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**Silicon NPN Power Transistor****2SC4517****DESCRIPTION**

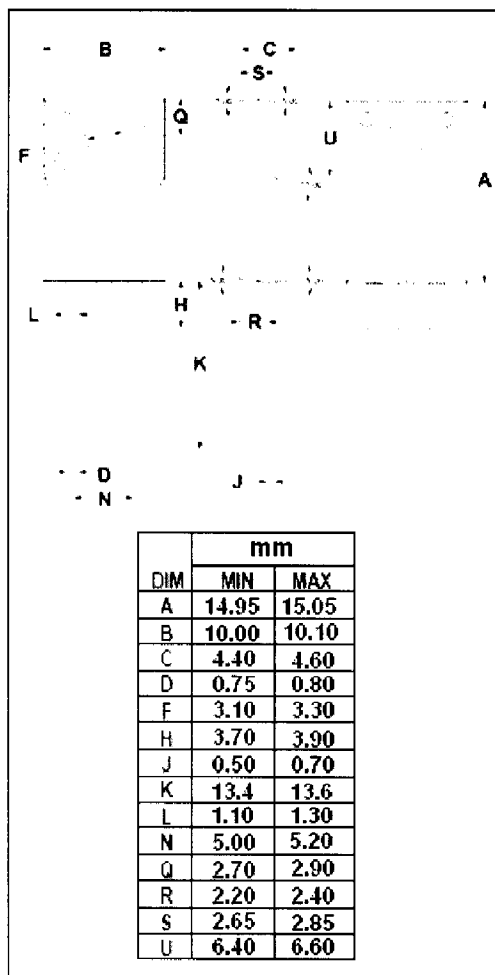
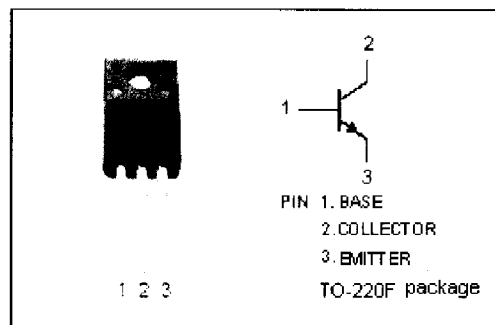
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 550V(\text{Min})$
- High Switching Speed

**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	900	V
$V_{CEO}$	Collector-Emitter Voltage	550	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	3	A
$I_{CM}$	Collector Current-Peak	6	A
$I_B$	Base Current-Continuous	1.5	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	-55~150	$^\circ\text{C}$



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.



**Quality Semi-Conductors**

## Silicon NPN Power Transistor

2SC4517

## ELECTRICAL CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 10mA; I <sub>B</sub> = 0	550			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 1A; I <sub>B</sub> = 0.2A			0.5	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 1A; I <sub>B</sub> = 0.2A			1.2	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 800V; I <sub>E</sub> = 0			100	μA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 7V; I <sub>C</sub> = 0			100	μA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 1A; V <sub>CE</sub> = 4V	10		30	
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = 10V; f= 1MHz		35		pF
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>E</sub> = -0.25A; V <sub>CE</sub> = 12V		6		MHz

## Switching Times

t <sub>on</sub>	Turn-On Time	I <sub>C</sub> = 1A; I <sub>B1</sub> = 0.15A; I <sub>B2</sub> = -0.45A; V <sub>CC</sub> = 250V; R <sub>L</sub> = 250 Ω			0.7	μs
t <sub>stg</sub>	Storage Time				4.0	μs
t <sub>f</sub>	Fall Time				0.5	μs