

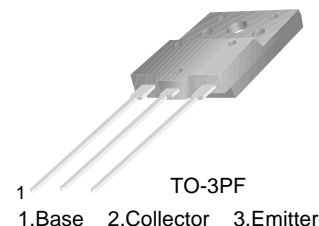
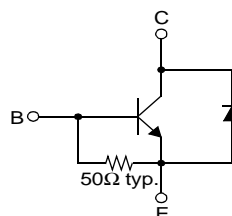
KSD5702

KSD5702

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

- High Collector-Base Voltage : $V_{CBO}=1500V$
- High Switching Speed $t_F = 0.4\mu s$ (Max.)
- For Color TV

Equivalent Circuit



NPN Triple Diffused Planar Silicon Transistor

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	1500	V
V_{CEO}	Collector-Emitter Voltage	800	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	6	A
I_{CP}	Collector Current (Pulse)	16	A
P_C	Collector Dissipation ($T_C=25^\circ C$)	60	W
T_J	Junction Temperature	150	$^\circ C$
T_{STG}	Storage Temperature	- 55 ~ 150	$^\circ C$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
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		200	mA
h_{FE1}	DC Current Gain	$V_{CE} = 5V, I_C = 1A$	10		30	-
h_{FE2}		$V_{CE} = 5V, I_C = 3A$	5		15	-
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 4A, I_B = 0.8A$		2	5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 4A, I_B = 0.8A$			1.5	V
f_T	Current Gain Bandwidth Product	$V_{CE} = 10V, I_C = 1A$		3		MHz
V_F	Damper Diode Turn On Voltage	$I_F = 6A$			2	V
t_F	Fall Time	$V_{CC} = 200V, I_C = 4A$ $I_{B1} = 0.8A, I_{B2} = -1.6A$ $R_L = 50\Omega$			0.4	μs

Typical Characteristics

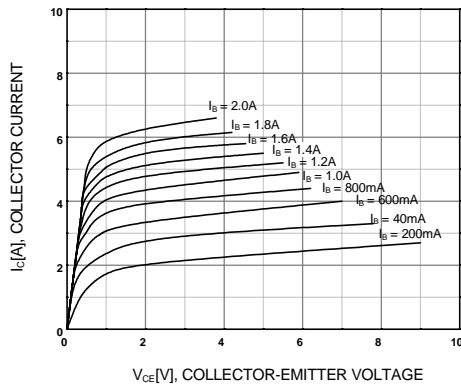


Figure 1. Static Characteristic

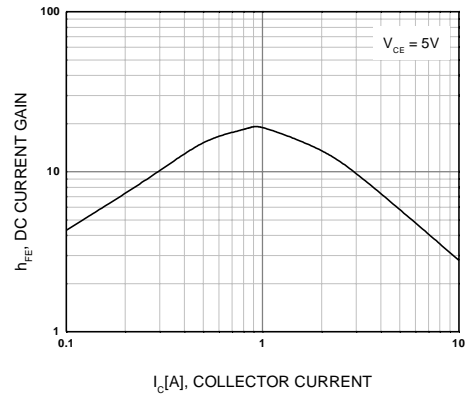


Figure 2. DC current Gain

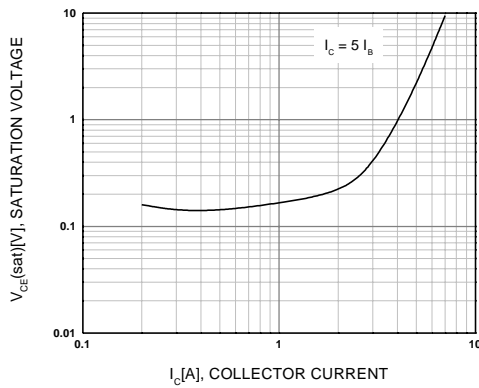


Figure 3. Collector-Emitter Saturation Voltage

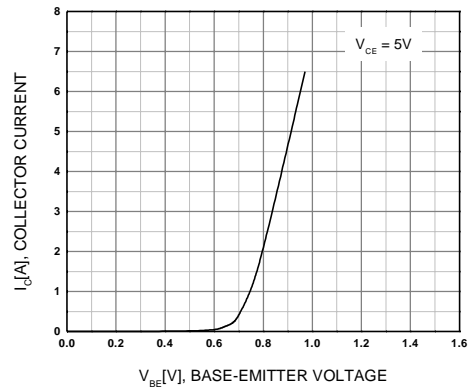


Figure 4. Base-Emitter On Voltage

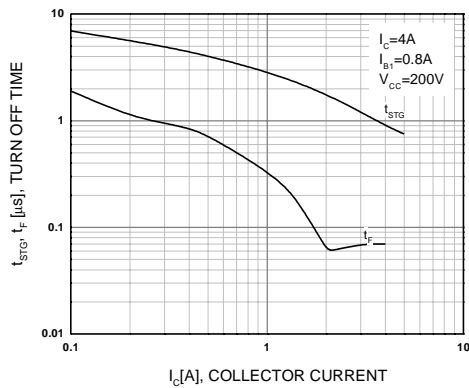


Figure 5. Switching Time

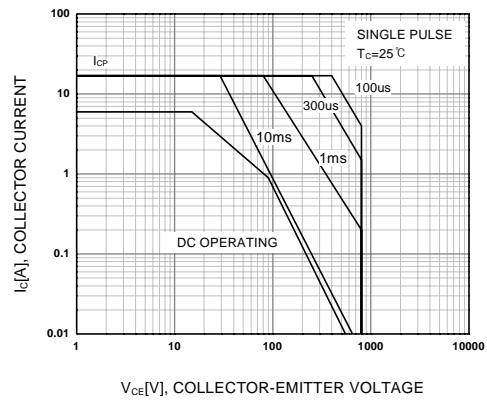


Figure 6. Safe Operating Area

Typical Characteristics (Continued)

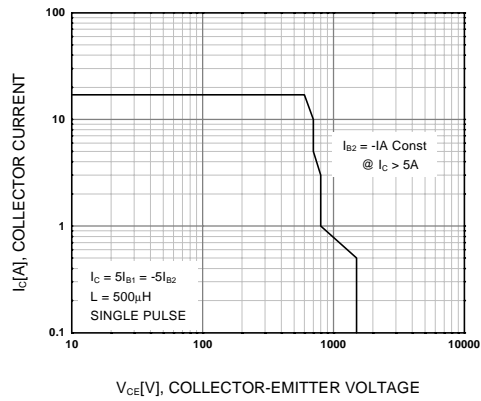


Figure 7. Reverse Bias Safe Operating Area

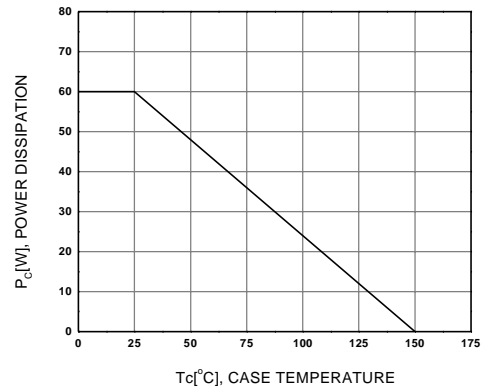


Figure 8. Power Derating

KSD5702

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