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|--------------|---|---------|
| SANYO | No.837E | 2SD1159 |
| | NPN Triple Diffused Planar Silicon Transistor TV Horizontal Deflection Output, High-Current Switching Applications | |

Features

- Capable of efficient drive with small internal loss due to excellent t_f .

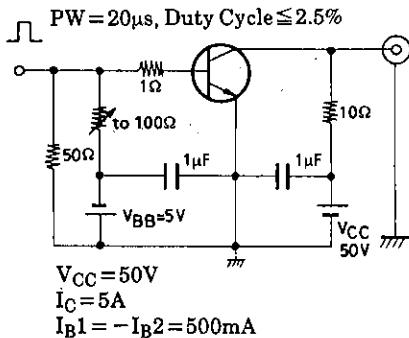
Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

| | | | | unit |
|------------------------------|-----------|--------------------------|-------------|------------------|
| Collector-to-Base Voltage | V_{CB0} | | 200 | V |
| Collector-to-Emitter Voltage | V_{CEO} | | 60 | V |
| Emitter-to-Base Voltage | V_{EBO} | | 6 | V |
| Collector Current | I_C | | 4.5 | A |
| Collector Current (Pulse) | I_{CP} | | 10 | A |
| Collector Dissipation | P_C | $T_c = 25^\circ\text{C}$ | 40 | W |
| Junction Temperature | T_j | | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | | -55 to +150 | $^\circ\text{C}$ |

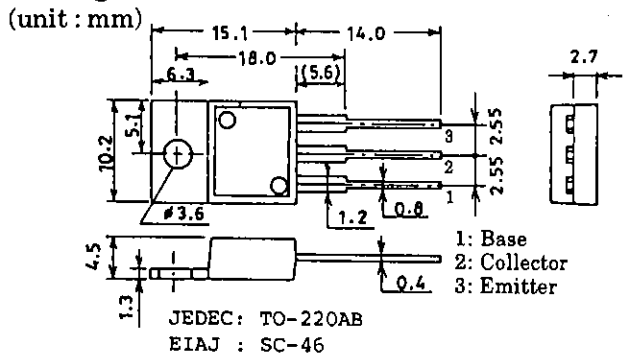
Electrical Characteristics at $T_a = 25^\circ\text{C}$

