

NPN TRIPLE DIFFUSED PLANAR SILICON TRANSISTOR

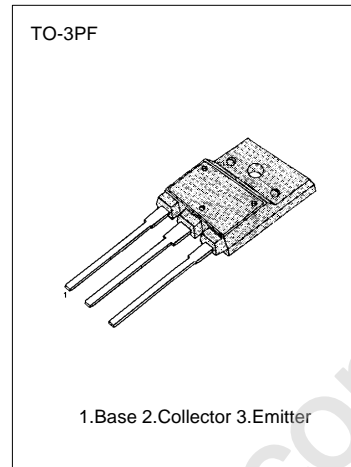
KSD5072

COLOR TV HORIZONTAL OUTPUT APPLICATION (DAMPER DIODE BUILT IN)

- High Collector-Base Voltage ($V_{CB0}=1500V$)
- High Switching Speed (t_f . max=0.4 μ s)

ABSOLUTE MAXIMUM RATING

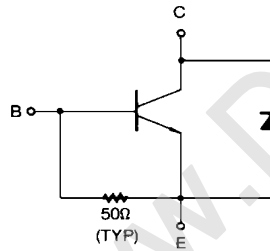
| Characteristic | Symbol | Rating | Unit |
|---|-----------|-----------|------------|
| Collector Base Voltage | V_{CB0} | 1500 | V |
| Collector Emitter Voltage | V_{CEO} | 800 | V |
| Emitter Base Voltage | V_{EBO} | 6 | V |
| Collector Current | I_C | 5 | A |
| Collector Current (Peak) | I_C | 16 | A |
| Collector Dissipation ($T_C=250^\circ C$) | P_C | 60 | W |
| Junction Temperature | T_J | 150 | $^\circ C$ |
| Storage Temperature | T_{STG} | -55 ~ 150 | $^\circ C$ |



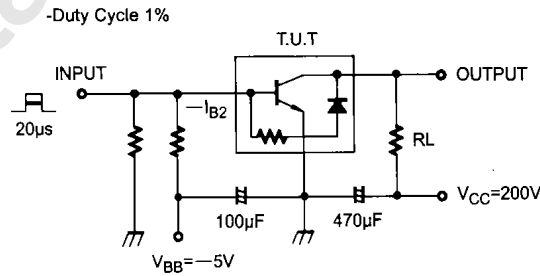
ELECTRICAL CHARACTERISTICS ($T_C=25^\circ C$)

| Characteristic | Symbol | Test Condition | Min | Typ | Max | Unit |
|--------------------------------------|---------------|--|-----|-----|-----|---------|
| Collector Cutoff Current | I_{CB0} | $V_{CB} = 800V, I_E = 0$ | | | 10 | μA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB} = 4V, I_C = 0$ | 40 | | 200 | mA |
| DC Current Gain | h_{FE} | $V_{CE} = 5V, I_C = 1A$ | 8 | | - | - |
| Collector Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 4A, I_B = 0.8A$ | | 3 | 5 | V |
| Base Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C = 4A, I_B = 0.8A$ | | | 1.5 | V |
| Current Gain Bandwidth Product | f_T | $V_{CE} = 10V, I_C = 1A$ | | 3 | | MHz |
| Damper Diode Turn On Voltage | V_F | $I_F = 5A$ | | | 2 | V |
| Fall Time | t_f | $I_C = 4A, I_{B1} = 0.8A$ $I_{B2} = -1.6A, V_{CC} = 200V$ $R_L = 50\Omega$ | | | 0.4 | μs |

