60 |

| Type | Rated Breakdown Voltages | | | Power Out | | | | C _{OB} (pF) | f _P (MHz) (Min.) | Case |
|--------|--------------------------|-----------------|-----------------|-----------------|----------------------|---------------------|--------------------|----------------------|-----------------------------|--------|
| | V _{CB} | V _{CE} | V _{EB} | V _{CE} | f _o (MHz) | P _{IE} (W) | P _O (W) | | | |
| 2N4933 | 70 | 35 | 4.0 | 24 | 70 | 3.5 | 20.0 | 85.0 | 200 | TO-60 |
| 2N5016 | 65 | 30 | 4.0 | 28 | 400 | 5.0 | 15.0 | 25.0 | 500 | TO-60 |
| 2N5070 | 65 | 30 | 4.0 | 28 | 30 | .625 | 12.5 | 85 | 100 | TO-60 |
| 2N5071 | 65 | 30 | 4.0 | 24 | 70 | 3.0 | 24.0 | 85 | 100 | TO-60 |
| 2N5090 | 55 | 30 | 3.5 | 28 | 400 | 0.2 | 1.2 | 3.5 | 500 | TO-60 |
| 2N5102 | 55 | 30 | 3.5 | 28 | 400 | 0.2 | 1.2 | 3.5 | 500 | TO-60 |
| 2N5108 | 55 | 30 | 3.0 | 28 | 1000 | .316 | 1.0 | 3.0 | 1200 | TO-5 |
| 2N5109 | 40 | 20 | 3.0 | 28 | 1000 | .32 | 1.0 | 3.5 | 1200 | TO-5 |
| 2N5421 | 36 | 18 | 4.0 | 13.5 | 175 | .125 | 1.0 | 5.0 | 300 | TO-5 |
| 2N5423 | 36 | 18 | 4.0 | 13.5 | 175 | 1.25 | 5.0 | 25.0 | 300 | TO-60 |
| 2N5424 | 36 | 18 | 4.0 | 13.5 | 175 | 4.1 | 13.0 | 45.0 | 250 | TO-60 |
| 2N5591 | 36 | 18 | 4.0 | 13.6 | 175 | 9.5 | 25.0 | 120.0 | 200 | MT-72 |
| 2N5641 | 65 | 35 | 4.0 | 28 | 175 | 1.0 | 7.0 | 15.0 | 300 | MT-71 |
| 2N5642 | 65 | 35 | 4.0 | 28 | 175 | 2.8 | 20.0 | 35.0 | 250 | MT-72e |
| 2N5643 | 65 | 35 | 4.0 | 28 | 175 | 8.0 | 40.0 | 65.0 | 200 | MT-72e |
| 2N6080 | 36 | 18 | 4.0 | 13.6 | 100 | | 4 | 20 | 200 | MT-72h |
| 2N6081 | 36 | 18 | 4.0 | 13.6 | 100 | | 15 | 85 | 200 | MT-72h |
| 2N6082 | 36 | 18 | 4.0 | 13.6 | 100 | | 25 | 130 | 200 | MT-72h |
| 2N6083 | 36 | 18 | 4.0 | 13.6 | 100 | | 30 | 130 | 200 | MT-72h |
| 2N6084 | 36 | 18 | 4.0 | 13.6 | 100 | | 40 | 200 | 200 | MT-72h |

germanium transistors

diffused-base MESA transistors
ultra-high-speed switching

| Type | Polarity | BVCBO Max. Volts | BVCES Max. Volts | Typ. Gain HFE | f _{cb} Avg. mc | V _{sat} Avg. Volts | Case |
|--------|----------|------------------|------------------|---------------|-------------------------|-----------------------------|-------|
| 2N705 | PNP | -15 | -15 | 25 | 300 | 0.125 | TO-18 |
| 2N705A | PNP | -15 | -15 | 40 | - | 0.125 | TO-18 |
| 2N710 | PNP | -15 | -15 | 25 | 300 | 0.125 | TO-18 |
| 2N710A | PNP | -15 | -15 | 70 | - | 0.125 | TO-18 |
| 2N711 | PNP | -12 | -12 | 80 | 300 | 0.125 | TO-18 |
| 2N711A | PNP | -15 | -14 | 80 | - | 0.125 | TO-18 |
| 2N711B | PNP | 18 | 15 | 80 | 320* | 0.18 | TO-18 |
| 2N782 | PNP | -12 | -12 | 20 | - | 0.125 | TO-18 |
| 2N797 | NPN | 20 | 7 | 40 | 600 | 0.5 | TO-18 |
| 2N828 | PNP | -15 | -15 | 25 | - | 0.125 | TO-18 |
| 2N837 | PNP | 12 | 12 | 30 | - | 0.18 | TO-18 |
| 2N855 | NPN | 12 | 11 | 30 | 1000 | 0.3 | TO-18 |
| 2N855A | NPN | 12 | 11 | 30 | 1000 | 0.3 | TO-18 |
| 2N860 | PNP | 15 | 15 | 20 | 460* | 0.125 | TO-18 |
| 2N861 | PNP | 12 | 12 | 20 | 460* | 0.125 | TO-18 |
| 2N862 | PNP | 12 | 12 | 20 | 460* | 0.125 | TO-18 |
| 2N863 | PNP | 12 | 12 | 20 | 460* | 0.18 | TO-18 |
| 2N864 | PNP | 15 | 15 | 60 | 460* | 0.125 | TO-18 |
| 2N864A | PNP | 15 | 15 | 60 | - | 0.10 | TO-18 |
| 2N865 | PNP | 12 | 12 | 40 | 460* | 0.125 | TO-18 |

