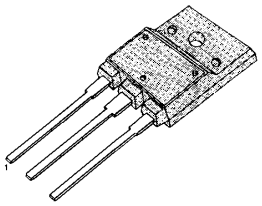
NPN TRIPLE DIFFUSED
KSD5070 PLANAR SILICON TRANSISTOR

COLOR TV HORIZONTAL OUTPUT APPLICATION (DAMPER DIODE BUILT IN)

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

TO-3PF



1.Base 2.Collector 3.Emitter

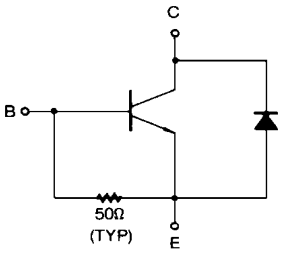
ABSOLUTE MIXIMUM RATING

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 (DC)	I_C	2.5	A
Collector Current (Pulse)	I_C	10	A
Collector Dissipation (T_C=25°C)	P_C	50	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55 ~ 150	°C

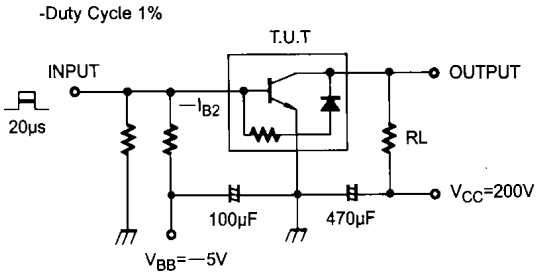
ELECTRICAL CHARACTERISTICS (T_C=25°C)

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 = 0.5A	8			
Collector Emitter Saturation Voltage	V_{CE}(sat)	I_C = 2A, I_B = 0.6A			8	V
Base Emitter Saturation Voltage	V_{BE}(sat)	I_C = 2A, I_B = 0.6A			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 = 2.5A			2	V
Fall Time	t_F	I_C = 2A, I_B1 = 0.6A I_B2 = - 1.2A, V_{CC} = 200V RL = 100Ω			0.4	μs

-EQUIVALENT CIRCUIT



-SWITCHING TIME TEST CIRCUIT



Rev B.

FAIRCHILD SEMICONDUCTOR TM

TRADEMARKS

The following are registered and unregistered trademarks Fairchild Semiconductor owns or is authorized to use and is not intended to be an exhaustive list of all such trademarks.

ACEx™
CoolFET™
CROSSVOLT™
E^2CMOS^{TM}
FACT™
FACT Quiet Series™
FAST®
FASTr™
GTO™
HiSeC™
ISOPLANAR™
MICROWIRE™
POP™
PowerTrench™
QS™
Quiet Series™
SuperSOT™-3
SuperSOT™-6
SuperSOT™-8
TinyLogic™

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF FAIRCHILD SEMICONDUCTOR CORPORATION.
As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, or (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.

2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.