

NPN TRIPLE DIFFUSED PLANAR SILICON TRANSISTOR

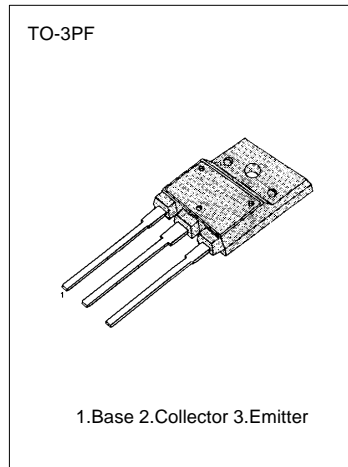
KSD5072

COLOR TV HORIZONTAL OUTPUT APPLICATION (DAMPER DIODE BUILT IN)

- High Collector-Base Voltage ($V_{CB0}=1500V$)
- High Switching Speed (t_f . max=0.4 μ s)

ABSOLUTE MAXIMUM RATING

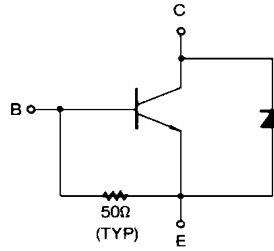
Characteristic	Symbol	Rating	Unit
Collector Base Voltage	V_{CB0}	1500	V
Collector Emitter Voltage	V_{CEO}	800	V
Emitter Base Voltage	V_{EBO}	6	V
Collector Current	I_C	5	A
Collector Current (Peak)	I_C	16	A
Collector Dissipation ($T_C=250^\circ C$)	P_C	60	W
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature	T_{STG}	-55 ~ 150	$^\circ C$



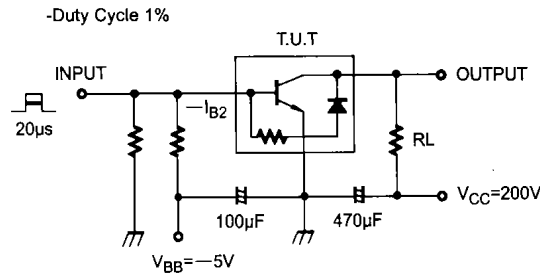
ELECTRICAL CHARACTERISTICS ($T_C=25^\circ C$)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 800V, I_E = 0$			10	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 4V, I_C = 0$	40		200	mA
DC Current Gain	h_{FE}	$V_{CE} = 5V, I_C = 1A$	8		-	-
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 4A, I_B = 0.8A$		3	5	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 4A, I_B = 0.8A$			1.5	V
Current Gain Bandwidth Product	f_T	$V_{CE} = 10V, I_C = 1A$		3		MHz
Damper Diode Turn On Voltage	V_F	$I_F = 5A$			2	V
Fall Time	t_f	$I_C = 4A, I_{B1} = 0.8A$ $I_{B2} = -1.6A, V_{CC} = 200V$ $R_L = 50\Omega$			0.4	μs

