

# KSD5071

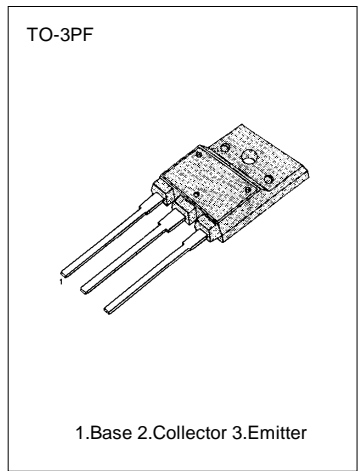
# NPN TRIPLE DIFFUSED PLANAR SILICON TRANSISTOR

## COLOR TV HORIZONTAL OUTPUT APPLICATION (DAMPER DIODE BUILT IN)

- High Collector-Base Voltage ( $V_{CB0}=1500V$ )
- High Switching Speed ( $t_f \text{ max}=0.4\mu S$ )

## ABSOLUTE MAXIMUM RATING

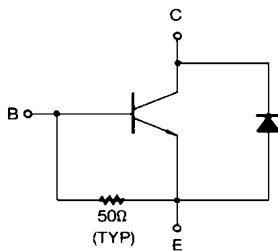
Characteristic	Symbol	Rating	Unit
Collector Base Voltage	$V_{CB0}$	1500	V
Collector Emitter Voltage	$V_{CEO}$	800	V
Emitter Base Voltage	$V_{EBO}$	6	V
Collector Current (DC)	$I_C$	3.5	A
Collector Current (Pulse)	$I_C$	10	A
Collector Dissipation ( $T_C=25^\circ C$ )	$P_C$	50	W
Junction Temperature	$T_J$	150	$^\circ C$
Storage Temperature	$T_{STG}$	-50 ~ 150	$^\circ C$



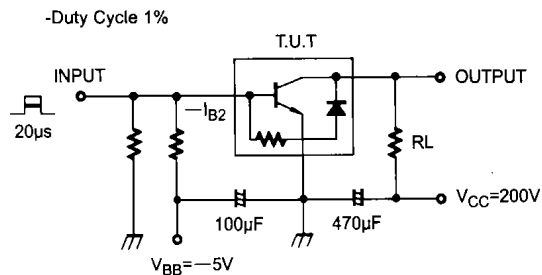
## ELECTRICAL CHARACTERISTICS ( $T_C=25^\circ C$ )

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 800V, I_E = 0$			10	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 4V, I_C = 0$	40		200	mA
DC Current Gain	$h_{FE}$	$V_{CE} = 5V, I_C = 0.5A$	8			
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 2.5A, I_B = 0.8A$			8	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 2.5A, I_B = 0.8A$			1.5	V
Current Gain Bandwidth Product	$f_T$	$V_{CE} = 10V, I_C = 0.5A$		3		MHz
Damper Diode Turn On Voltage	$V_F$	$I_F = 3.5A$			2	V
Fall Time	$t_F$	$I_C = 3A, I_{B1} = 0.8A$ $I_{B2} = -1.6A, V_{CC} = 200V$ $R_L = 66.7\Omega$			0.4	$\mu S$

-EQUIVALENT CIRCUIT



-SWITCHING TIME TEST CIRCUIT



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