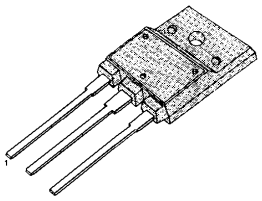
NPN TRIPLE DIFFUSED
KSD5072 PLANAR SILICON TRANSISTOR

COLOR TV HORIZONTAL OUTPUT APPLICATION (DAMPER DIODE BUILT IN)

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

TO-3PF



1.Base 2.Collector 3.Emitter

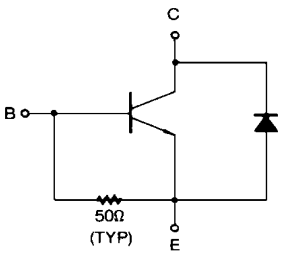
ABSOLUTE MIXIMUM RATING

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	5	A
Collector Current (Peak)	I_C	16	A
Collector Dissipation (T_C=250°C)	P_C	60	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55 ~ 150	°C

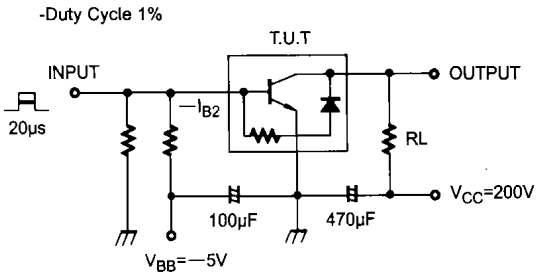
ELECTRICAL CHARACTERISTICS (T_C=25°C)

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 = 50Ω			0.4	μs

-EQUIVALENT CIRCUIT



-SWITCHING TIME TEST CIRCUIT



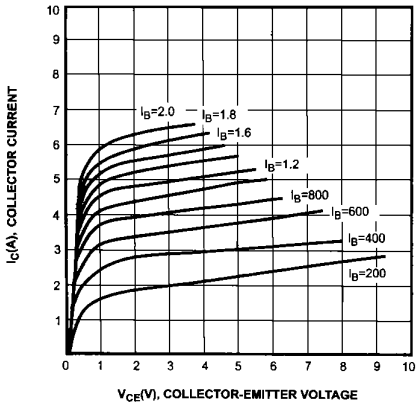
Rev B.

FAIRCHILD SEMICONDUCTOR TM

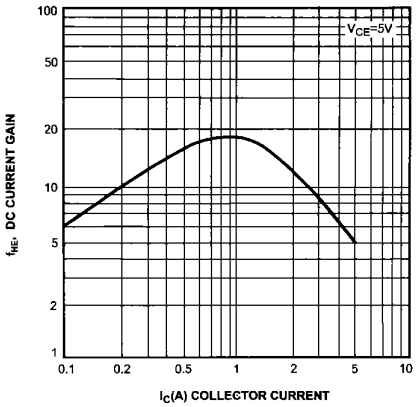
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NPN TRIPLE DIFFUSED
KSD5072 PLANAR SILICON TRANSISTOR