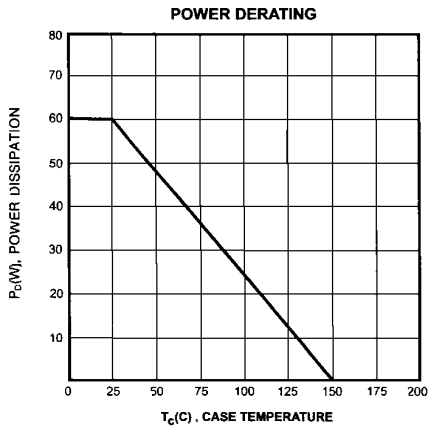
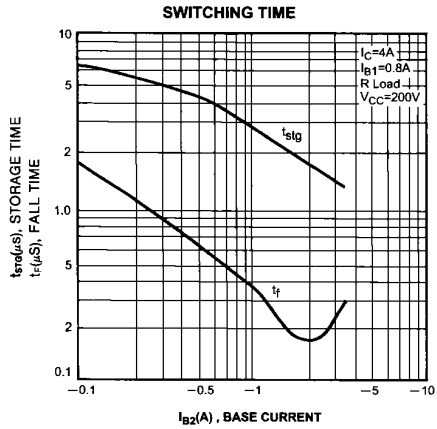
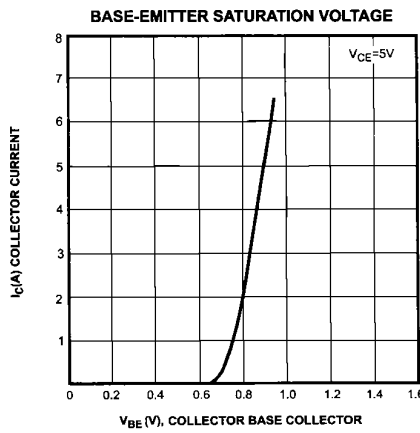
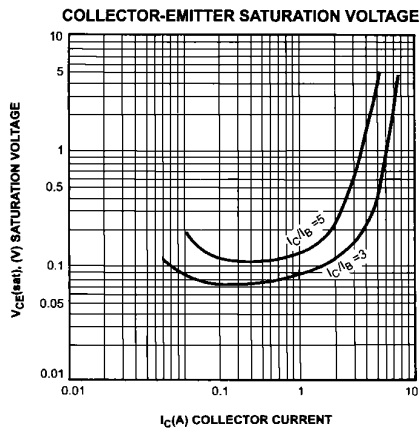
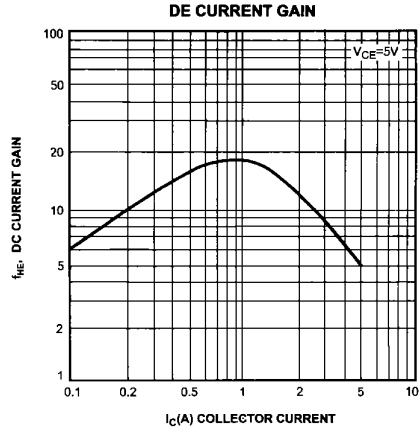
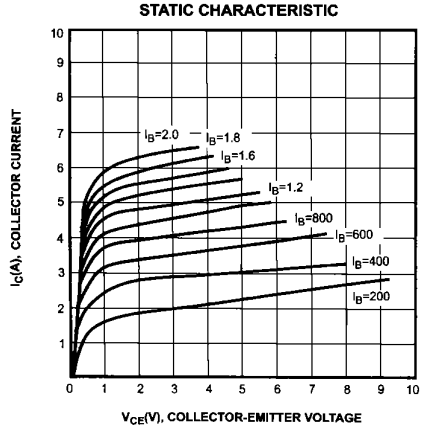
-EQUIVALENT CIRCUIT



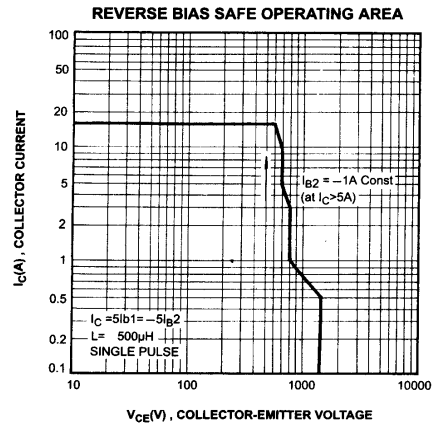
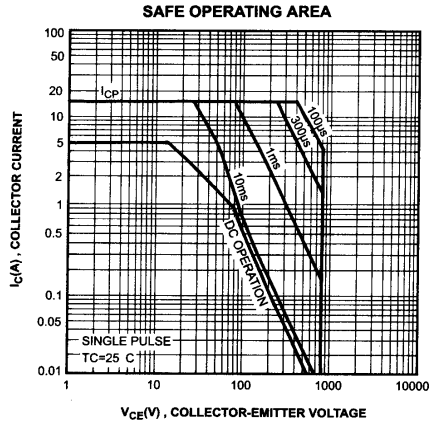
-SWITCHING TIME TEST CIRCUIT



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