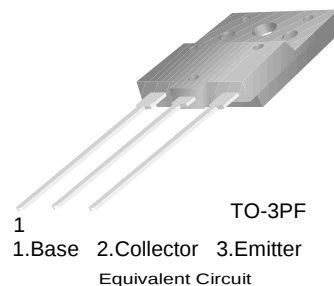


## FJAF6806D

FJAF6806D

### High Voltage Color Display Horizontal Deflection Output (Damper Diode Built In)

- High Collector-Base Breakdown Voltage :  $BV_{CBO} = 1500V$
- High Switching Speed :  $t_f(\text{typ.}) = 0.1\mu s$
- For Color TV



### NPN Triple Diffused Planar Silicon Transistor

#### Absolute Maximum Ratings $T_C = 25^\circ C$ unless otherwise noted

| Symbol     | Parameter                 | Rating    | Units      |
|------------|---------------------------|-----------|------------|
| $V_{CBO}$  | Collector-Base Voltage    | 1500      | V          |
| $V_{CEO}$  | Collector-Emitter Voltage | 750       | V          |
| $V_{EBO}$  | Emitter-Base Voltage      | 6         | V          |
| $I_C$      | Collector Current (DC)    | 6         | A          |
| $I_{CP}^*$ | Collector Current (Pulse) | 12        | A          |
| $P_C$      | Collector Dissipation     | 50        | W          |
| $T_J$      | Junction Temperature      | 150       | $^\circ C$ |
| $T_{STG}$  | Storage Temperature       | -55 ~ 150 | $^\circ C$ |

\* Pulse Test: Pulse Width=5ms, Duty Cycle  $\leq 10\%$

#### Electrical Characteristics $T_C = 25^\circ C$ unless otherwise noted

| Symbol                 | Parameter                            | Test Conditions                            | Min    | Typ | Max | Units   |
|------------------------|--------------------------------------|--------------------------------------------|--------|-----|-----|---------|
| $I_{CES}$              | Collector Cut-off Current            | $V_{CB}=1400V, R_{BE}=0$                   |        |     | 1   | mA      |
| $I_{CBO}$              | Collector Cut-off Current            | $V_{CB}=800V, I_E=0$                       |        |     | 10  | $\mu A$ |
| $I_{EBO}$              | Emitter Cut-off Current              | $V_{EB}=4V, I_C=0$                         | 40     |     | 200 | mA      |
| $BV_{EBO}$             | Base-Emitter Breakdown Voltage       | $I_E=300mA, I_C=0$                         | 6      |     |     | V       |
| $h_{FE1}$<br>$h_{FE2}$ | DC Current Gain                      | $V_{CE}=5V, I_C=1A$<br>$V_{CE}=5V, I_C=4A$ | 8<br>4 |     | 7   |         |
| $V_{CE(sat)}$          | Collector-Emitter Saturation Voltage | $I_C=4A, I_B=1A$                           |        |     | 5   | V       |
| $V_{BE(sat)}$          | Base-Emitter Saturation Voltage      | $I_C=4A, I_B=1A$                           |        |     | 1.5 | V       |
| $V_F$                  | Damper Diode Turn On Voltage         | $I_F = 4.5A$                               |        |     | 2   | V       |
| $t_{STG}^*$            | Storage Time                         | $V_{CC}=200V, I_C=4A, R_L=50\Omega$        |        |     | 3   | $\mu s$ |
| $t_f^*$                | Fall Time                            | $I_{B1}=1.0A, I_{B2} = -2.0A$              |        |     | 0.2 | $\mu s$ |

\* Pulse Test:  $PW=20\mu s$ , duty Cycle=1% Pulsed

#### Thermal Characteristics $T_C = 25^\circ C$ unless otherwise noted

| Symbol          | Parameter                            | Typ | Max | Units        |
|-----------------|--------------------------------------|-----|-----|--------------|
| $R_{\theta JC}$ | Thermal Resistance, Junction to Case |     | 2.5 | $^\circ C/W$ |

