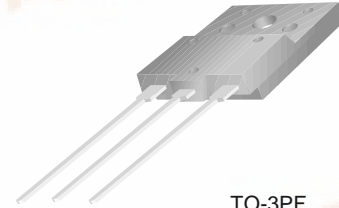


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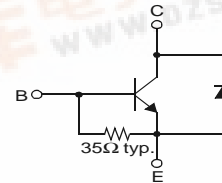
High Voltage Color Display Horizontal Deflection Output (Damper Diode Built-In)

- High Collector-Base Breakdown Voltage : $V_{CB0} = 1500V$
- High Switching Speed : $t_f(\text{typ.}) = 0.1\mu s$
- For Color TV



TO-3PF
1.Base 2.Collector 3.Emitter

Equivalent Circuit



NPN Triple Diffused Planar Silicon Transistor

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

Symbol	Parameter	Rating	Units
V_{CB0}	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	μA
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}	DC Current Gain	$V_{CE}=5V, I_C=1A$	7			
h_{FE2}		$V_{CE}=5V, I_C=6A$	5		8	
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C=6A, I_B=1.5A$			3	V
$V_{BE}(\text{sat})$	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	μs
t_f^*	Fall Time	$I_{B1}=1.2A, I_{B2} = - 2.4A$			0.2	μs

