

SILICON TRANSISTORS

Planar Epitaxial High Speed Switching (n-p-n)

| Type No. | Maximum Ratings | | | | Characteristics | | | | | | | | | | Package | Out-line Drawing | Comments |
|---------------|------------------|------------------|------------------|----------------------------|-----------------------------|-------|-------|-----------------|-------|-------------------|---------------------|------------------------------------|------|----------|---------|--|--|
| | V _{CB0} | V _{CER} | V _{EBO} | P _{tot} 25°C amb. | V _{CE(sat)} (max.) | | | h _{FE} | | | f _T min. | Storage Time t _s (max.) | | | | | |
| | | | | | volts | volts | volts | mW | volts | I _C mA | | I _B mA | min. | max. | | | |
| BSY95A | 20 | 20 | 5 | 300 | 0.35 | 10 | 0.2 | 50 | 200 | 10 | 200 | 50 | 10 | TO-18 | T2B | For low cost high performance systems. | |
| ZTX310, BSV23 | 25 | 20 | 3 | 300 | 0.6 | 10 | 1 | 20 | — | 10 | 200 | 60 | 10 | E-Line § | T21 | | |
| ZTX311, BSV24 | 20 | 15†† | 5 | 300 | 0.35 | 10 | 0.2 | 50 | 200 | 10 | 200 | 25 | 10 | E-Line § | T21 | | |
| ZTX312, BSV25 | 30 | 12†† | 5 | 300 | 0.24 | 10 | 1 | 40 | — | 10 | 400 | 13 | 10 | E-Line § | T21 | | |
| ZTX313, BSV26 | 40 | 15†† | 5 | 300 | 0.24 | 10 | 1 | 40 | 120 | 10 | 500 | 13 | 10 | E-Line § | T21 | | |
| ZTX314, BSV27 | 40 | 15†† | 5 | 300 | 0.5 | 100 | 10 | 40 | 120 | 10 | 500 | 13 | 10 | E-Line § | T21 | | |
| 2N706 | 25 | 20 | 3 | 300 | 0.6 | 10 | 1 | 20 | — | 10 | 200 | 60 | 10 | TO-18 | T2B | | |
| 2N706A | 25 | 20 | 5 | 300 | 0.6 | 10 | 1 | 20 | 60 | 10 | 200 | 25 | 10 | TO-18 | T2B | | |
| 2N708 | 40 | 20 | 5 | 360 | 0.4 | 10 | 1 | 30 | 120 | 10 | 300 | 25 | 10 | TO-18 | T2B | | |
| 2N709 | 15 | 6† | 4 | 300 | 0.3 | 3 | 0.15 | 20 | 120 | 10 | 600 | 6 | 5 | TO-18 | T2A | | |
| 2N753 | 25 | 20 | 5 | 300 | 0.6 | 10 | 1 | 40 | 120 | 10 | 250 | 35 | — | TO-18 | T2B | | |
| 2N2206 | 25 | 20†† | 5 | 300 | 0.22 | 10 | 1 | 40 | 120 | 10 | 200 | 35 | 10 | TO-46 | T1A | | High speed logic and core driving applications |
| 2N2368 | 40 | 15† | 4.5 | 360 | 0.25 | 10 | 1 | 20 | 60 | 10 | 400 | 10 | 10 | TO-18 | T2A | | |
| 2N2369 | 40 | 15† | 4.5 | 360 | 0.25 | 10 | 1 | 40 | 120 | 10 | 500 | 13 | 10 | TO-18 | T2A | | |
| 2N2369A | 40 | 15† | 4.5 | 360 | 0.2 | 10 | 1 | 40 | 120 | 10 | 500 | 13 | 10 | TO-18 | T2A | | |
| 2N2475 | 15 | 6† | 4 | 300 | 0.4 | 20 | 0.66 | 30 | 150 | 20 | 600 | 6 | 5 | TO-18 | T2A | | |
| 2N2476 | 60 | 20† | 5 | 600 | 0.4 | 150 | 7.5 | 20 | — | 150 | 250 | 25 | 150‡ | TO-5 | T7A | | |
| 2N2477 | 60 | 20† | 5 | 600 | 0.4 | 150 | 3.75 | 40 | — | 150 | 250 | 25 | 150‡ | TO-5 | T7A | | |
| 2N2938 | 25 | 13† | 5 | 300 | 0.4 | 50 | 1.6 | 25 | — | 10 | 500 | 15 | 10 | TO-18 | T2A | | |
| 2N3262 | 100 | 80†† | 4 | 1000 | 0.6 | 1000 | 100 | 40 | — | 500 | 150 | 40 | | TO-5 | T7C | | |

