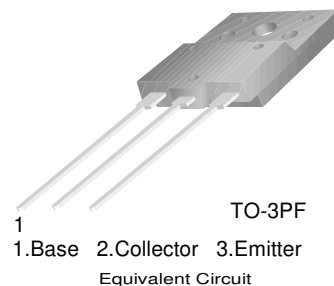


# FJAF6810D

FJAF6810D

## 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)	10	A
$I_{CP}^*$	Collector Current (Pulse)	20	A
$P_C$	Collector Dissipation	60	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

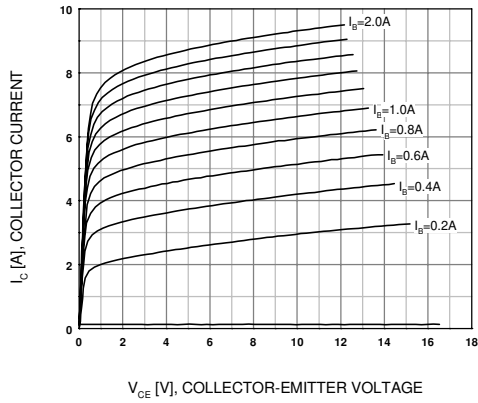
Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
$I_{CES}$	Collector Cut-off Current	$V_{CB}=1500V, R_{BE}=0$			1	mA
$I_{CBO}$	Collector Cut-off Current	$V_{CB}=800V, I_E=0$			10	$\mu A$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB}=4V, I_C=0$	40		250	mA
$BV_{EBO}$	Base-Emitter Breakdown Voltage	$I_E=300mA, I_C=0$	6			V
$h_{FE1}$ $h_{FE2}$	DC Current Gain	$V_{CE}=5V, I_C=1A$ $V_{CE}=5V, I_C=6A$	7 5		8	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=6A, I_B=1.5A$			3	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=6A, I_B=1.5A$			1.5	V
$V_F$	Damper Diode Turn On Voltage	$I_F=6A$			2	V
$t_{STG}^*$	Storage Time	$V_{CC}=200V, I_C=6A, R_L=33\Omega$			3	$\mu s$
$t_F^*$	Fall Time	$I_{B1}=1.2A, I_{B2}=-2.4A$			0.2	$\mu s$

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

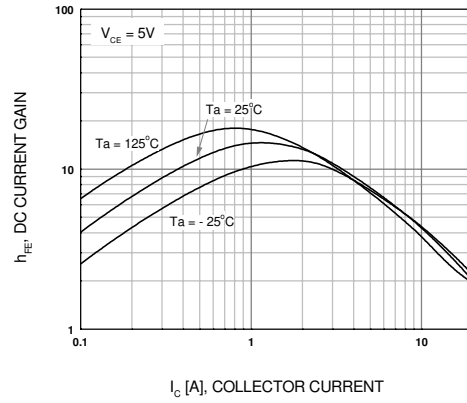
### Thermal Characteristics $T_C=25^\circ C$ unless otherwise noted

Symbol	Parameter	Typ	Max	Units
$R_{\theta JC}$	Thermal Resistance, Junction to Case		2.08	$^\circ C/W$

