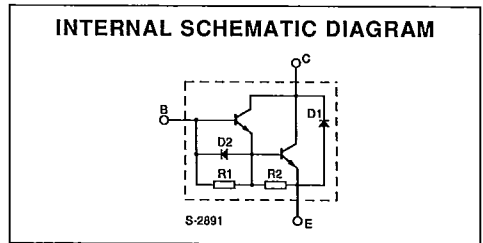
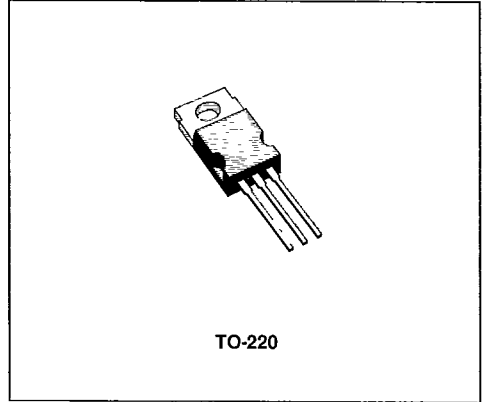


DESCRIPTION

Monolithic Darlingtons with integrated speed-up and damper diode, suited for TV applications.



ABSOLUTE MAXIMUM RATINGS

| Symbol | Parameter | Value | | Unit |
|------------------|--|---------------|-------|------|
| | | BU184 | BU189 | |
| V _{CBO} | Collector-base Voltage (I _E = 0) | 400 | 330 | V |
| V _{CEx} | Collector-emitter Voltage | 400 | 330 | V |
| V _{CE0} | Collector-emitter Voltage (I _B = 0) | 200 | 150 | V |
| V _{EBO} | Emitter-base Voltage (I _C = 0) | 8 | | V |
| I _C | Collector Current | 8 | | A |
| I _{CM} | Collector Peak Current (t _p < 10ms) | 15 | | A |
| I _B | Base Current | 2 | | A |
| I _{BM} | Base Peak Current (t _p < 10ms) | 4 | | A |
| P _{tot} | Total Dissipation at T _c < 25°C | 60 | | W |
| T _{stg} | Storage Temperature | - 65 to + 150 | | °C |
| T _j | Max. Operating Junction Temperature | 150 | | °C |

THERMAL DATA

SGS-THOMSON

30E D

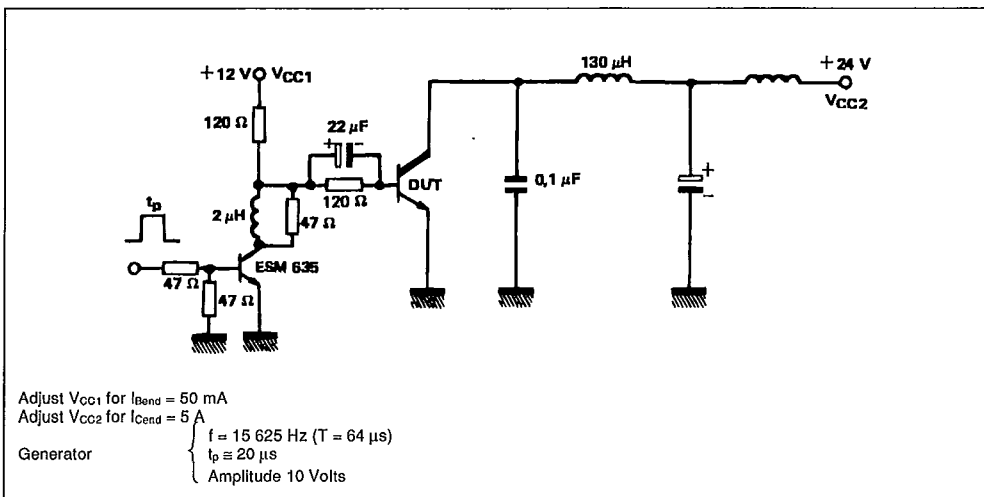
| | | | | |
|------------------|----------------------------------|-----|------|------|
| $R_{th(j-case)}$ | Thermal Resistance Junction-case | Max | 2.08 | °C/W |
|------------------|----------------------------------|-----|------|------|

ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise specified)

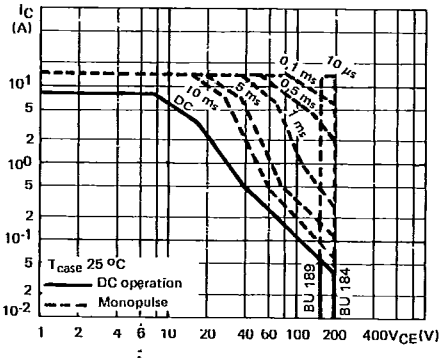
| Symbol | Parameter | Test Conditions | Min. | Typ. | Max. | Unit |
|----------------|---|---|------------|-------------|------|--------------------|
| I_{CEX} | Collector Cutoff Current | $V_{CE} = V_{CEX}$ $V_{BE} = -6V$ | | | 100 | μA |
| I_{EBO} | Emitter Cutoff Current ($I_C = 0$) | $V_{EB} = -8V$ | | | 10 | mA |
| $V_{CE(sus)}$ | Collector Emitter Sustaining Voltage | $I_C = 3A$ $L = 15mH$ for BU184 for BU189 | 200 150 | | | V V |
| $V_{CE(sat)}$ | Collector-emitter Saturation Voltage | $I_C = 5A$ $I_B = 50mA$ | | | 1.5 | V |
| $V_{BE(sat)}$ | Base-emitter Saturation Voltage | $I_C = 5A$ $I_B = 50mA$ | | | 2.2 | V |
| V_F | Diode Forward Voltage | $I_F = 4A$ | | 1.8 | 2.3 | V |
| t_s t_f | RESISTIVE LOAD Storage Time Fall Time | See Test Circuit | | 0.44 0.3 | 0.5 | μs μs |

