

SPTECH Silicon NPN Power Transistor

2SC2517

DESCRIPTION

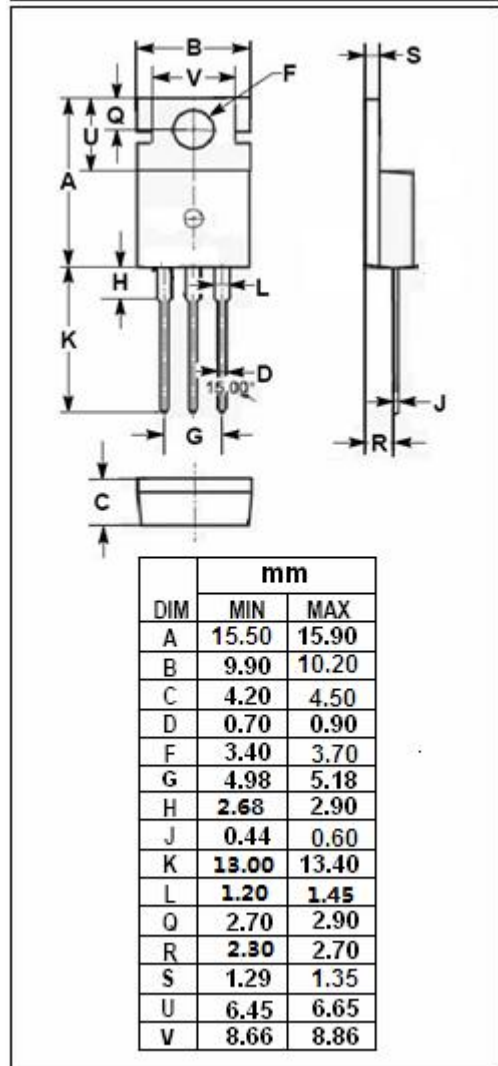
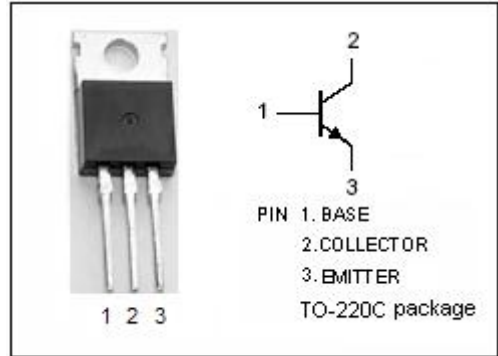
- Low Collector Saturation Voltage
- Fast Switching Speed

APPLICATIONS

- Designed for high-speed switching, and is ideal for use as a driver in devices such as switching regulators, DC/DC converters, and high frequency power amplifiers.

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	150	V
V _{CEO}	Collector-Emitter Voltage	100	V
V _{EBO}	Emitter-Base Voltage	12	V
I _C	Collector Current-Continuous	5	A
I _{CM}	Collector Current-Peak	10	A
I _B	Base Current-Continuous	2.5	A
P _C	Total Power Dissipation @ T _C =25°C	30	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-55~150	°C



ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C= 50\text{mA}; I_B= 0$	100		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 3.0\text{A}; I_B= 0.3\text{A}$		0.6	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 3.0\text{A}; I_B= 0.3\text{A}$		1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}= 100\text{V}; I_E= 0$		10	μA
I_{CER}	Collector Cutoff Current	$V_{CE}= 100\text{V}; R_{BE}= 51\ \Omega, T_a=125^{\circ}\text{C}$		1.0	mA
I_{CEX}	Collector Cutoff Current	$V_{CE}= 100\text{V}; V_{BE(off)}= -1.5\text{V}$ $V_{CE}= 100\text{V}; V_{BE(off)}= -1.5\text{V}, T_a=125^{\circ}\text{C}$		10 1.0	μA mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 10\text{V}; I_C=0$		10	μA
h_{FE-1}	DC Current Gain	$I_C= 0.2\text{A}; V_{CE}= 5\text{V}$	40		
h_{FE-2}	DC Current Gain	$I_C= 2\text{A}; V_{CE}= 5\text{V}$	40	200	

Switching times

t_{on}	Turn-on Time	$I_C= 3.0\text{A}, R_L= 17\ \Omega,$ $I_{B1}= -I_{B2}= 0.3\text{A}, V_{CC}\approx 50\text{V}$		0.5	μs
t_{stg}	Storage Time			2.5	μs
t_f	Fall Time			0.5	μs

◆ **h_{FE-2} Classifications**

M	L	K
40-80	60-120	100-200