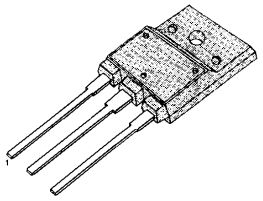
KSD5702

NPN TRIPLE DIFFUSED PLANAR SILICON TRANSISTOR

COLOR TV HORIZONTAL OUTPUT APPLICATION (DAMPER DIODE BUILT IN)

- High Collector-Base Voltage (V_{CBO}=1500V)
- High Switching Speed (tf. max=0.4uS)

TO-3PF



1.Base 2.Collector 3.Emitter

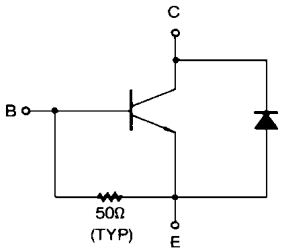
ABSOLUTE MIXIMUM RATING

Characteristic	Symbol	Rating	Unit
Collector Base Voltage	V_{CBO}	1500	V
Collector Emitter Voltage	V_{CEO}	800	V
Emitter Base Voltage	V_{EBO}	6	V
Collector Current	I_C	6	A
Collector Current (Peak)	I_C	16	A
Collector Dissipation (T_C=25℃)	P_C	60	W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-50 ~ 150	℃

ELECTRICAL CHARACTERISTICS (T_C=25℃)

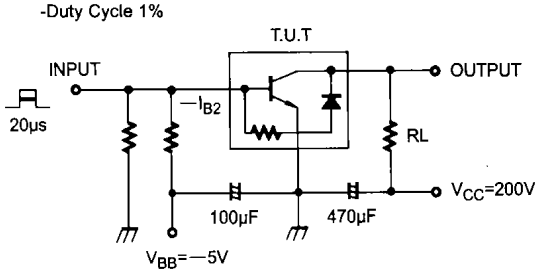
Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	V_{CB} = 800V, I_E = 0			10	uA
Emitter Cutoff Current	I_{EBO}	V_{EB} = 4V, I_C = 0	40		200	mA
DC Current Gain	h_{FE} 1	V_{CE} = 5V, I_C = 1A	10		30	-
	h_{FE} 2	V_{CE} = 5V, I_C = 3A	5		15	
Collector Emitter Saturation Voltage	V_{CE}(sat)	I_C = 4A, I_B = 0.8A		2	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 = 6A			2	V
Fall Time	t_F	I_C = 4A, I_B1 = 0.8A			0.4	uS
		I_B2 = - 1.6A, V_{CC} = 200V				
		R_L = 50Ω				

-EQUIVALENT CIRCUIT



-SWITCHING TIME TEST CIRCUIT

-Duty Cycle 1%

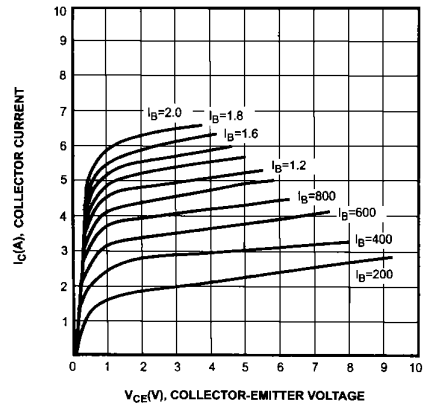


SAMSUNG ELECTRONICS

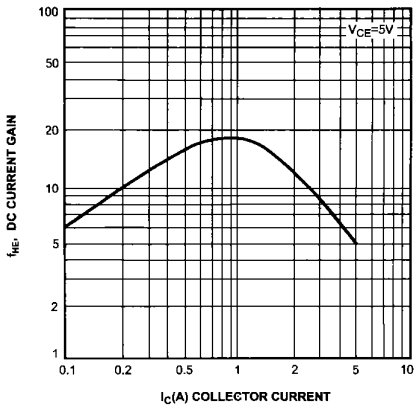
KSD5072

NPN TRIPLE DIFFUSED PLANAR SILICON TRANSISTOR

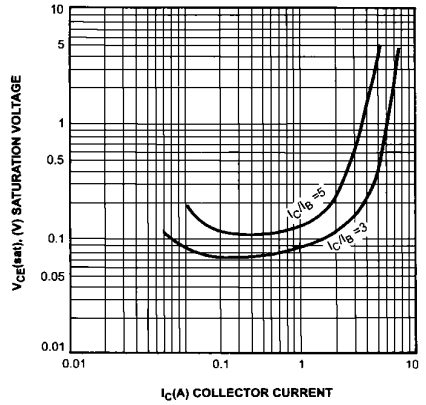
STATIC CHARACTERISTIC



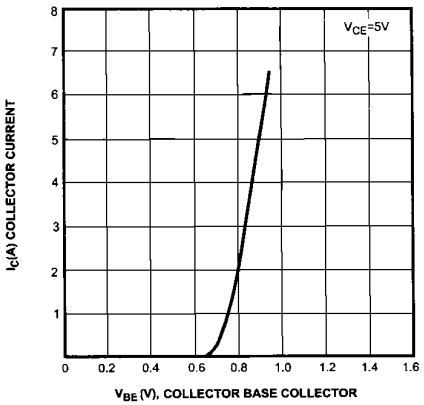
DE CURRENT GAIN



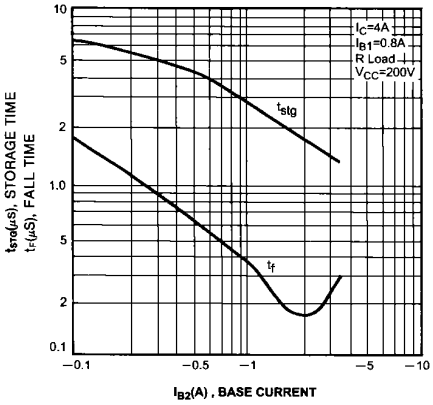
COLLECTOR-EMITTER SATURATION VOLTAGE



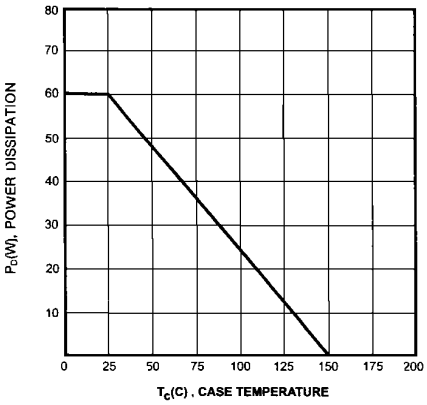
BASE-EMITTER SATURATION VOLTAGE



SWITCHING TIME

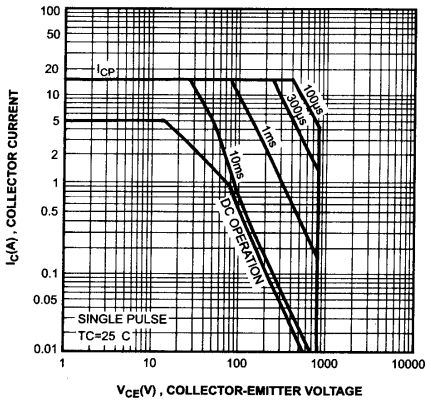


POWER DERATING



SAMSUNG ELECTRONICS

SAFE OPERATING AREA



REVERSE BIAS SAFE OPERATING AREA