* Pulse test $t_p < 300 \mu s$ $\delta < 2 \%$.

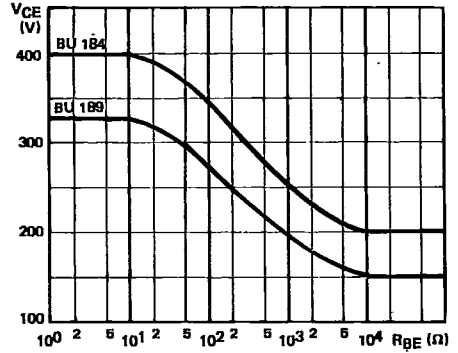
TEST CIRCUIT



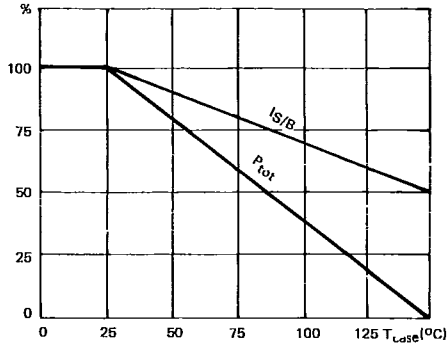
DC and Pulse Area.



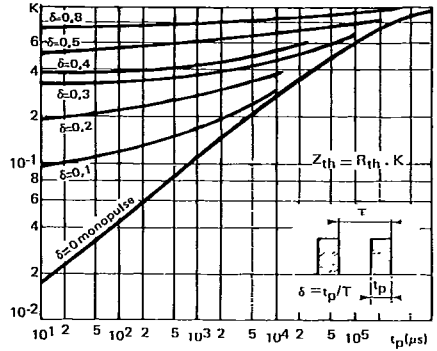
Collector-emitter Voltage vs Base-emitter Resistance.



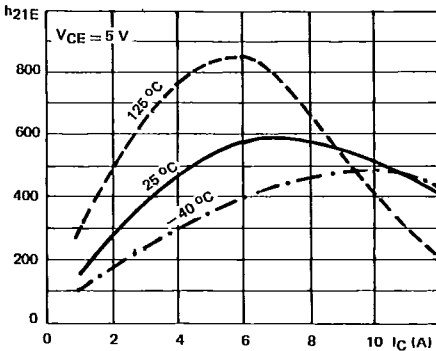
Power and IS/B Derating vs Case Temperature.



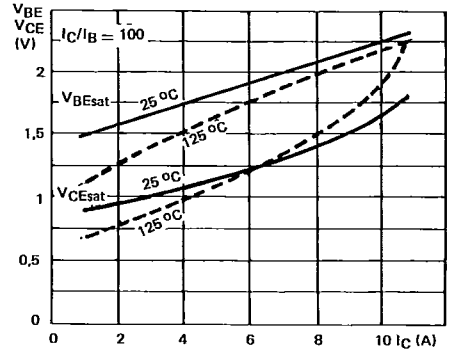
Transient Thermal Response.



DC Current Gain.



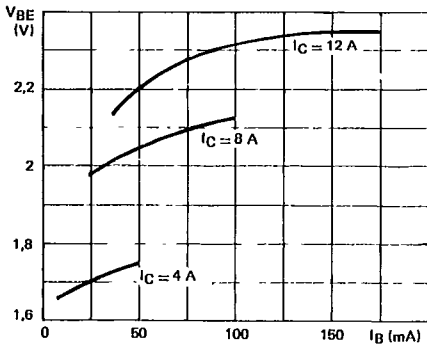
Saturation Voltage.



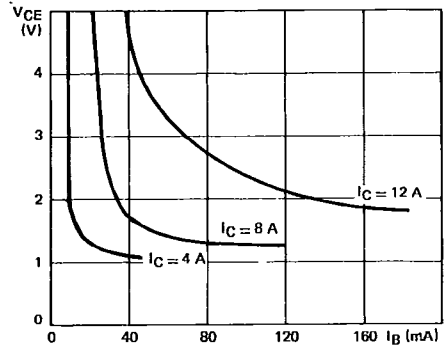
SGS-THOMSON

30E D

Base Characteristics.



Collector Saturation Region.



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30E D