

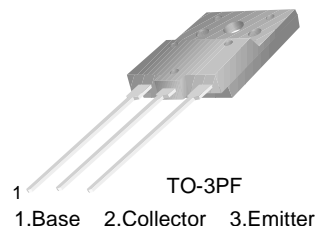
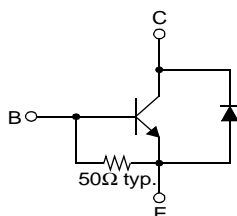
KSC5801

KSC5801

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

- High Breakdown Voltage : $BV_{CBO}=1500V$
- High Speed Switching : $t_f=0.1\mu s$ (Typ.)
- Wide S.O.A
- For C-Monitor (48KHz) & C-TV (~21")

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)	8	A
I_{CP}	Collector Current (Pulse)	16	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_{CES}	Collector Cut-off Current	$V_{CE} = 1400V, V_{BE} = 0$			1	V
I_{CBO}	Collector Cut-off Current	$V_{CB} = 800V, I_E = 0$			10	mA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 4V, I_C = 0$	40		250	mA
h_{FE1} h_{FE2}	DC Current Gain	$V_{CE} = 5V, I_C = 1.0A$ $V_{CE} = 5V, I_C = 5.0A$	10 4		30 7	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 5A, I_B = 1.2A$			5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 5A, I_B = 1.2A$			1.5	V
V_F	Damper Diode Turn On Voltage	$I_F = 6A$			2	V
t_f	Fall Time	$V_{CC} = 200V, I_C = 4A$ $I_{B1} = 0.8A, I_{B2} = -1.6A$ $R_L = 50\Omega$			0.2	μs

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

Symbol	Item	Max	Unit
$R_{\theta jC}$	Thermal Resistance, Junction to Case	2.5	$^\circ C/W$