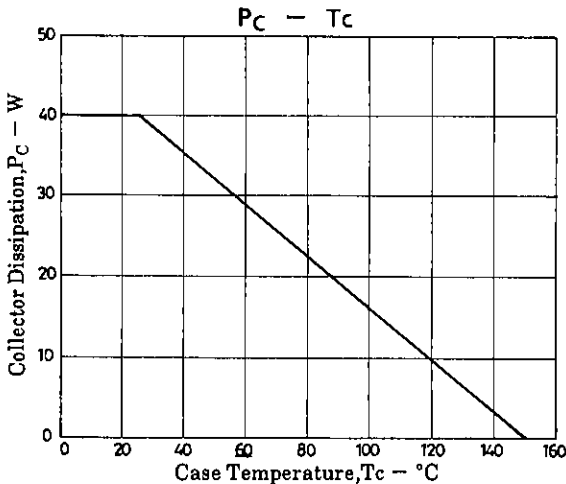
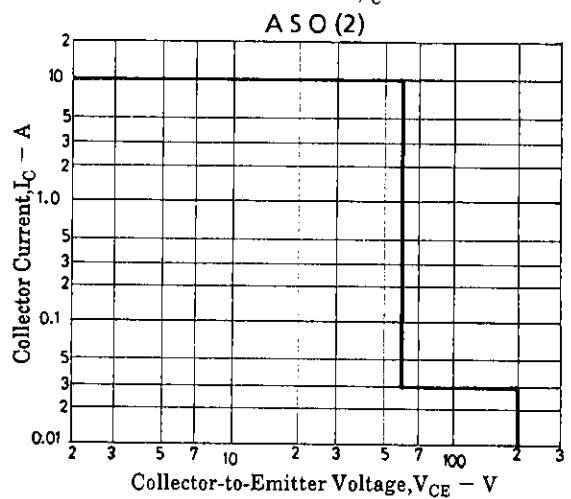
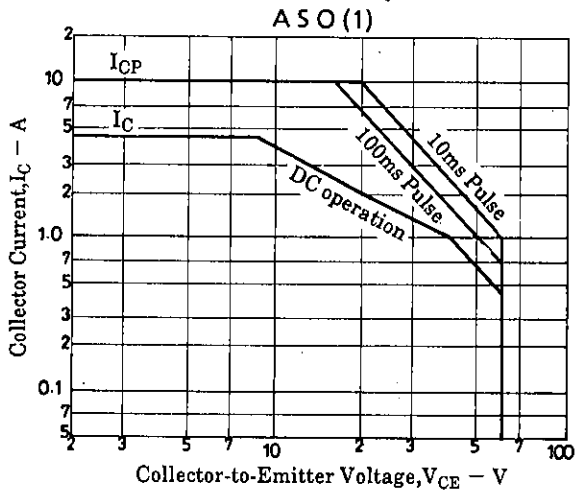
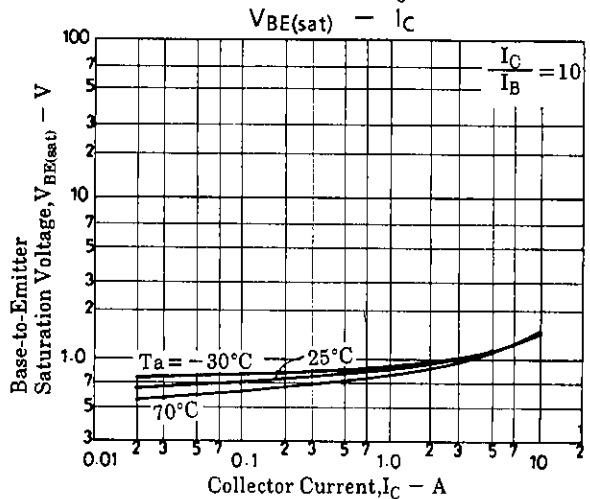
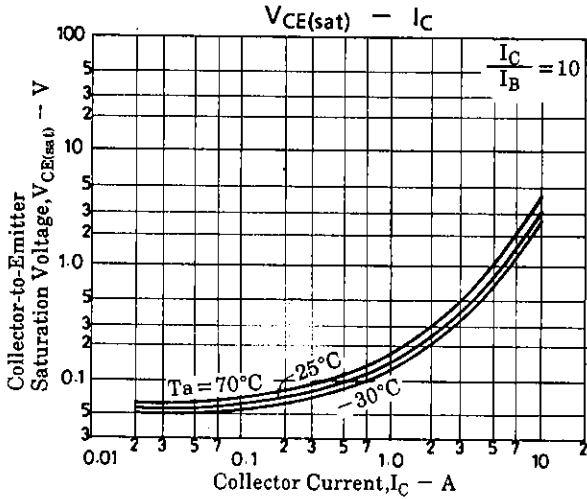
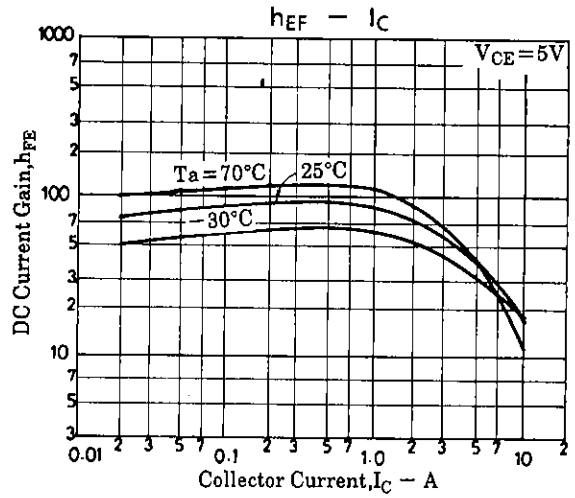
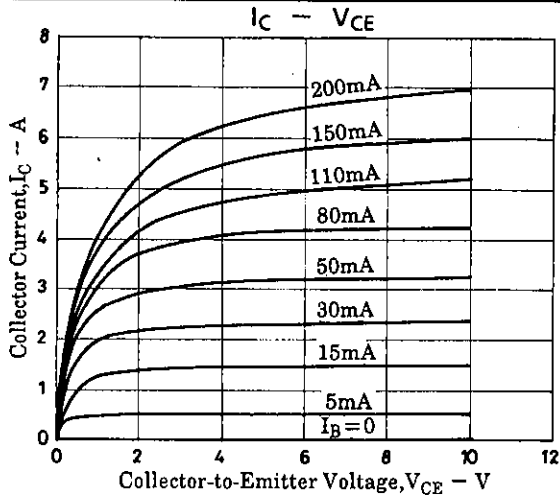
| | | | min | typ | max | unit |
|--------------------------|---------------|---------------------------------------|-----|-----|-----|---------------|
| Collector Cutoff Current | I_{CBO} | $V_{CB} = 40\text{V}, I_E = 0$ | | | 0.1 | mA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB} = 5\text{V}, I_C = 0$ | | | 0.1 | mA |
| DC Current Gain | $h_{FE(1)}$ | $V_{CE} = 5\text{V}, I_C = 1\text{A}$ | 30 | | 160 | |
| | $h_{FE(2)}$ | $V_{CE} = 5\text{V}, I_C = 4\text{A}$ | 25 | | | |
| Gain-Bandwidth Product | f_T | $V_{CE} = 5\text{V}, I_C = 1\text{A}$ | | 10 | | MHz |
| C-E Saturation Voltage | $V_{CE(sat)}$ | $I_C = 4\text{A}, I_B = 0.4\text{A}$ | | 0.5 | 1.0 | V |
| B-E Saturation Voltage | $V_{BE(sat)}$ | $I_C = 4\text{A}, I_B = 0.4\text{A}$ | | | 1.5 | V |
| C-B Breakdown Voltage | $V_{(BR)CBO}$ | $I_C = 5\text{mA}, I_E = 0$ | 200 | | | V |
| C-E Breakdown Voltage | $V_{(BR)CEO}$ | $I_C = 5\text{mA}, R_{BE} = \infty$ | 60 | | | V |
| E-B Breakdown Voltage | $V_{(BR)EBO}$ | $I_E = 5\text{mA}, I_C = 0$ | 6 | | | V |
| Fall Time | t_f | See specified Test Circuit. | | 0.2 | 0.5 | μs |

Specified Test Circuit



Package Dimensions 2010C





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