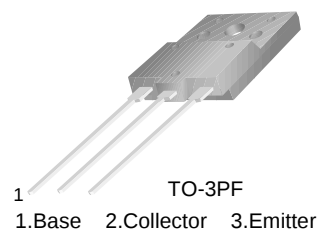


# KSC5801

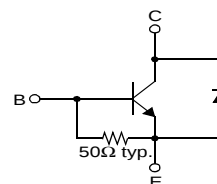
KSC5801

## 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       | 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      |
| $h_{FE1}$<br>$h_{FE2}$ | DC Current Gain                      | $V_{CE} = 5V, I_C = 1.0A$<br>$V_{CE} = 5V, I_C = 5.0A$                           | 10<br>4 |      | 30<br>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                            | $V_{CC} = 200V, I_C = 4A$<br>$I_{B1} = 0.8A, I_{B2} = -1.6A$<br>$R_L = 50\Omega$ |         |      | 0.2     | $\mu s$ |

### 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

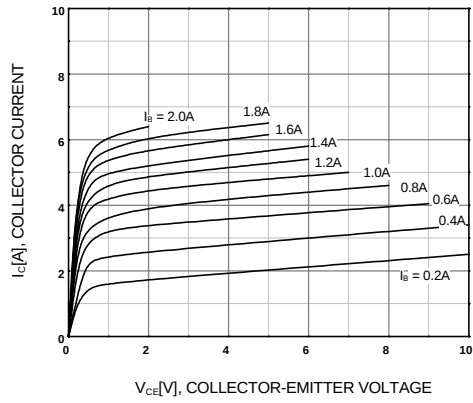


Figure 1. Static Characteristic

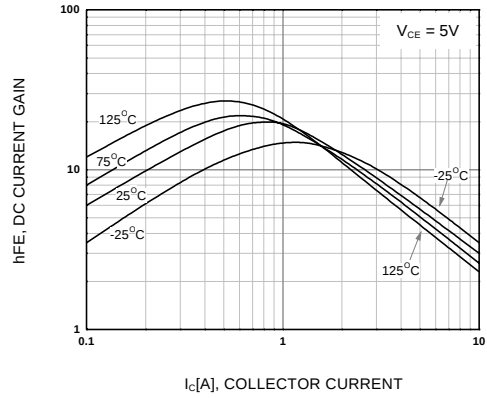


Figure 2. DC current Gain

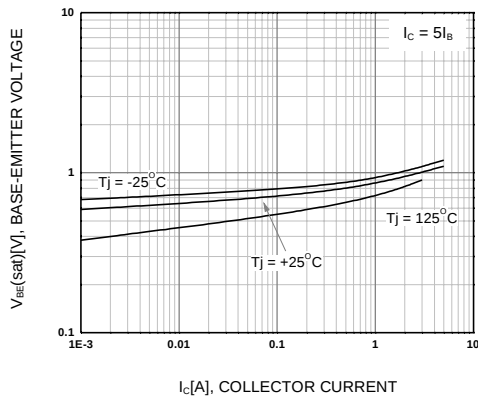


