

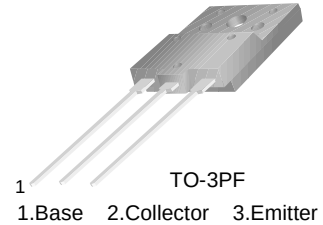
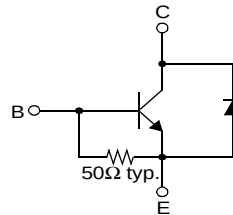
KSD5701

KSD5701

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 (DC)	3.5	A
I_{CP}	Collector Current (Pulse)	10	A
P_C	Collector Dissipation ($T_C=25^\circ C$)	50	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		250	mA
h_{FE1} h_{FE2}	DC Current Gain	$V_{CE} = 5V, I_C = 0.5A$ $V_{CE} = 5V, I_C = 2.5A$	10 2.5		30	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 2.5A, I_B = 0.8A$			5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 2.5A, I_B = 0.8A$			1.5	V
f_T	Current Gain Bandwidth Product	$V_{CE} = 10V, I_C = 0.5A$		3		MHz
V_F	Damper Diode Turn On Voltage	$I_F = 3.5A$			2	V
t_F	Fall Time	$V_{CC} = 200V, I_C = 3A$ $I_{B1} = 0.8A, I_{B2} = - 1.6A$ $R_L = 66.7\Omega$			0.4	μs