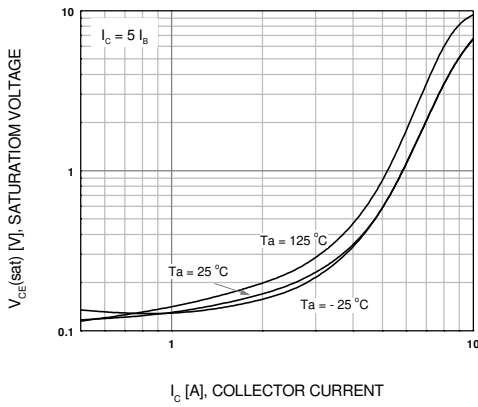
# Typical Characteristics



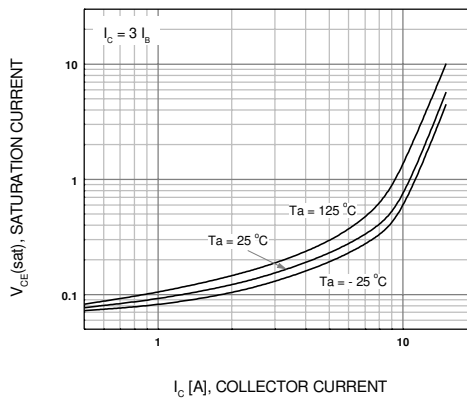
**Figure 1. Static Characteristic**



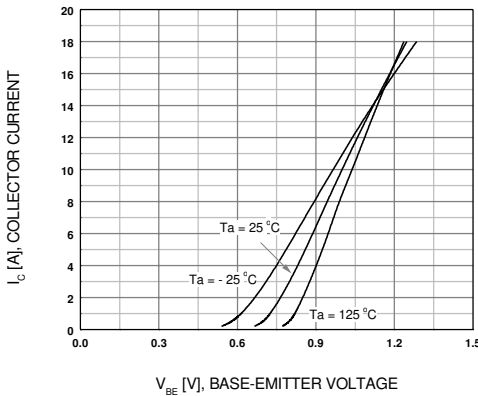
**Figure 2. DC current Gain**



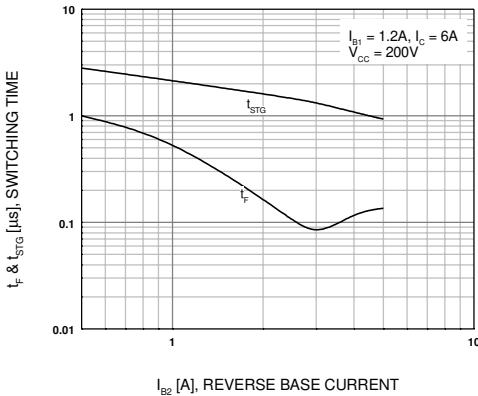
**Figure 3. Collector-Emitter Saturation Voltage**