Typical Characteristics

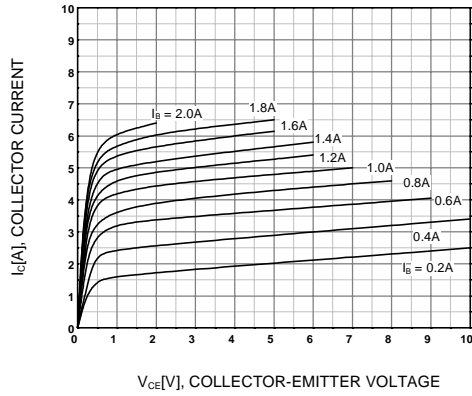


Figure 1. Static Characteristic

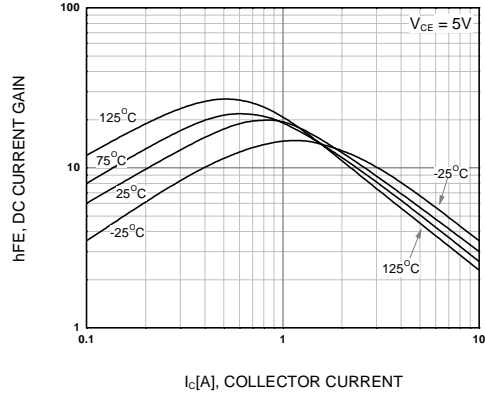


Figure 2. DC current Gain

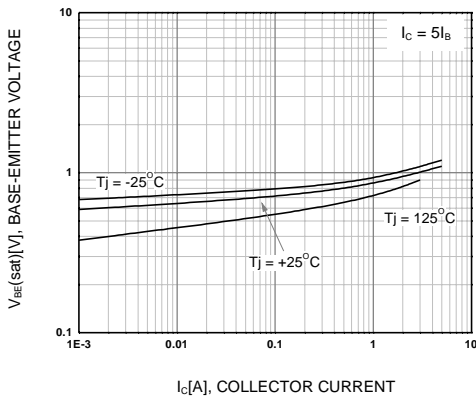


Figure 3. Collector-Emitter Saturation Voltage

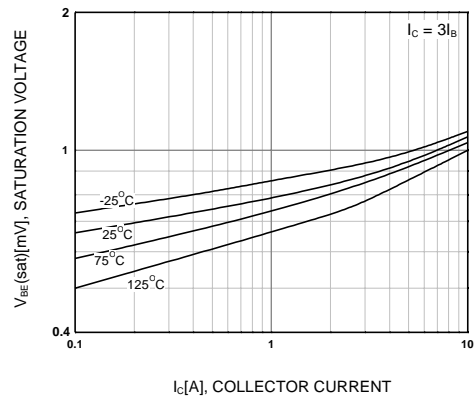


Figure 4. Base-Emitter Saturation Voltage

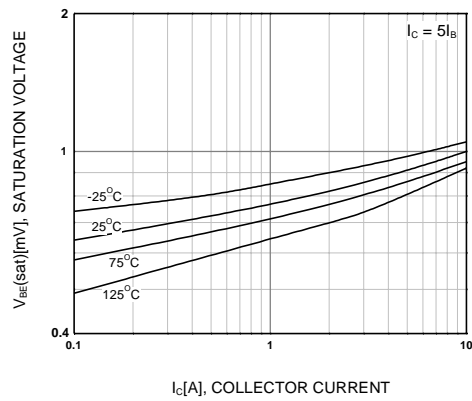


Figure 5. Base-Emitter Saturation Voltage

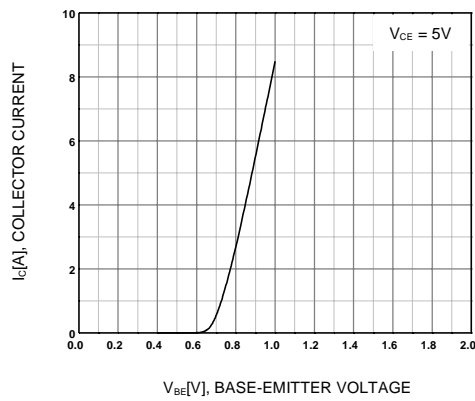


Figure 6. Base-Emitter On Voltage

Typical Characteristics (Continued)