Figure 3. Collector-Emitter Saturation Voltage

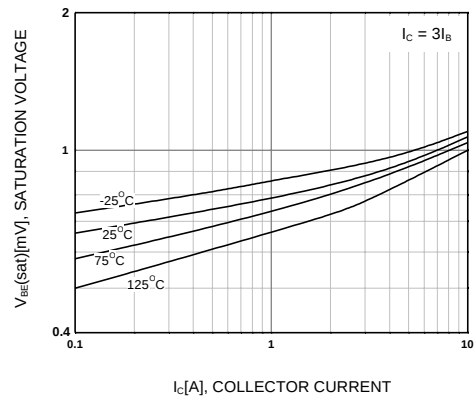


Figure 4. Base-Emitter Saturation Voltage

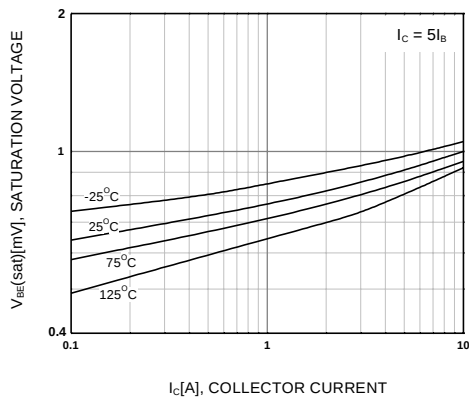


Figure 5. Base-Emitter Saturation Voltage

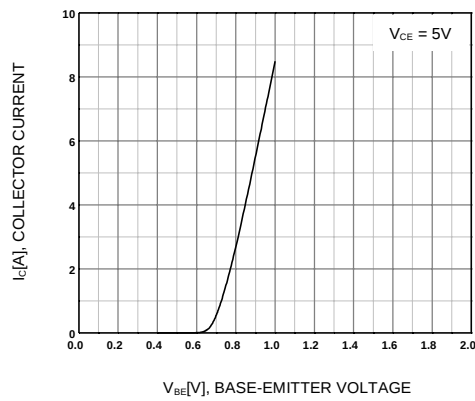


Figure 6. Base-Emitter On Voltage

# Typical Characteristics (Continued)

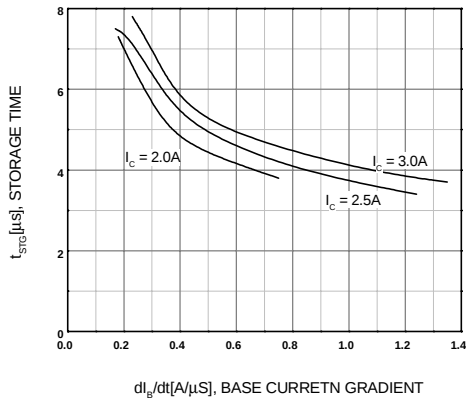


Figure 7. Switching Characteristic

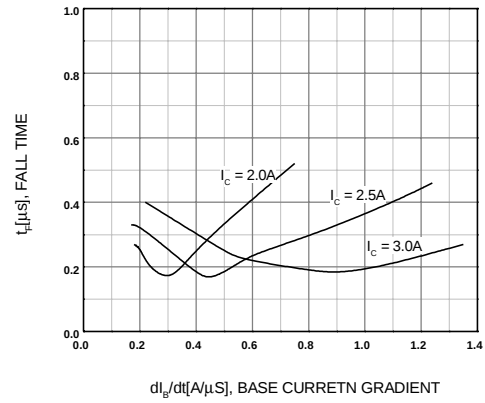


Figure 8. Switching Characteristic

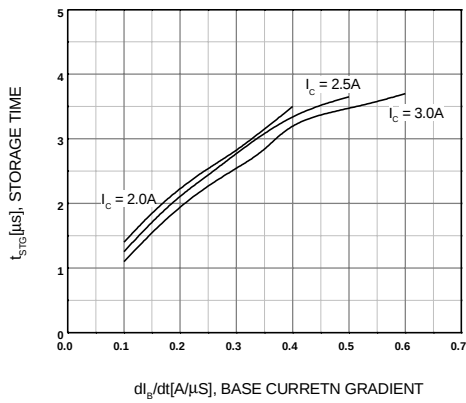


Figure 9. Switching Characteristic

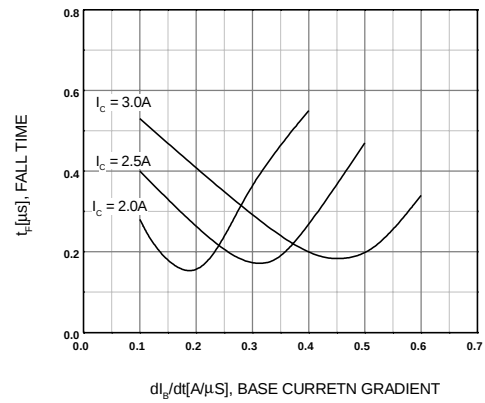


Figure 10. Switching Characteristic

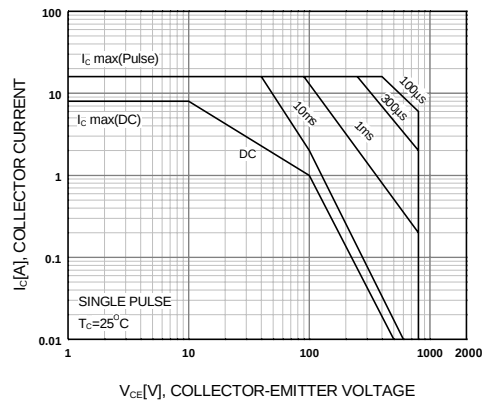


Figure 11. Safe Operating Area

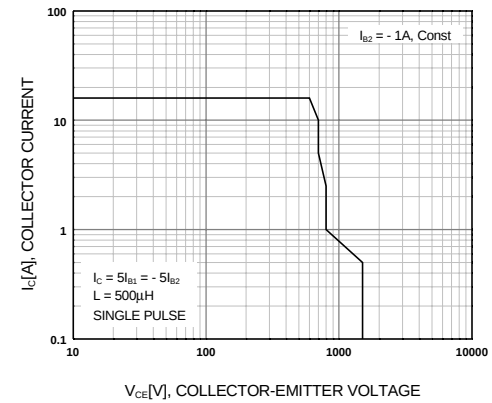
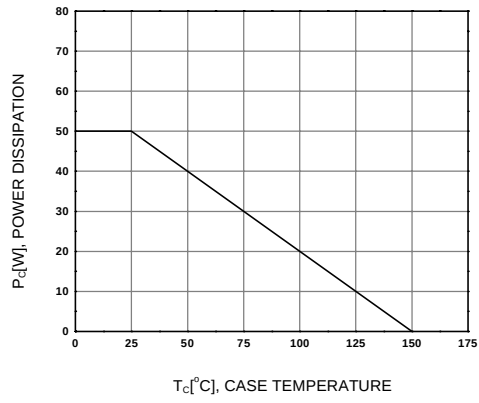


