New Jersey Semi-Conductor Products, Inc.

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Silicon NPN Power Transistors

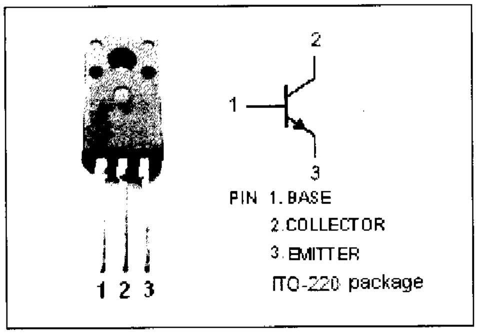
2SC4940

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 550V(Min)
- Fast Switching Speed
- Low Saturation Voltage

APPLICATIONS

- Horizontal deflection circuits of color TV receivers.

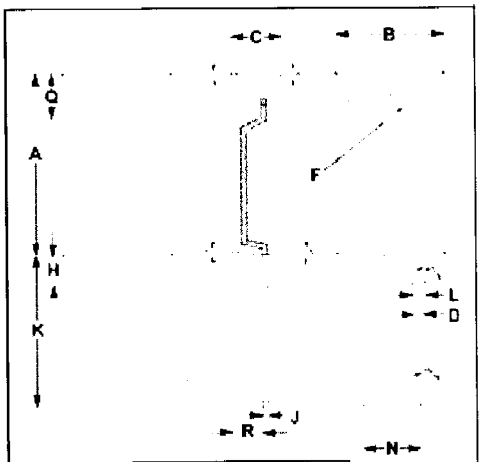


ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1200	V
V_{CEO}	Collector-Emitter Voltage	550	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	4	A
I_{CM}	Collector Current-Peak	8	A
I_B	Base Current-Continuous	2	A
I_{BM}	Base Current-Peak	4	A
P_T	Total Power Dissipation @ T_C=25℃	30	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	4.16	℃/W



	mm	
DIM	MIN	MAX
A	16.70	17.00
B	9.80	10.20
C	4.40	4.80
D	0.70	0.90
F	3.20	3.40
H	2.50	2.70
J	0.50	0.70
K	13.80	14.20
L	1.10	1.30
N	4.98	5.18
Q	4.00	4.40
R	2.60	2.80

Quality Semi-Conductors

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 0.1A; I_B= 0	550			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 2A; I_B= 0.4A			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 2A; I_B= 0.4A			1.5	V
I_{CBO}	Collector Cutoff Current	At rated Voltage			100	μA
I_{CEO}	Collector Cutoff Current	At rated Voltage			100	μA
I_{EBO}	Emitter Cutoff Current	At rated Voltage			100	μA
h_{FE-1}	DC Current Gain	I_C=2A; V_{CE}= 5V	10			
h_{FE-2}	DC Current Gain	I_C= 1mA; V_{CE}= 5V	10			
f_T	Current-Gain—Bandwidth Product	I_C= 0.4A; V_{CE}= 10V		10		MHz

Switching times

t_{on}	Turn-on Time	I_C= 2A; I_{B1}=0.4A; I_{B2}= -0.8A; R_L= 75Ω; V_{BB2}= 4V			0.8	μs
t_{stg}	Storage Time				3.0	μs
t_f	Fall Time				0.3	μs