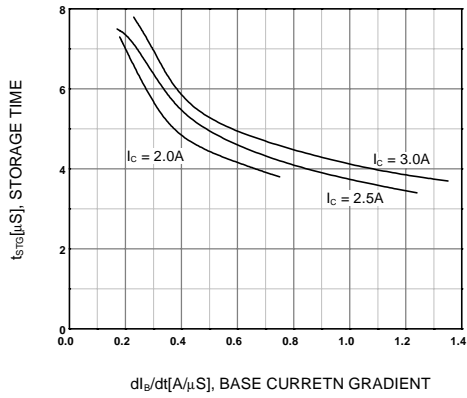


Figure 7. Switching Characteristic

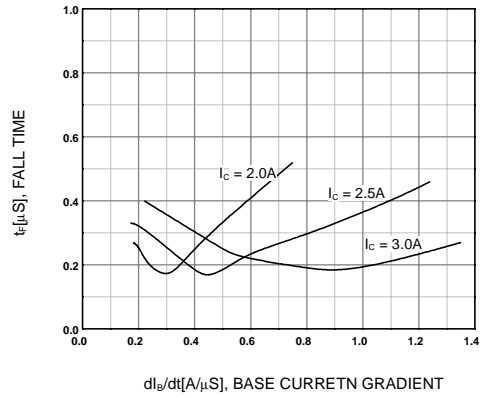


Figure 8. Switching Characteristic

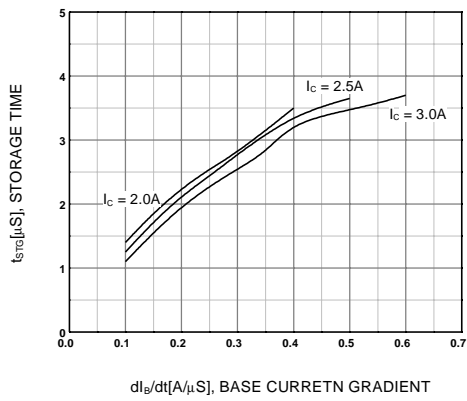


Figure 9. Switching Characteristic

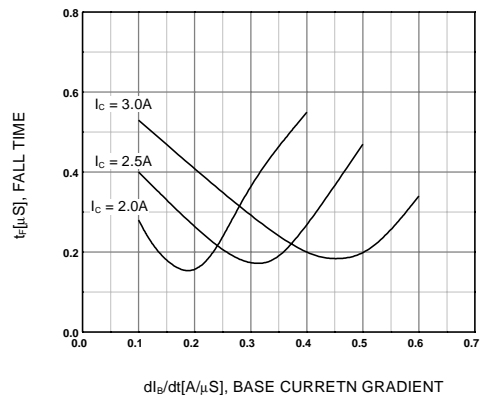


Figure 10. Switching Characteristic

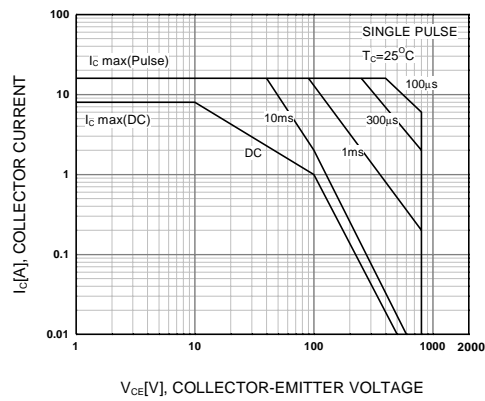


Figure 11. Safe Operating Area

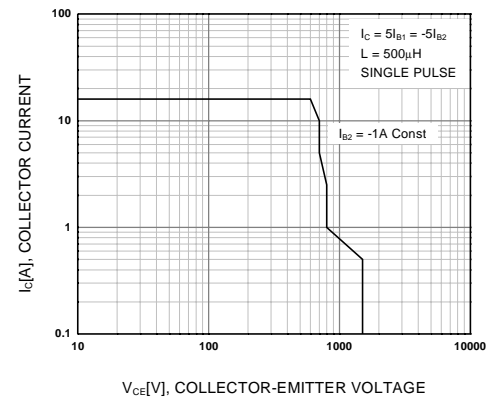


Figure 12. Reverse Bias Safe Operating Area

Typical Characteristics (Continued)

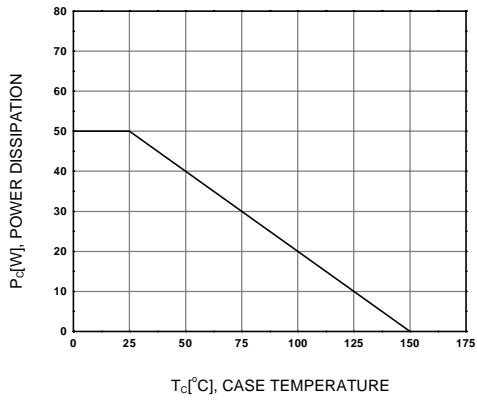
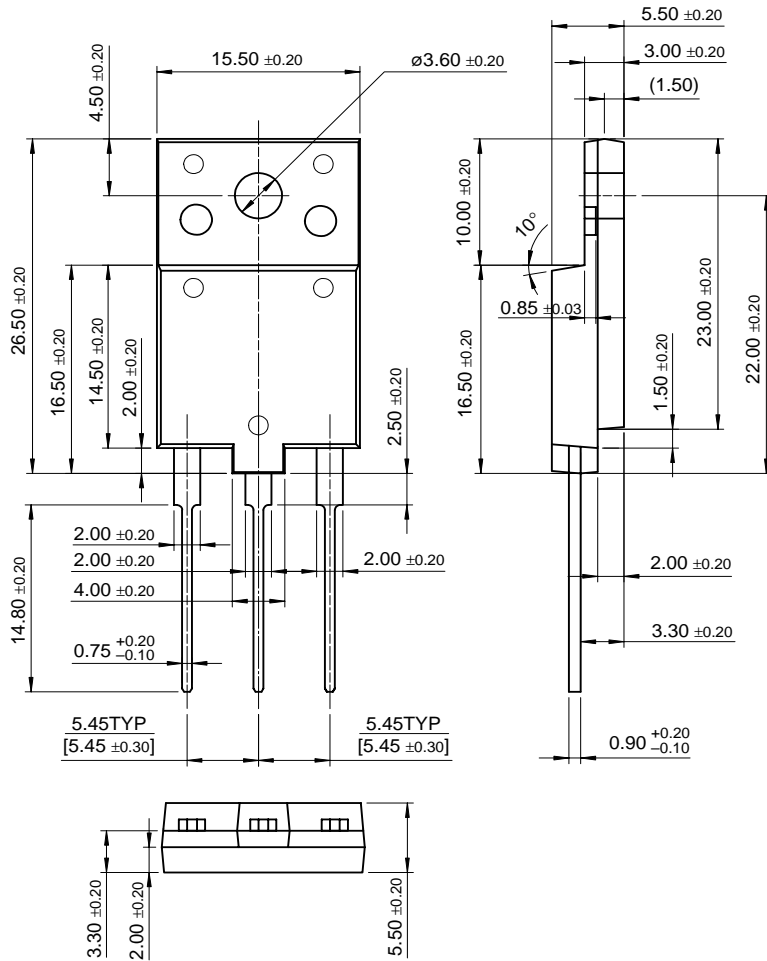


