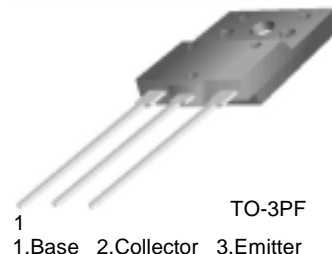


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FAIRCHILD
 SEMICONDUCTOR®

FJAF6812

High Voltage Color Display Horizontal Deflection Output

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



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) | 12 | A |
| I_{CP}^* | Collector Current (Pulse) | 24 | A |
| P_C | Collector Dissipation | 60 | W |
| T_J | Junction Temperature | 150 | $^\circ C$ |
| T_{STG} | Storage Temperature | -55 ~ 150 | $^\circ C$ |

* Pulse Test: $PW=300\mu s$, duty Cycle=2% Pulsed

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 | μA |
| I_{EBO} | Emitter Cut-off Current | $V_{EB}=4V, I_C=0$ | | | 1 | mA |
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E=500\mu A, I_C=0$ | 6 | | | V |
| h_{FE1} h_{FE2} | DC Current Gain | $V_{CE}=5V, I_C=1A$ $V_{CE}=5V, I_C=8A$ | 10 5 | | 40 8 | |
| $V_{CE}(\text{sat})$ | Collector-Emitter Saturation Voltage | $I_C=8A, I_B=2A$ | | | 3 | V |
| $V_{BE}(\text{sat})$ | Base-Emitter Saturation Voltage | $I_C=8A, I_B=2A$ | | | 1.5 | V |
| t_{STG}^* | Storage Time | $V_{CC}=200V, I_C=7A, R_L=30\Omega$ | | | 3 | μs |
| t_f^* | Fall Time | $I_{B1}=1.4A, I_{B2}=-2.8A$ | | | 0.2 | μs |

* 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 | 1.4 | 2.08 | $^\circ C/W$ |

Typical Characteristics

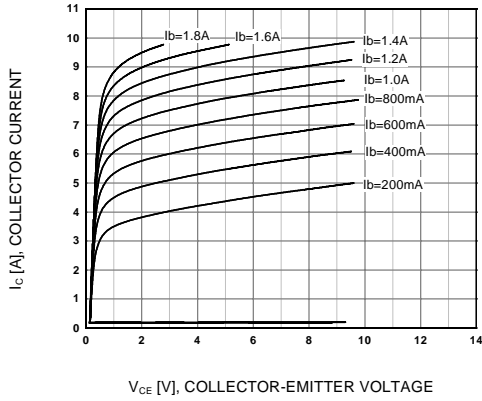


Figure 1. Static Characteristics

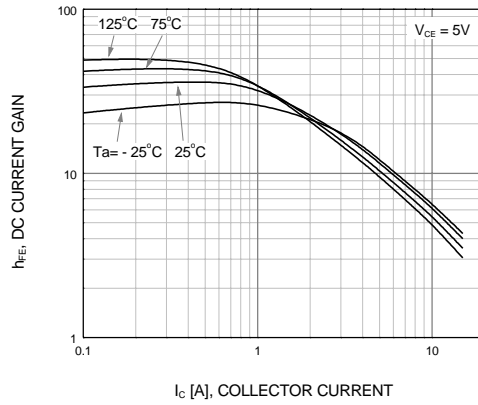


Figure 2. DC Current Gain

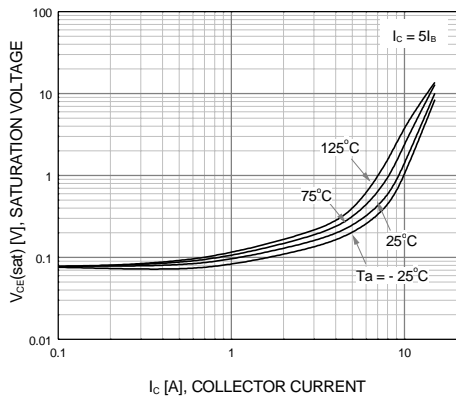


Figure 3. Collector-Emitter Saturation Voltage

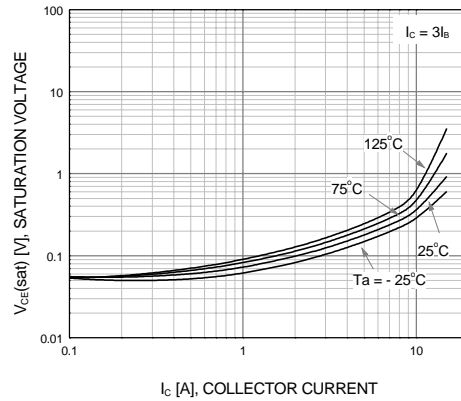


Figure 4. Collector-Emitter Saturation Voltage

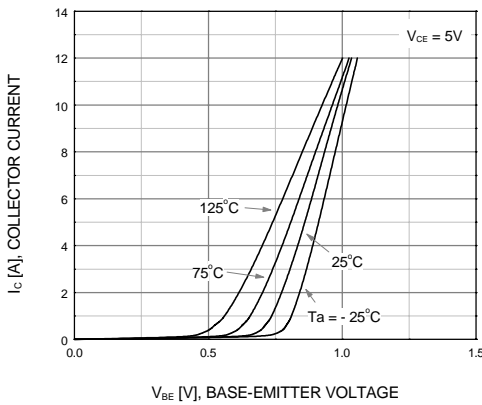


Figure 5. Base-Emitter On Voltage

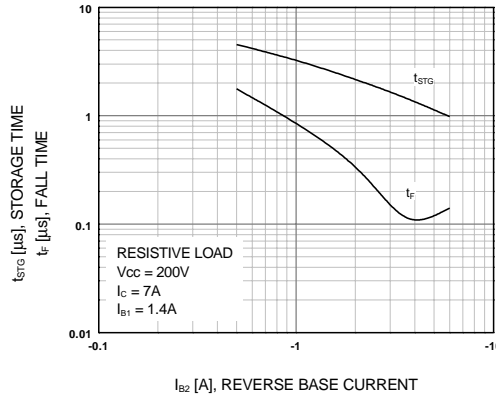


Figure 6. Switching Time

Typical Characteristics (Continued)