* Pulse Test: PW=20 μs , 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

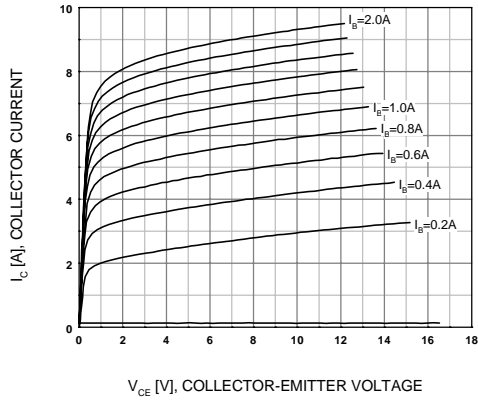


Figure 1. Static Characteristic

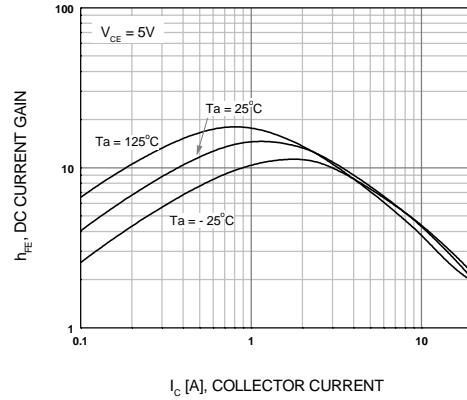


Figure 2. DC current Gain

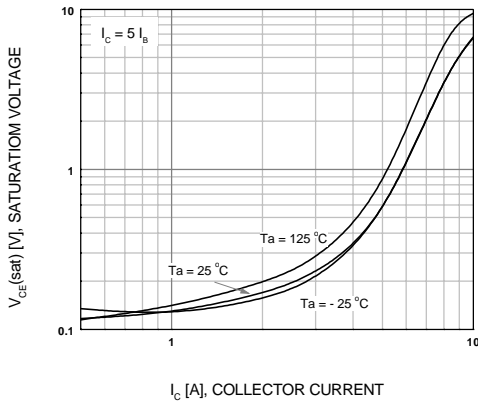


Figure 3. Collector-Emitter Saturation Voltage

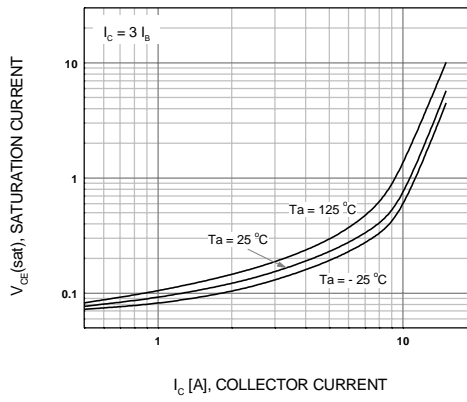


Figure 4. Collector-Emitter Saturation Voltage

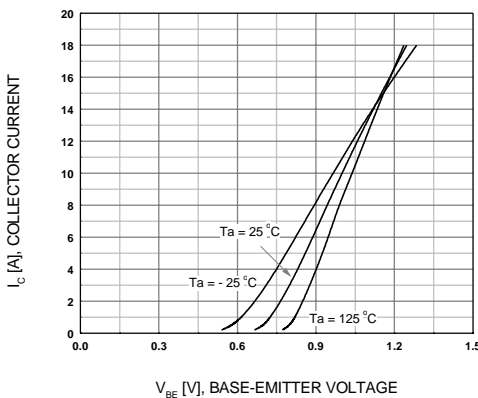


Figure 5. Base-Emitter On Voltage

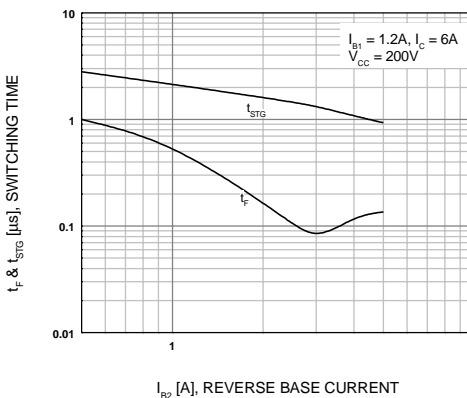


Figure 6. Resistive Load Switching Time

Typical Characteristics (Continued)