| Type | Polarity | BVCBO Max. Volts | BVCES Max. Volts | Typ. Gain HFE | f _{cb} Avg. mc | V _{sat} Avg. Volts | Case |
|--------|----------|------------------|------------------|---------------|-------------------------|-----------------------------|--------|
| 2N866 | PNP | 12 | 12 | 40 | 460* | 0.125 | TO-18 |
| 2N867 | PNP | 12 | - | 40 | 460* | 0.11 | TO-18 |
| 2N868 | PNP | 15 | 15 | 20 | 320* | 0.18 | TO-18 |
| 2N868 | PNP | 12 | 12 | 17 | 320* | 0.18 | TO-18 |
| 2N870 | PNP | 12 | 12 | 20 | 320* | 0.18 | TO-18 |
| 2N871 | PNP | 7 | 7 | 20 | 320* | 0.18 | TO-1C |
| 2N872 | PNP | 15 | 15 | 40 | 320* | 0.18 | TO-18 |
| 2N873 | PNP | 12 | 12 | 40 | 320* | 0.18 | TO-18 |
| 2N874 | PNP | 12 | 12 | 40 | 320* | 0.18 | TO-18 |
| 2N875 | PNP | 7 | 7 | 40 | 320* | 0.18 | TO-18 |
| 2N885 | PNP | 15 | - | 40 | - | 0.10 | TO-18 |
| 2N894 | PNP | 15 | 15 | 45 | - | 0.18 | TO-18 |
| 2N1692 | PNP | 25 | 25 | 10 | 500 | 0.4 | TO-102 |
| 2N1693 | PNP | 25 | 25 | 9 | 450 | 0.4 | TO-102 |
| 2N2188 | PNP | 40 | 40 | 80 | 60 | - | TO-1 |
| 2N2189 | PNP | 40 | 40 | 80 | 102 | - | TO-1 |
| 2N2190 | PNP | 60 | 60 | 80 | 60 | - | TO-1 |
| 2N2191 | PNP | 60 | 60 | 80 | 102 | - | TO-1 |
| 2N2482 | NPN | 20 | 12 | 15 | 600 | 2. | TO-18 |



case outline drawings cont'd

D01-3

D013

D027

D04

D035

D041

D05

A245

| TYPE | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. |
|------|------|------|------|------|------|------|
| 245B | .010 | .015 | .010 | .015 | .010 | .015 |
| 245C | .010 | .015 | .010 | .015 | .010 | .015 |
| 245D | .010 | .015 | .010 | .015 | .010 | .015 |
| 245E | .010 | .015 | .010 | .015 | .010 | .015 |

D07

MILLIMETER DIMENSIONS ARE DERIVED FROM ORIGINAL INCH DIMENSIONS

| SYMBOL | INCHES | MILLIMETERS | NOTES |
|----------------|--------|-------------|-------|
| Ø | .400 | 10.16 | 1 |
| Ø | .405 | 10.28 | 1 |
| Ø | .430 | 10.92 | 1 |
| L | 1.000 | 25.40 | 1 |
| L ₁ | - | 6.35 | 2 |

C212

C223

SPACED ON 200 IS ±1 CENTERS

LEADS Ø50 IS ±1 DIA

750 IS ±1

150 IS ±1

DIMENSIONS IN INCHES AND MILLIMETERS

D08

D09

D010

F22

| TYPE | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. |
|------|------|------|------|------|------|------|
| F22A | 1.20 | 1.30 | .010 | .015 | .010 | .015 |
| F22B | 1.20 | 1.30 | .010 | .015 | .010 | .015 |
| F22C | 1.20 | 1.30 | .010 | .015 | .010 | .015 |
| F22D | 1.20 | 1.30 | .010 | .015 | .010 | .015 |
| F22E | 1.20 | 1.30 | .010 | .015 | .010 | .015 |
| F22F | 1.20 | 1.30 | .010 | .015 | .010 | .015 |
| F22G | 1.20 | 1.30 | .010 | .015 | .010 | .015 |
| F22H | 1.20 | 1.30 | .010 | .015 | .010 | .015 |