Figure 13. Power Derating

Package Dimensions

KSC5801

TO-3PF

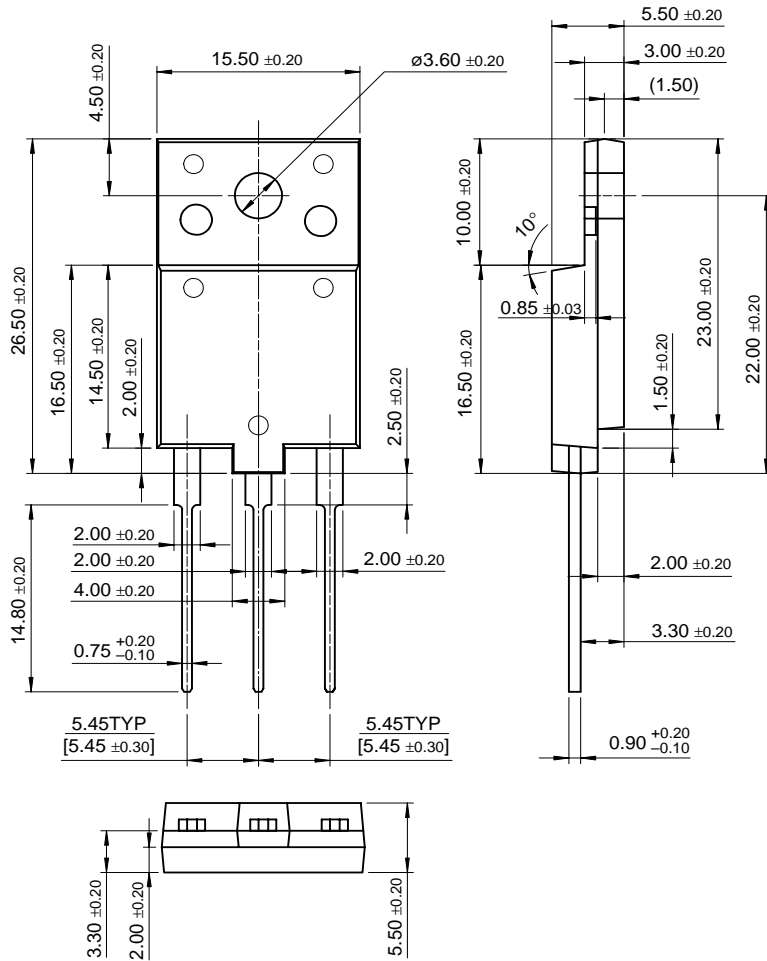


Dimensions in Millimeters

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