-EQUIVALENT CIRCUIT



-SWITCHING TIME TEST CIRCUIT



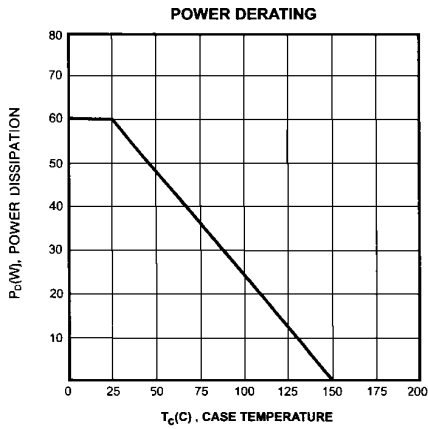
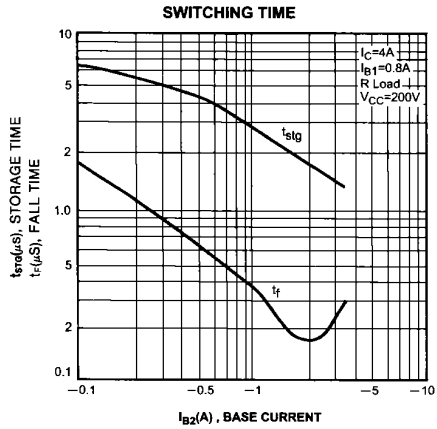
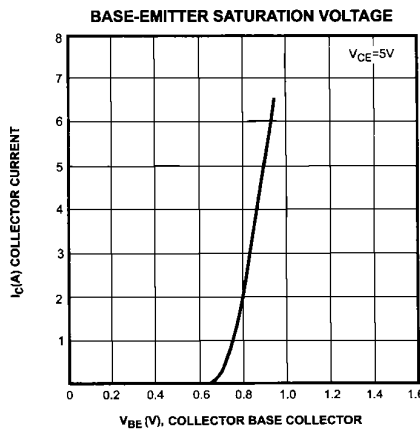
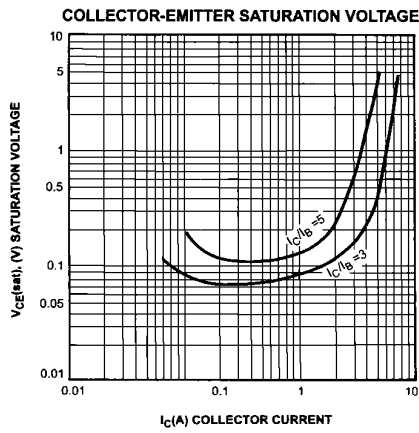
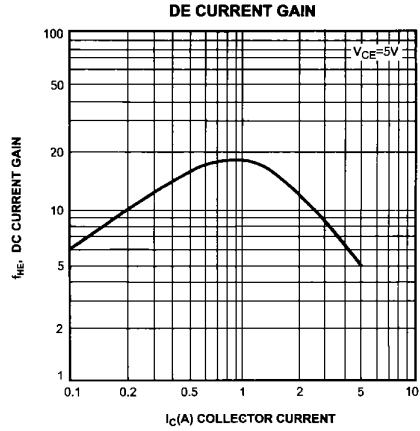
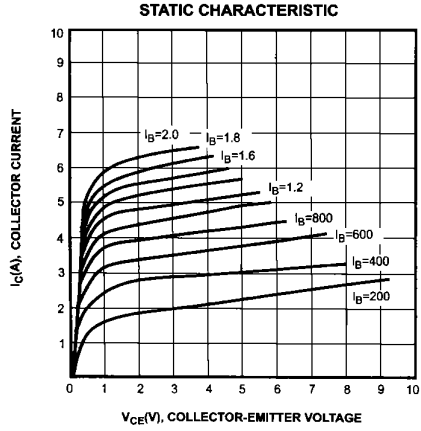
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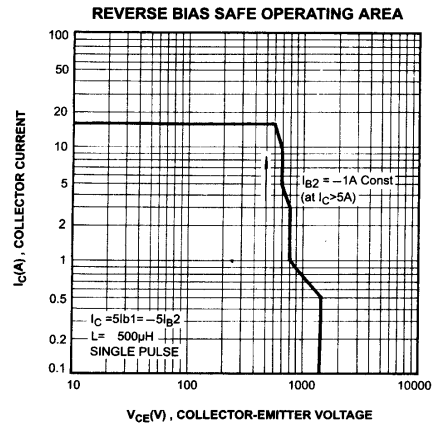
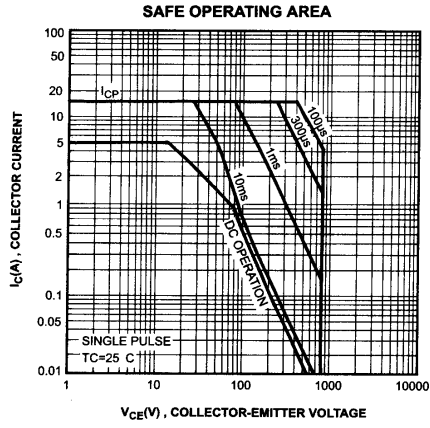
Rev B.

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|--------------------------|------------------------|---|
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