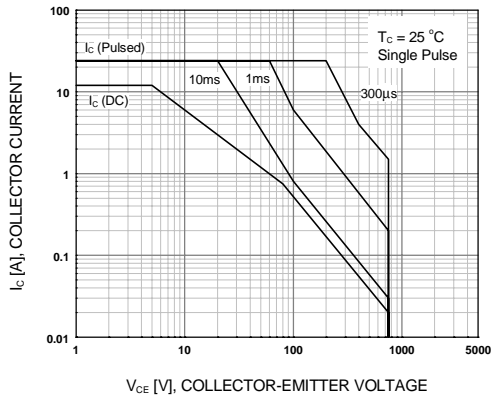


Figure 7. Forward Bias Safe Operating Area

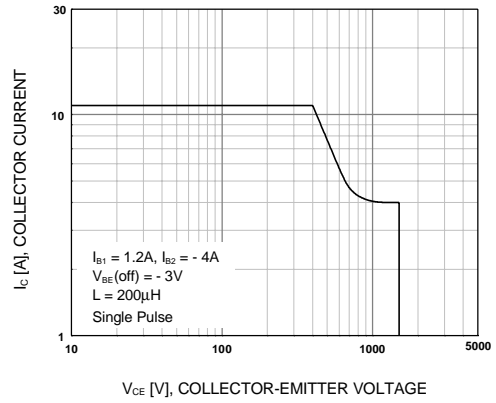


Figure 8. Reverse Bias Safe Operating Area

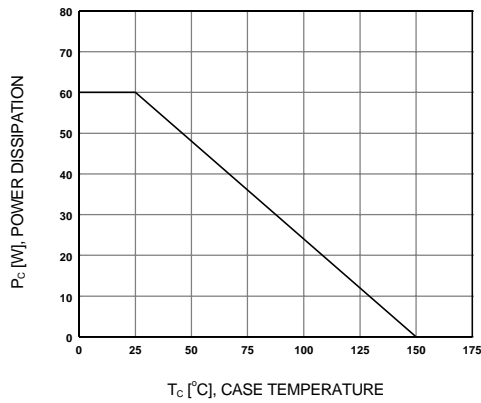
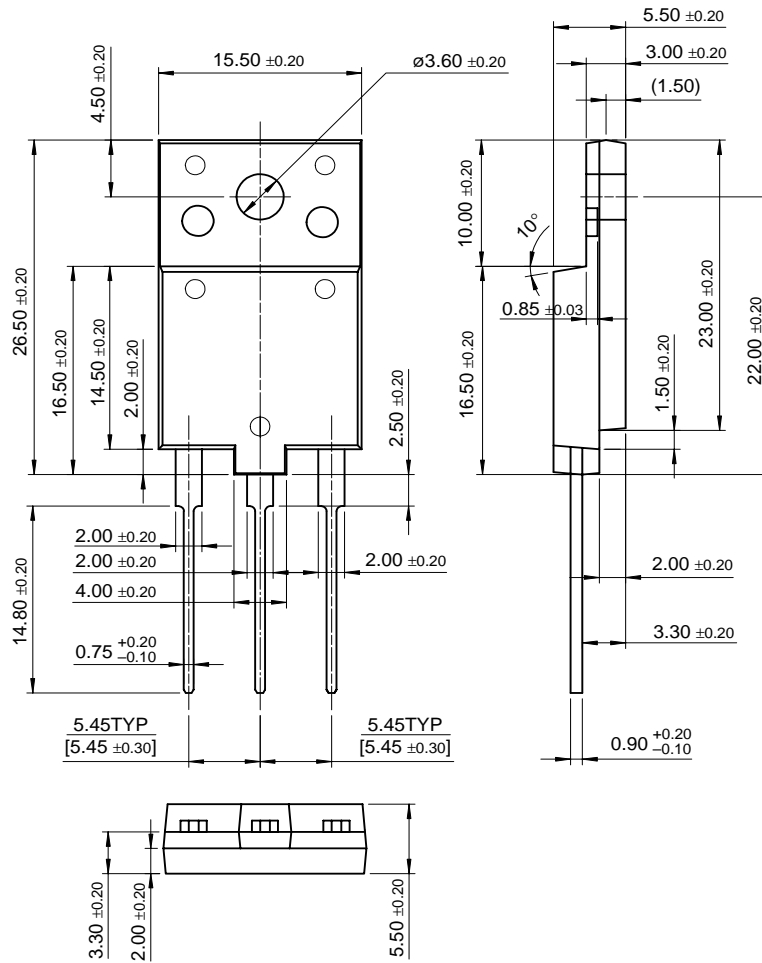


Figure 9. Power Derating

Package Dimensions

TO-3PF



Dimensions in Millimeters

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