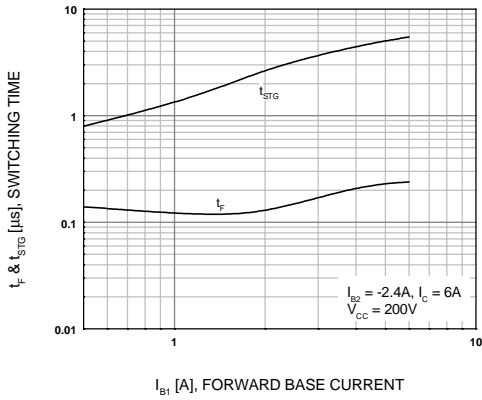


Figure 7. Resistive Load Switching Time

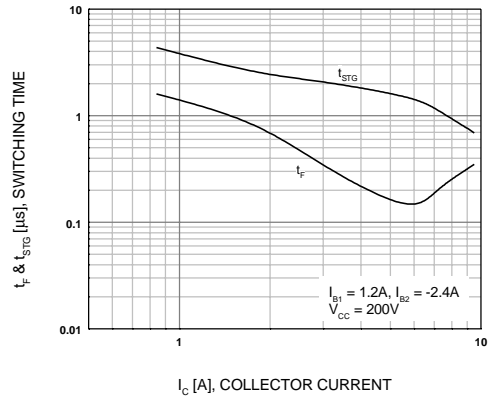


Figure 8. Resistive Load Switching Time

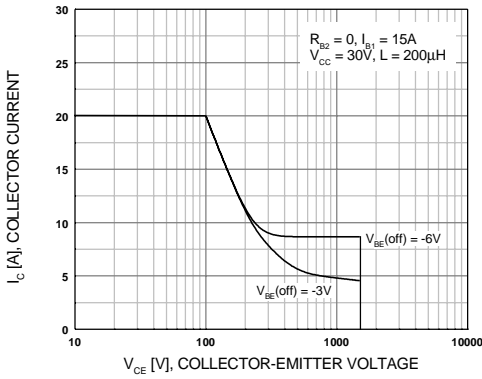


Figure 9. Reverse Bias Safe Operating Area

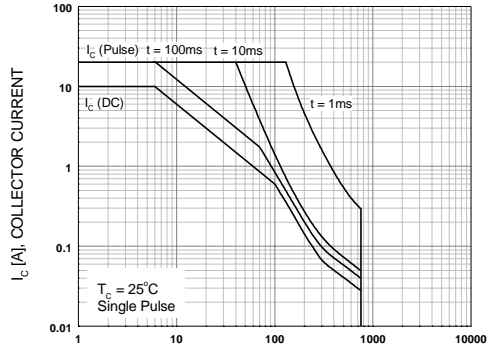


Figure 10. Forward Bias Safe Operating Area

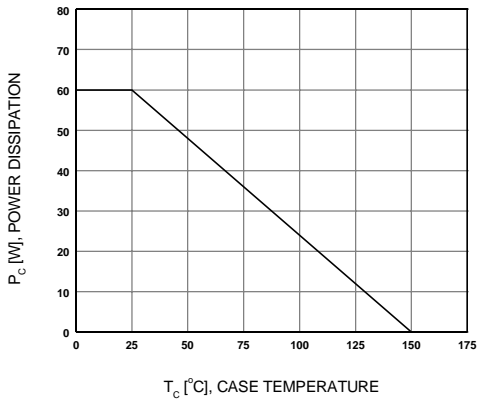
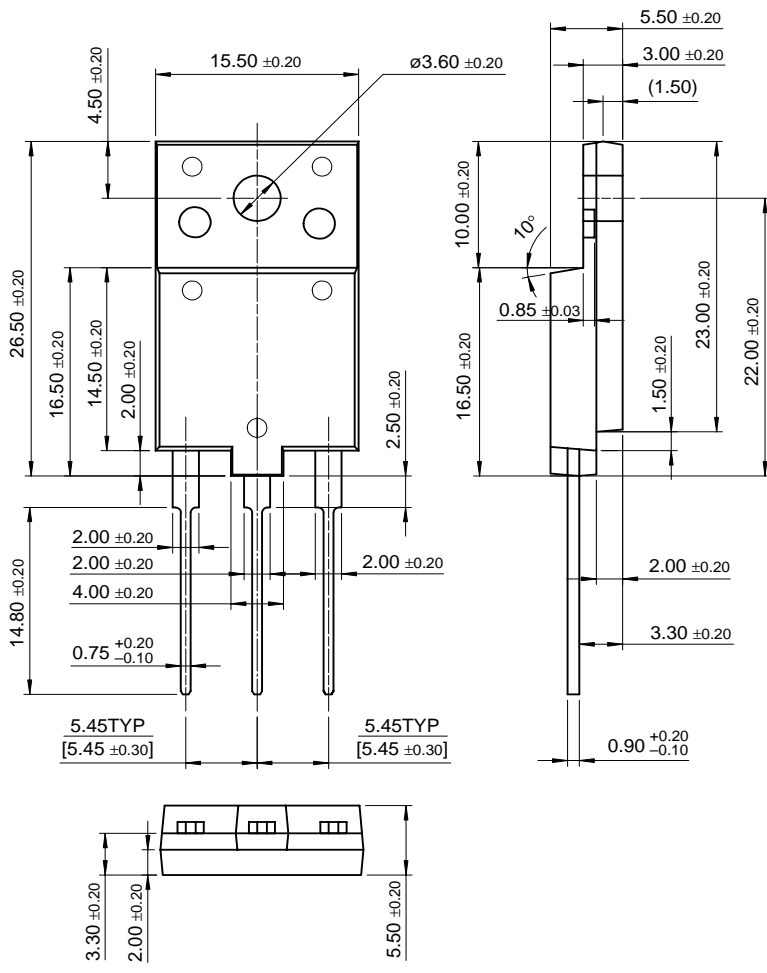


Figure 11. Power Derating

Package Demensions

FJAF6810D

TO-3PF



Dimensions in Millimeters

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