Typical Characteristics

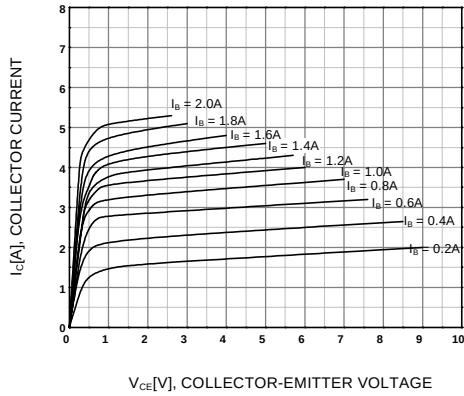


Figure 1. Static Characteristic

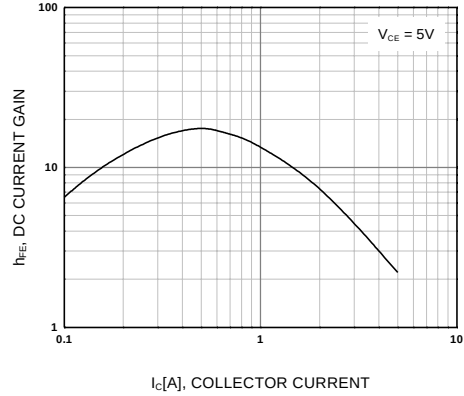


Figure 2. DC current Gain

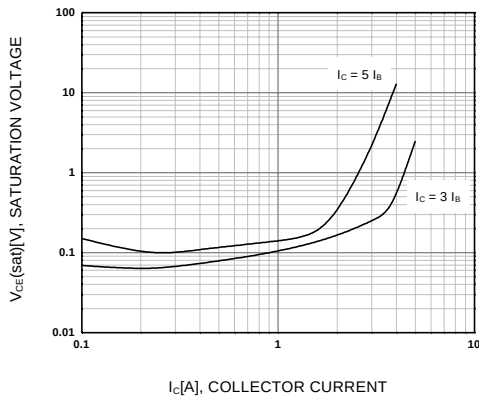


Figure 3. Collector-Emitter Saturation Voltage

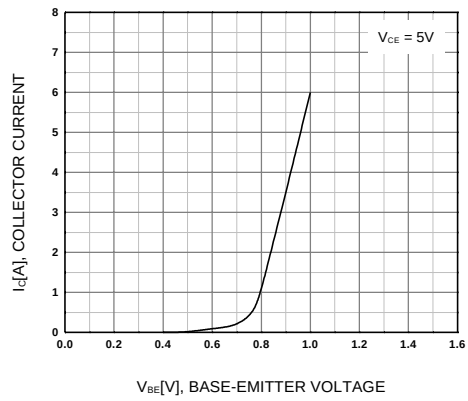


Figure 4. Base-Emitter On Voltage

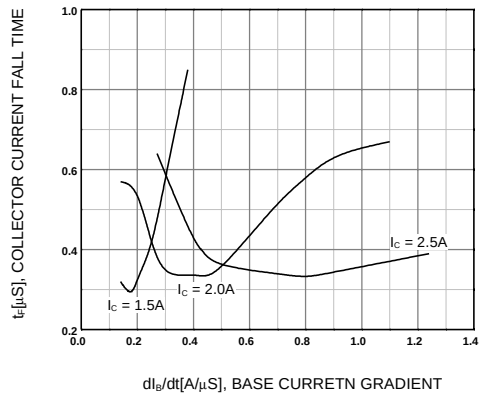


Figure 5. Switching Characteristic 1

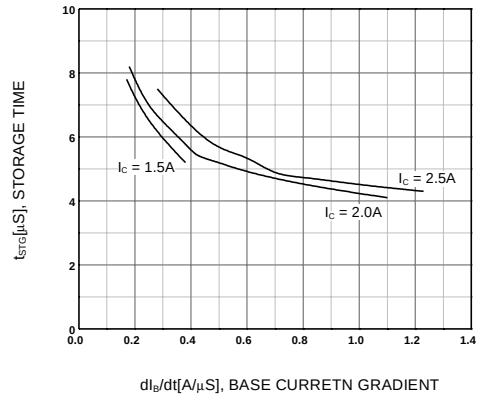


Figure 6. Switching Characteristic 2

Typical Characteristics (Continued)

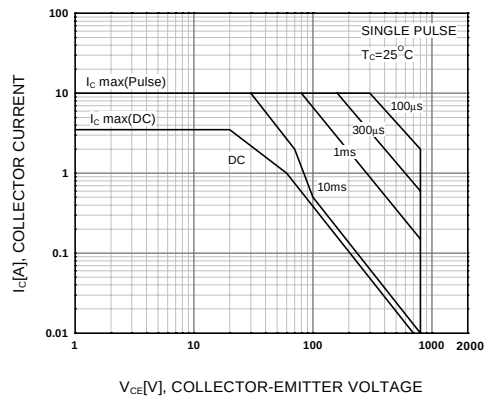


Figure 7. Safe Operating Area

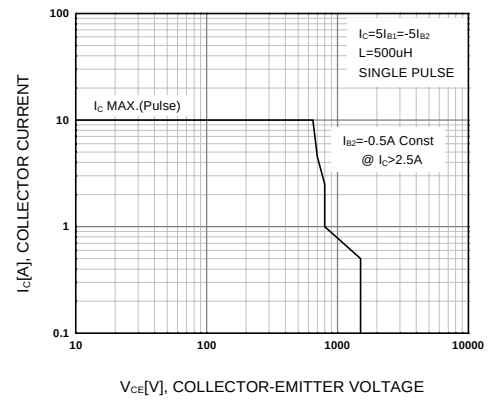


Figure 8. Reverse Bias Safe Operating Area

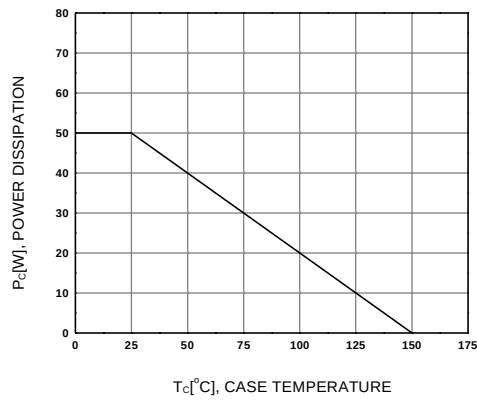


Figure 9. Power Derating

Technical drawing of a mechanical part, showing three views: Front View, Side View, and Top View. Dimensions are given in millimeters (mm) with tolerances.

Front View Dimensions:

- Overall Width: 15.50 ± 0.20
- Overall Height: 26.50 ± 0.20
- Top Section Height: 4.50 ± 0.20
- Central Slot Width: 2.00 ± 0.20
- Slot Depth: 2.50 ± 0.20
- Pin Diameter: $\varnothing 3.60 \pm 0.20$
- Pin Spacing (Center-to-Center): 14.50 ± 0.20
- Pin Length (from slot bottom): 14.80 ± 0.20
- Pin Diameter (bottom): 5.45 TYP [5.45 ± 0.30]
- Pin Spacing (Bottom): 5.45 TYP [5.45 ± 0.30]
- Pin Diameter (top): $0.75^{+0.20}_{-0.10}$
- Pin Spacing (Top): 2.00 ± 0.20
- Pin Spacing (Middle): 2.00 ± 0.20
- Pin Spacing (Bottom): 2.00 ± 0.20

Side View Dimensions:

- Overall Width: 5.50 ± 0.20
- Overall Height: 22.00 ± 0.20
- Top Section Height: 3.00 ± 0.20
- Chamfer Angle: 10°
- Chamfer Width: 0.85 ± 0.03
- Pin Diameter (bottom): $0.90^{+0.20}_{-0.10}$
- Pin Spacing (Bottom): 2.00 ± 0.20
- Pin Spacing (Middle): 1.50 ± 0.20
- Pin Spacing (Top): 23.00 ± 0.20

Top View Dimensions:

- Overall Width: 14.80 ± 0.20
- Overall Height: 16.50 ± 0.20
- Pin Spacing (Top): 2.00 ± 0.20
- Pin Spacing (Middle): 2.00 ± 0.20
- Pin Spacing (Bottom): 2.00 ± 0.20

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