

Silicon NPN Power Transistors

2SC4941

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
 : $V_{CE(SUS)} = 800V(\text{Min})$
- Fast Switching speed

APPLICATIONS

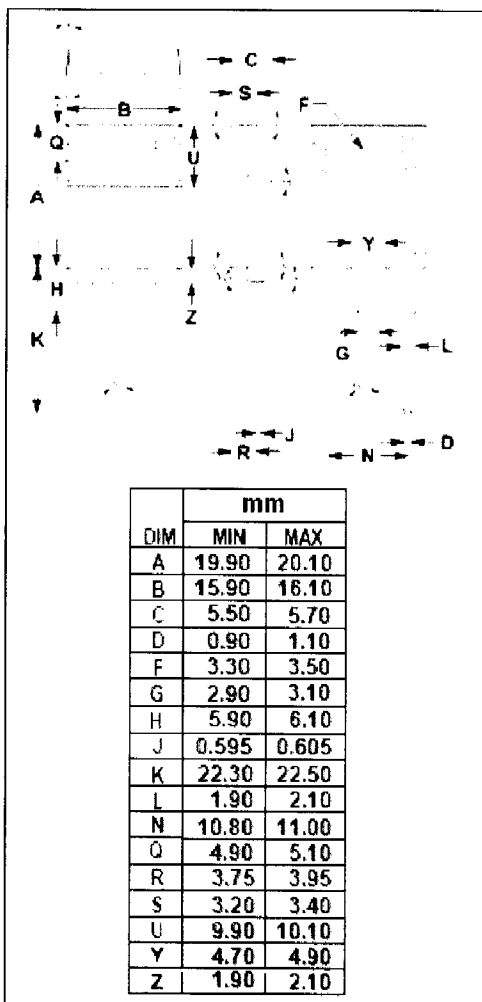
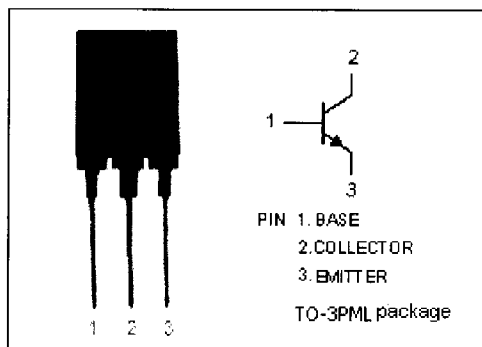
- Color TV horizontal deflection output applications
- Color display horizontal deflection output applications

ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

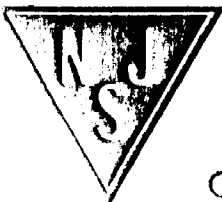
SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1500	V
V_{CEO}	Collector-Emitter Voltage	800	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	6	A
I_{CP}	Collector Current-Peak	12	A
I_B	Base Current-Continuous	3	A
I_{BP}	Base Current-Peak	6	A
P_T	Total Power Dissipation @ $T_C=25^\circ\text{C}$	65	W
T_J	Junction Temperature	150	°C
T_{stg}	Storage Temperature Range	-55~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Thermal Resistance, Junction to Case	1.92	°C/W



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.



Silicon NPN Power Transistors

2SC4941

ELECTRICAL CHARACTERISTICS

$T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=0.2\text{A}; I_B=0$	800			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=3\text{A}; I_B=0.6\text{A}$			0.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=3\text{A}; I_B=0.6\text{A}$			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	$I_C=1\text{A}; V_{CE}=5\text{V}$	15			
h_{FE-2}	DC Current Gain	$I_C=1\text{mA}; V_{CE}=5\text{V}$	7			
f_T	Current-Gain—Bandwidth Product	$I_C=0.6\text{A}; V_{CE}=10\text{V}$		8		MHz

Switching times

t_{on}	Turn-on Time	$I_C=3\text{A}; I_{B1}=0.6\text{A}; I_{B2}=-1.2\text{A}$ $R_L=85\Omega; V_{BB2}=4\text{V}$			0.5	μs
t_{stg}	Storage Time				3.5	μs
t_f	Fall Time				0.3	μs