

SPTECH Silicon NPN Power Transistor

2SC2517

DESCRIPTION

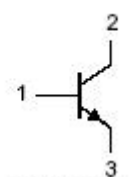
- Low Collector Saturation Voltage
- Fast Switching Speed

APPLICATIONS

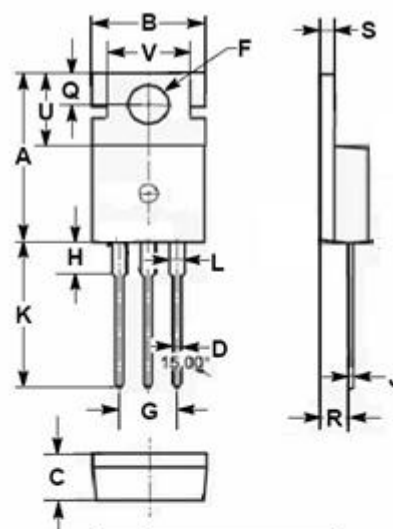
- Designed for high-speed switching, and is ideal for use as a driver in devices such as switching regulators, DC/DC converters, and high frequency power amplifiers.

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

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 @ $T_C=25^\circ\text{C}$	30	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



PIN 1. BASE
2. COLLECTOR
3. EMITTER
TO-220C package



DIM	mm	
	MIN	MAX
A	15.50	15.90
B	9.90	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	13.00	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEQ(SUS)}$	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