

Silicon NPN Power Transistor

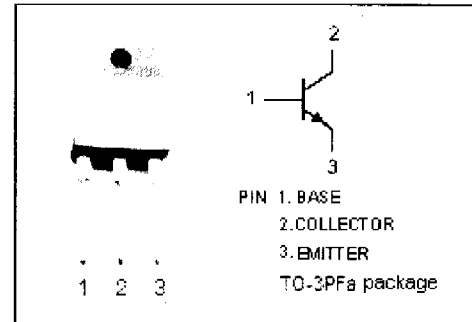
2SC4960

DESCRIPTION

- High Collector-Base Breakdown Voltage-
 : $V_{(BR)CBO} = 900V(\text{Min})$
- High Switching Speed

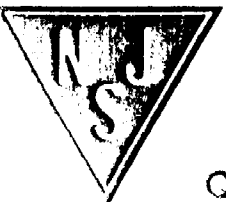
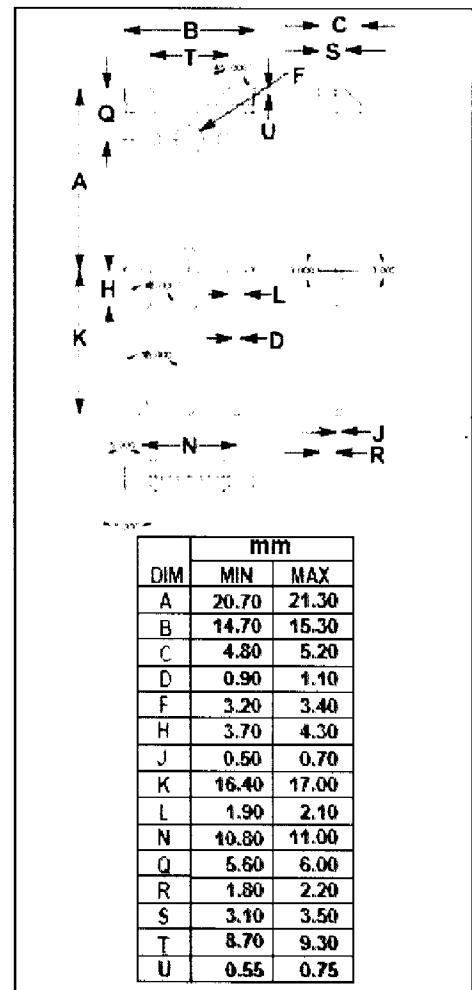
APPLICATIONS

- Designed for power switching applications.



ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	900	V
V_{CES}	Collector-Emitter Voltage	900	V
V_{CEO}	Collector-Emitter Voltage	800	V
V_{EBO}	Emitter-Base voltage	7	V
I_C	Collector Current-Continuous	1	A
I_{CM}	Collector Current-Peak	2	A
I_B	Base Current-Continuous	0.3	A
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	40	W
	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	3	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 1\text{mA}; I_B = 0$	800			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 0.2\text{A}; I_B = 40\text{mA}$			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 0.2\text{A}; I_B = 40\text{mA}$			1.0	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = 900\text{V}; I_E = 0$			50	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = 7\text{V}; I_C = 0$			50	μA
h_{FE-1}	DC Current Gain	$I_C = 50\text{mA}; V_{CE} = 5\text{V}$	6			
h_{FE-2}	DC Current Gain	$I_C = 0.5\text{A}; V_{CE} = 5\text{V}$	3			
f_T	Current-Gain—Bandwidth Product	$I_C = 50\text{mA}; V_{CE} = 10\text{V}; f = 1\text{MHz}$		4		MHz

Switching times

t_{on}	Turn-On Time	$I_C = 0.2\text{A}; I_{B1} = 40\text{mA}, I_{B2} = -80\text{mA}; V_{CC} = 250\text{V}$			1.0	μs
t_{stg}	Storage Time				3.0	μs
t_f	Fall Time				1.0	μs