Figure 12. Reverse Bias Safe Operating Area

## Typical Characteristics (Continued)

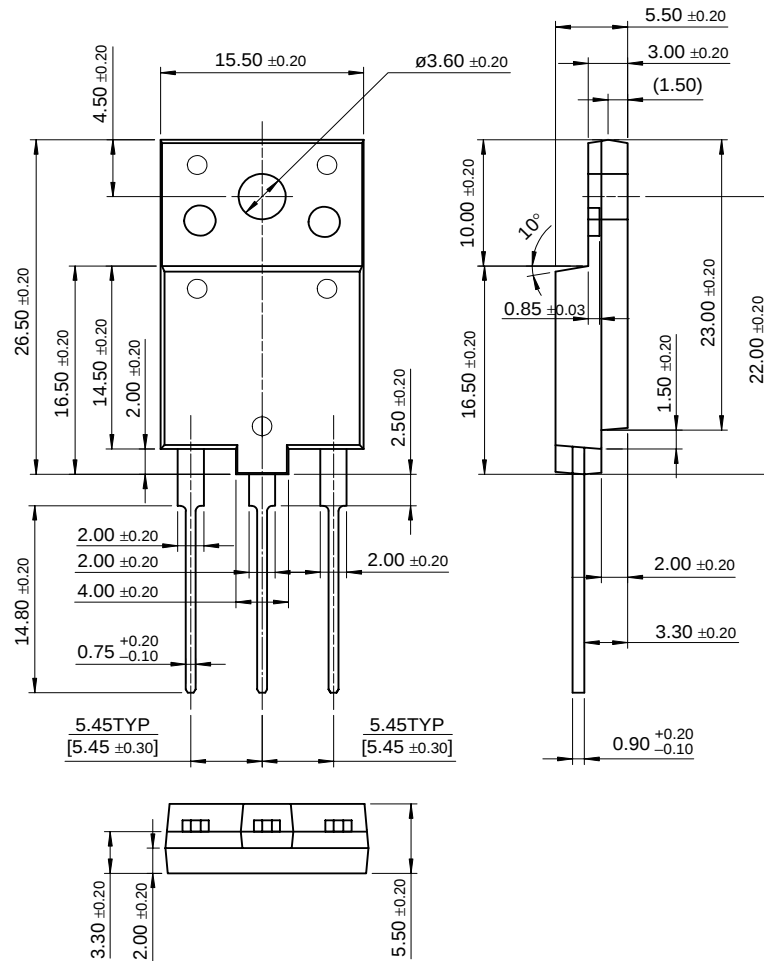


**Figure 13. Power Derating**

# Package Dimensions

KSC5801

## TO-3PF

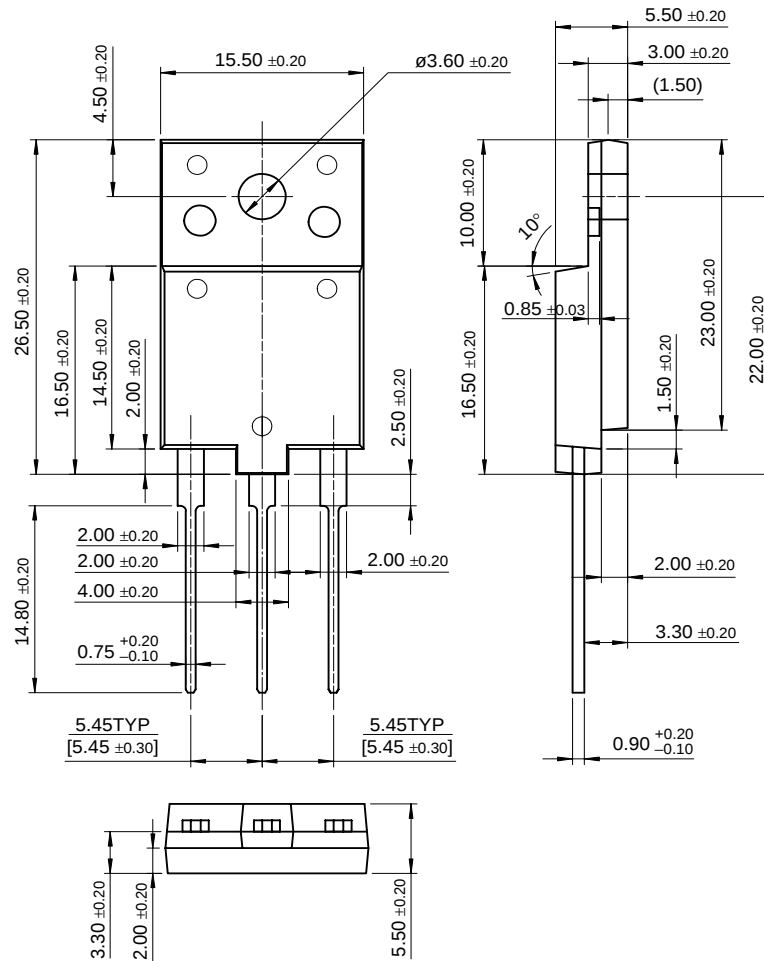


Dimensions in Millimeters

# Package Dimensions

KSC5801

## TO-3PF



Dimensions in Millimeters