**Figure 4. Collector-Emitter Saturation Voltage**



**Figure 5. Base-Emitter On Voltage**



**Figure 6. Resistive Load Switching Time**

## Typical Characteristics (Continued)

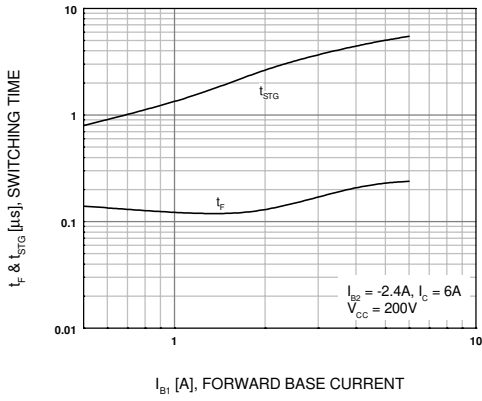


Figure 7. Resistive Load Switching Time

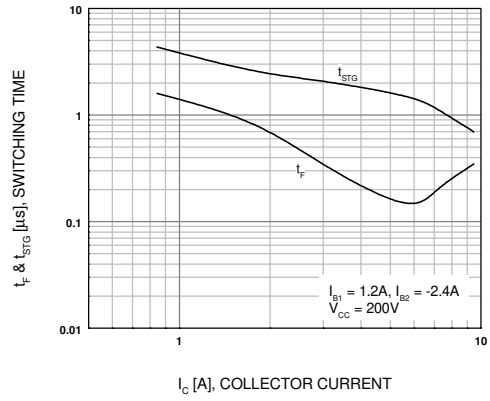


Figure 8. Resistive Load Switching Time

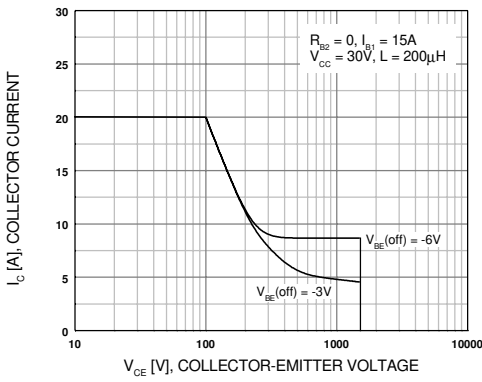


Figure 9. Reverse Bias Safe Operating Area

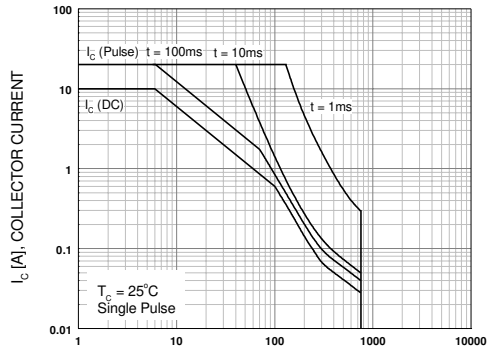


Figure 10. Forward Bias Safe Operating Area

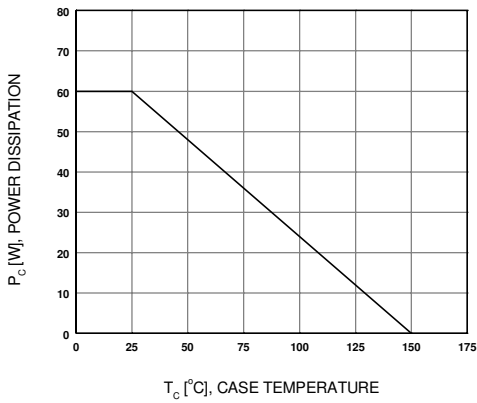
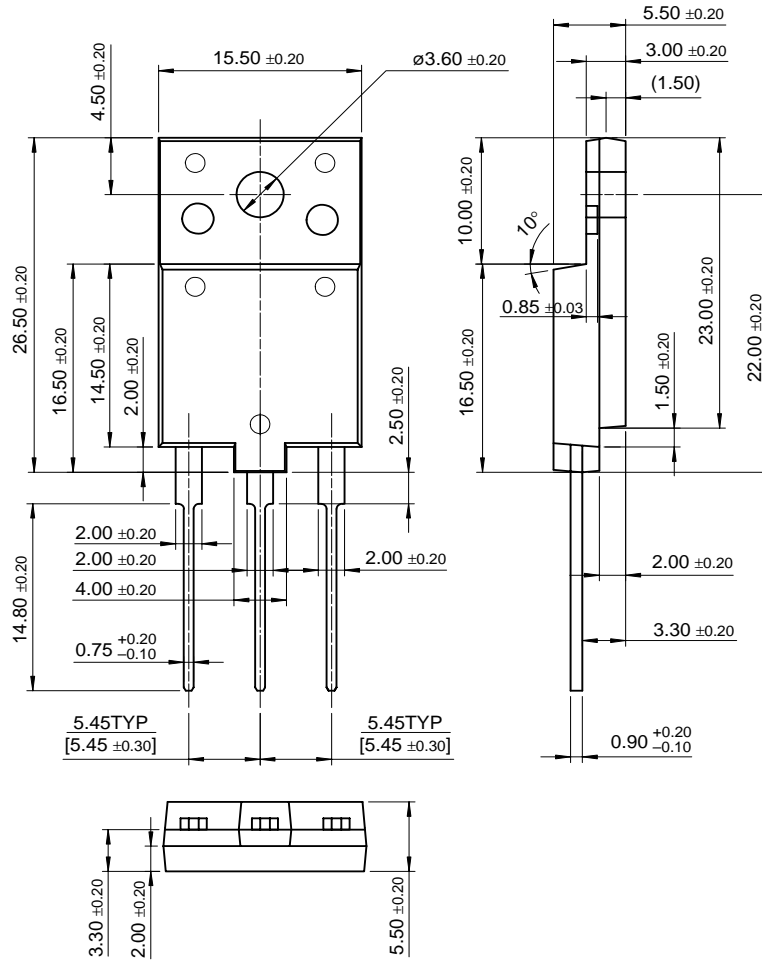


Figure 11. Power Derating

# Package Dimensions

FJAF6810D

## TO-3PF



Dimensions in Millimeters

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