*Also available as ZT706, etc. † V_{CEO} †† V_{CEO(sus)} ††† V_{CER}, R_L=100Ω ‡ I_{B1}=I_{B2}=15 mA. || t_{on} at I_C=1 Amp and I_{B1}=I_{B2}=100mA
 § See note below High-Speed Core Drivers (n-p-n)

High-Speed Core Drivers (n-p-n)

| Type No. | Maximum Ratings | | | | Characteristics | | | | | | | | | | Package | Out-line Drawing | Comments |
|----------|------------------|------------------|------------------|----------------------------|-----------------------------|-------|-------|-----------------|-------|-------------------|---------------------|------------------------------------|------|----------|---------|-------------------------------------|----------|
| | V _{CB0} | V _{CEO} | V _{EBO} | P _{tot} 25°C amb. | V _{CE(sat)} (max.) | | | h _{FE} | | | f _T min. | Storage Time t _s (max.) | | | | | |
| | | | | | volts | volts | volts | mW | volts | I _C mA | | I _B mA | min. | max. | | | |
| BSX12 | 25 | 12 | 4 | 600 | 0.33 | 300 | 30 | 30 | 120 | 300 | 450 | 15 | 100 | TO-39 | T7C | High speed core driver applications | |
| BSX59 | 70 | 45 | 5 | 800 | 0.3 | 150 | 15 | 30 | — | 150 | 250 | — | — | TO-5 | T7A | | |
| BSX60 | 70 | 30 | 5 | 800 | 0.3 | 150 | 15 | 30 | — | 150 | 250 | — | — | TO-5 | T7A | | |
| BSX61 | 70 | 45 | 5 | 800 | 0.5 | 150 | 15 | 30 | — | 150 | 250 | — | — | TO-5 | T7A | | |
| ZTX360 | 60 | 40 | 5 | 500 | 0.6 | 500 | 50 | 25 | 150 | 500 | 250 | — | — | E-Line § | T21 | | |
| ZT600 | 24 | 20 | 5 | 800 | 0.5 | 500 | 50 | 50 | 150 | 150 | 250 | — | — | TO-5 | T7A | | |
| 2N3013 | 40 | 15 | 5 | 360 | 0.18 | 30 | 3 | 30 | 120 | 30 | 350 | 18 | 10 | TO-18 | T2A | | |
| 2N3261 | 40 | 15 | 6 | 300 | 0.35 | 100 | 10 | 40 | 150 | 10 | 600 | 10 | 10 | TO-18 | T2A | | |
| 2N3512 | 60 | 35 | 5 | 800 | 0.4 | 150 | 7.5 | 50 | — | 500 | 250 | 30 | 150‡ | TO-5 | T7A | | |
| 2N3724 | 50 | 30 | 6 | 800 | 0.2 | 100 | 10 | 60 | 150 | 100 | 300 | 50 | 500* | TO-5 | T7A | | |
| 2N3725 | 80 | 50 | 6 | 800 | 0.26 | 100 | 10 | 60 | 150 | 100 | 300 | 50 | 500* | TO-5 | T7A | | |

† I_{B1}=I_{B2}=15mA * I_C=500mA, I_{B1}=50mA, I_{B2}=-50mA

§ Lead Configuration: — The leads of E-Line devices can be preformed, on request, to the TO-5 configuration and when this is done suffix K is added to the type number. Similarly, suffix L indicates that the leads have been preformed to the TO-18 configuration. For flat mounting, suffix M is added to the type number.

Other Transistor types available

Planar Medium Power and Switching (p-n-p)

ZT 152

Planar Matched Pairs (n-p-n)

Planar General Purpose - Small Signal (n-p-n)

ZDT 10
ZDT 11
ZDT 20
ZDT 21

ZT 202
ZT 203
ZT 204
ZT 402
ZT 403
ZT 404

Planar Medium Power and Switching (n-p-n)

ZT 60—69

Planar Epitaxial High Speed Switching (n-p-n)

2N 1708
2N 2205