

Silicon NPN Power Transistor

2SC4881

DESCRIPTION

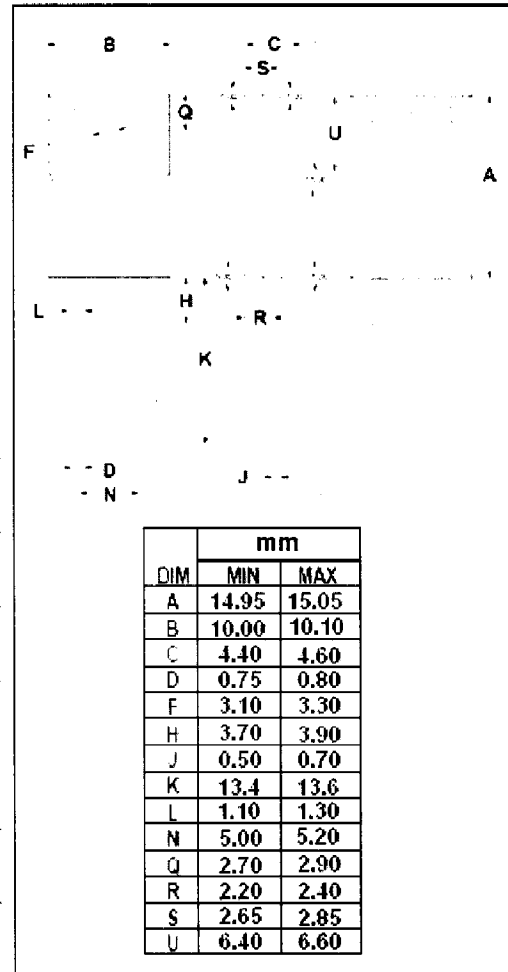
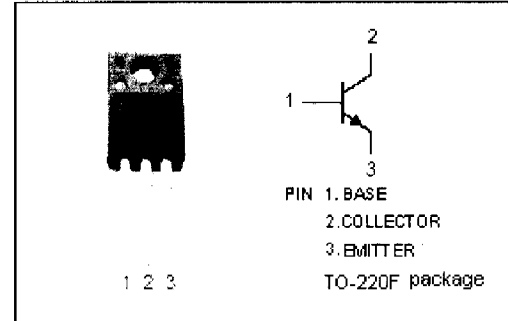
- Collector-Emitter Breakdown Voltage-
 : $V_{(BR)CEO} = 50V(\text{Min})$
- High Switching Speed
- Low Collector Saturation Voltage-
 : $V_{CE(sat)} = 0.4V(\text{Max}) @ (I_C = 2.5A, I_B = 125mA)$

APPLICATIONS

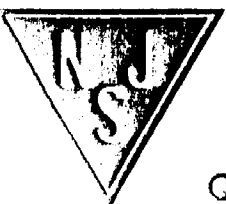
- Designed for high current switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	5	A
I_{CM}	Collector Current-Pulse	8	A
I_B	Base Current-Continuous	1	A
P_T	Total Power Dissipation @ $T_C=25^\circ\text{C}$	20	W
	Total Power Dissipation @ $T_a=25^\circ\text{C}$	2.0	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=10\text{mA}; I_B=0$	50			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=2.5\text{A}; I_B=125\text{mA}$			0.4	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=2.5\text{A}; I_B=125\text{mA}$			1.3	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=50\text{V}; I_E=0$			1	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=6\text{V}; I_C=0$			1	μA
h_{FE-1}	DC Current Gain	$I_C=1\text{A}; V_{CE}=1\text{V}$	100		320	
h_{FE-2}	DC Current Gain	$I_C=2.5\text{A}; V_{CE}=1\text{V}$	60			
C_{OB}	Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f=1.0\text{MHz}$		45		pF
f_T	Current-Gain—Bandwidth Product	$I_C=1\text{A}; V_{CE}=4\text{V}$		100		MHz

Switching times

t_{on}	Turn-on Time	$R_L=12\Omega, I_{B1}=-I_{B2}=125\text{mA}, V_{CC}=30\text{V}$		0.1		μs
t_{stg}	Storage Time			0.8		μs
t_f	Fall Time			0.1		μs