# Typical Characteristics

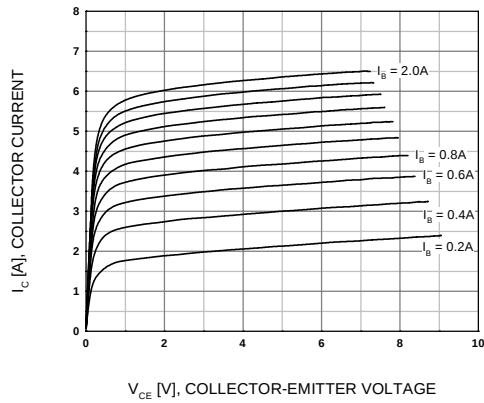


Figure 1. Static Characteristic

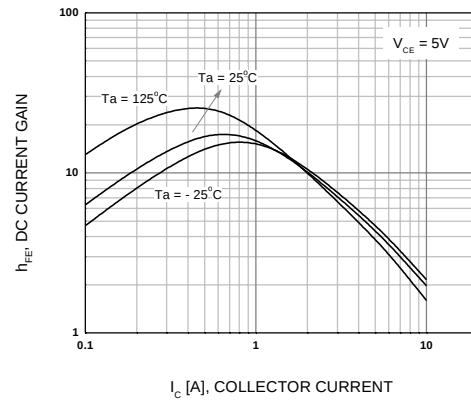


Figure 2. DC current Gain

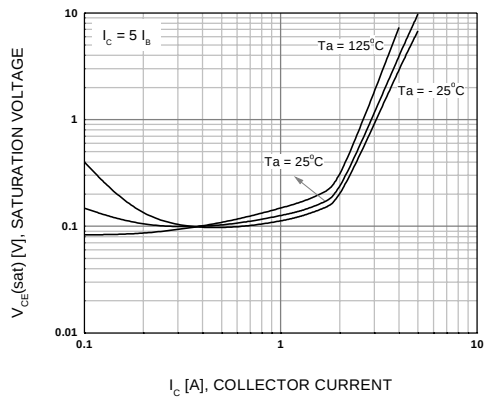


Figure 3. Collector-Emitter Saturation Voltage

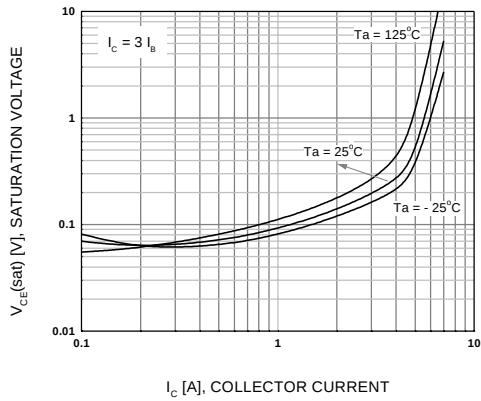


Figure 4. Collector-Emitter Saturation Voltage

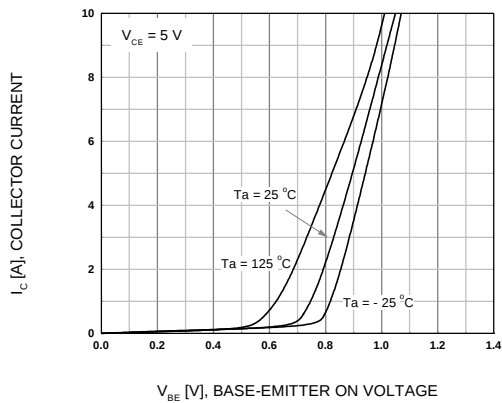


Figure 5. Base-Emitter On Voltage

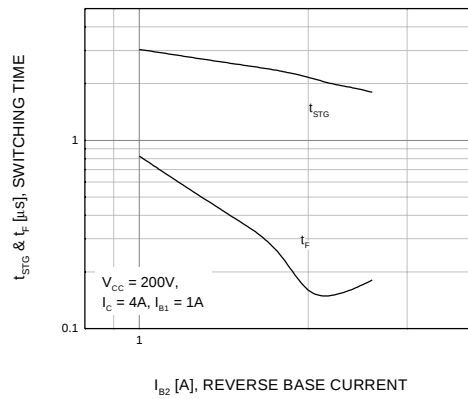


Figure 6. Resistive Load Switching Time

## Typical Characteristics (Continued)

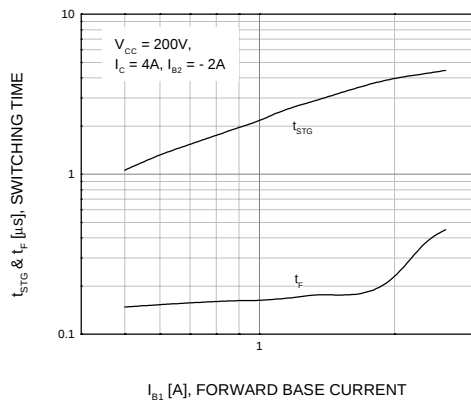


Figure 7. Resistive Load Switching Time

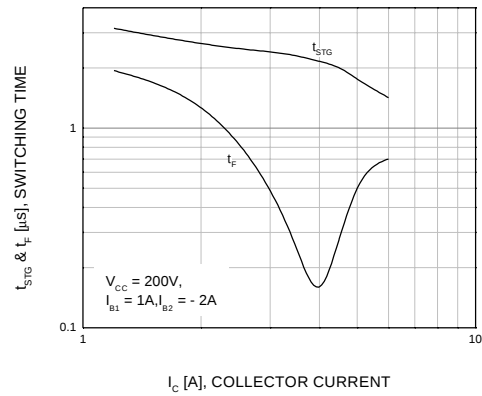


Figure 8. Resistive Load Switching Time

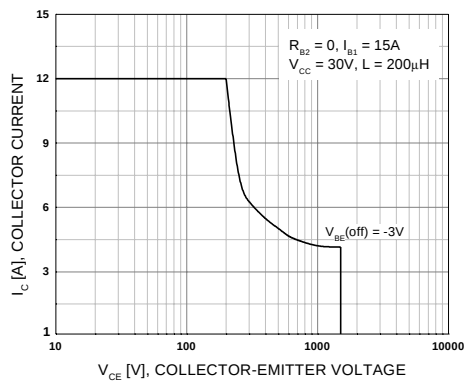


Figure 9. Reverse Bias Safe Operating Area

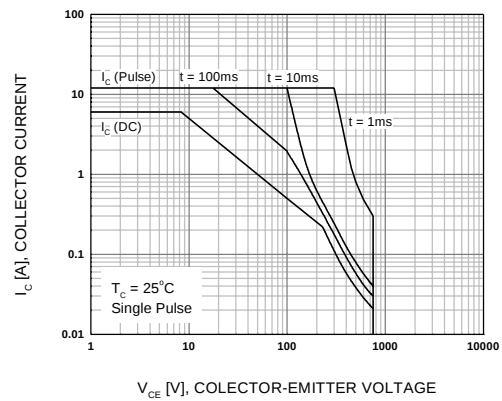


Figure 10. Forward Bias Safe Operating Area

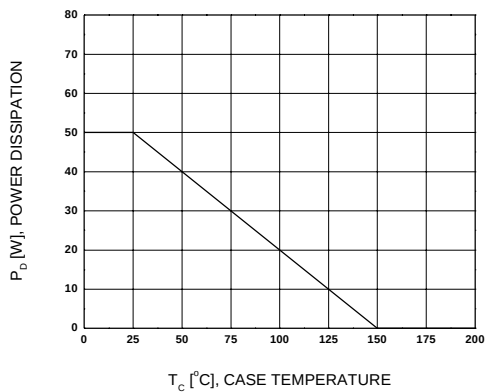
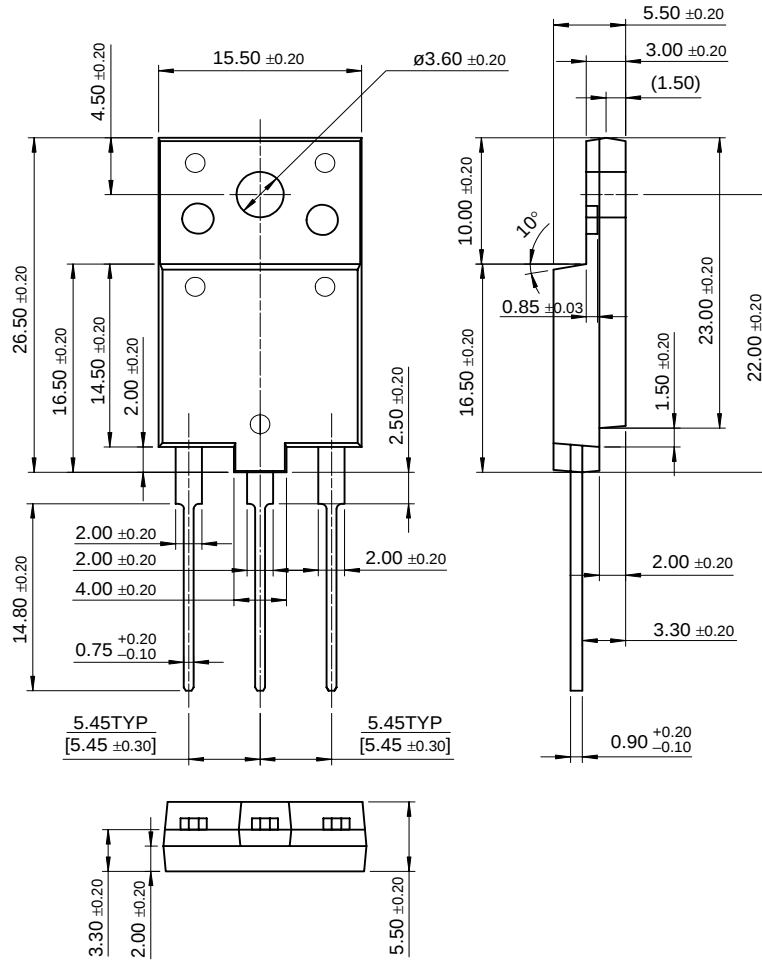


Figure 11. Power Derating

# Package Dimensions

## TO-3PF



Dimensions in Millimeters

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| DOVE <sup>TM</sup>                | HiSeC <sup>TM</sup>              | Power247 <sup>TM</sup>           | SuperSOT <sup>TM</sup> -6    |                   |
| EcoSPARK <sup>TM</sup>            | I <sup>2</sup> C <sup>TM</sup>   | PowerTrench <sup>®</sup>         | SuperSOT <sup>TM</sup> -8    |                   |
| E <sup>2</sup> CMOS <sup>TM</sup> | ISOPPLANAR <sup>TM</sup>         | QFET <sup>TM</sup>               | SyncFET <sup>TM</sup>        |                   |
| EnSigna <sup>TM</sup>             | LittleFET <sup>TM</sup>          | QS <sup>TM</sup>                 | TinyLogic <sup>TM</sup>      |                   |
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| FACT Quiet series <sup>TM</sup>   | MicroPak <sup>TM</sup>           | Quiet Series <sup>TM</sup>       | UHC <sup>TM</sup>            |                   |
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