

Silicon NPN Power Transistor

2SC4907

DESCRIPTION

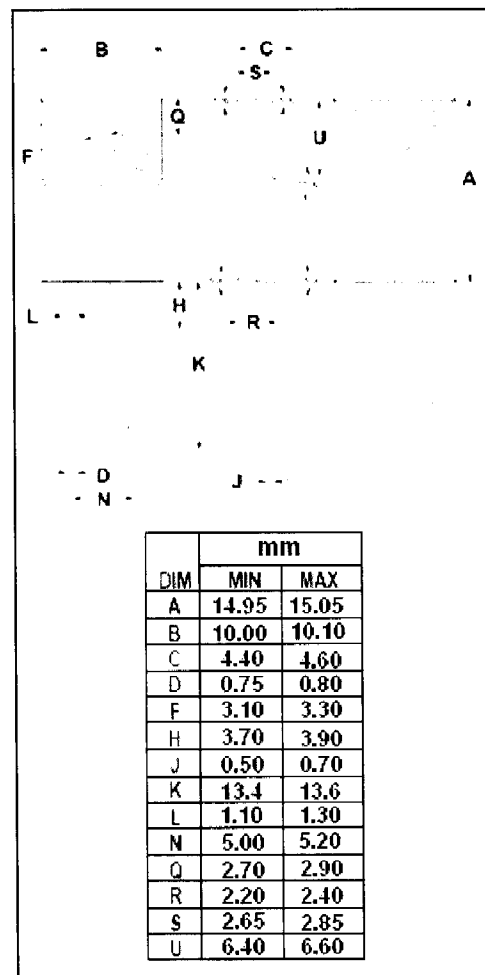
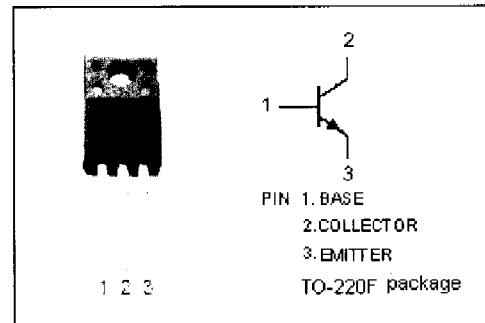
- Collector-Emitter Breakdown Voltage
 : $V_{(BR)CEO} = 500V(\text{Min.})$
- High Speed Switching

APPLICATIONS

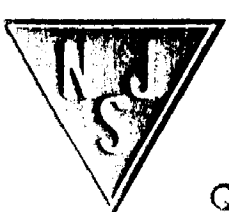
- Designed for switching regulator and general purpose applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	600	V
V_{CEO}	Collector-Emitter Voltage	500	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current-Continuous	6	A
I_{CM}	Collector Current-peak	12	A
I_B	Base Current	2	A
P_C	Collector Power Dissipation $T_C=25^\circ\text{C}$	30	W
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	$I_C = 25\text{mA}; I_B = 0$	500			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 2\text{A}; I_B = 0.4\text{A}$			0.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 2\text{A}; I_B = 0.4\text{A}$			1.3	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = 600\text{V}; I_E = 0$			1.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = 10\text{V}; I_C = 0$			0.1	mA
h_{FE}	DC Current Gain	$I_C = 2\text{A}; V_{CE} = 4\text{V}$	10		30	
f_T	Current-Gain—Bandwidth Product	$I_E = -0.5\text{A}; V_{CE} = 12\text{V}$		8		MHz
C_{OB}	Output Capacitance	$I_E = 0; V_{CB} = 10\text{V}; f_{test} = 1\text{MHz}$		45		pF

Switching Times

t_{on}	Turn-On Time	$I_C = 2\text{A}; V_{CC} = 200\text{V}; R_L = 100\Omega$ $I_{B1} = 0.2\text{A}; I_{B2} = -0.4\text{A};$			1.0	μs
t_s	Storage Time				4.5	μs
t_f	Fall Time				0.5	μs