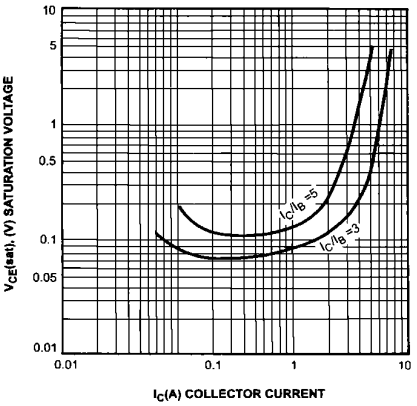
STATIC CHARACTERISTIC



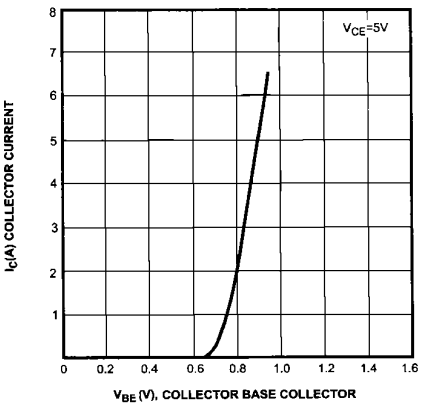
DE CURRENT GAIN



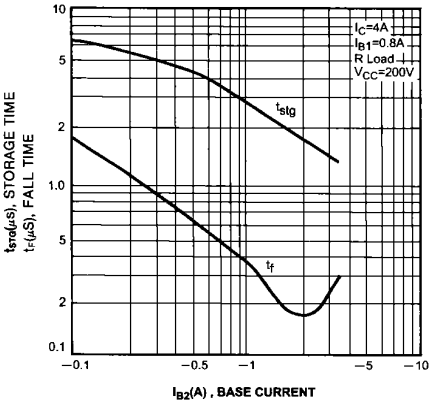
COLLECTOR-EMITTER SATURATION VOLTAGE



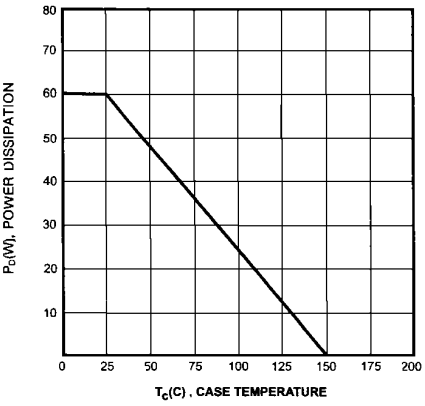
BASE-EMITTER SATURATION VOLTAGE



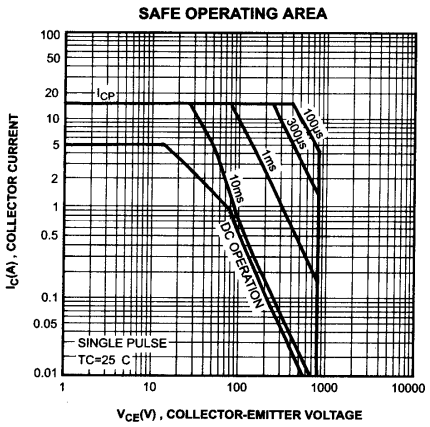
SWITCHING TIME

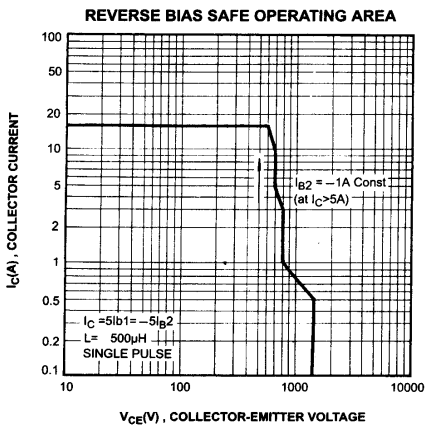


POWER DERATING



FAIRCHILD
SEMICONDUCTOR TM


SAFE OPERATING AREA
100
50
20
10
5
2
1
0.5
0.1
0.05
0.01
I_{CP}
100μs
300μs
1ms
10ms
DC OPERATION
SINGLE PULSE
TC=25 C
1
10
100
1000
10000
I_C(A), COLLECTOR CURRENT
V_{CE}(V), COLLECTOR-EMITTER VOLTAGE


REVERSE BIAS SAFE OPERATING AREA
100
50
20
10
5
2
1
0.5
0.2
0.1
I_{B2} = −1A Const
(at I_C>5A)
I_C =5Ib1= −5I_{B2}
L= 500μH
SINGLE PULSE
10
100
1000
10000
I_C(A), COLLECTOR CURRENT
V_{CE}(V), COLLECTOR-EMITTER VOLTAGE

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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