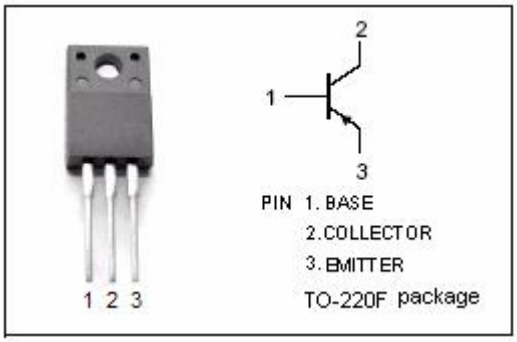
SPTECH Silicon PNP Power Transistor

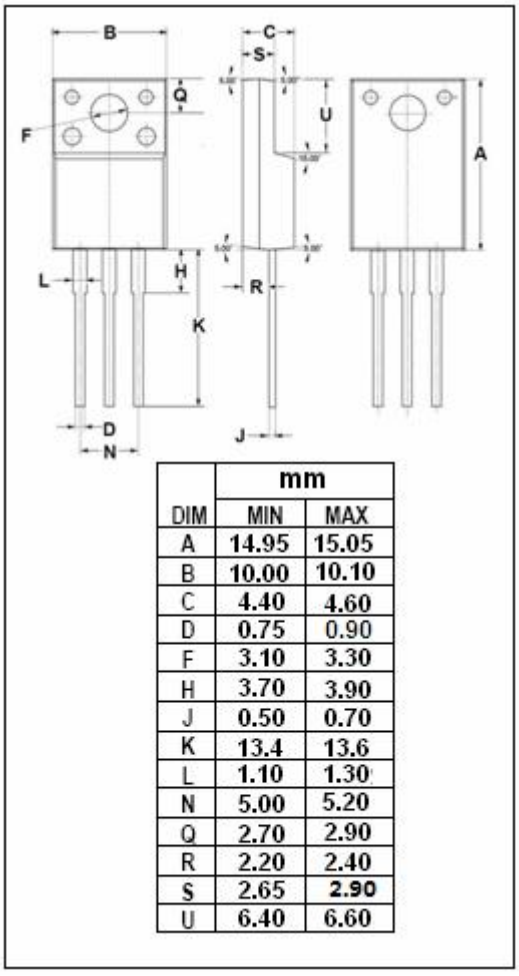
DESCRIPTION

- With TO-220F package
- High h_{FE} and low $V_{CE(sat)}$

APPLICATIONS

- For high-speed switching
- For use in drivers such as DC-DC converters and actuators.





DIM	mm MIN	mm MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.90
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.90
U	6.40	6.60

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-100	V
V_{CEO}	Collector-Emitter Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-7.0	V
I_C	Collector Current-Continuous	-15	A
I_{CM}	Collector Current-Pulse	-30	A
I_B	Base Current-Continuous	-7.5	A
P_T	Total Power Dissipation @T_C=25℃	30	W
	Total Power Dissipation @T_a=25℃	2.0	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~150	℃

SPTECH Silicon PNP Power Transistor

ELECTRICAL CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= -8.0A ; I_B= -0.8A, L= 1mH	-60			V
$V_{CEX(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= -8.0A ; I_{B1}=-I_{B2}= -0.8A, $V_{BE(OFF)}$=1.5V, L=180 μ H,clamped	-60			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= -8A; I_B= -0.4A			-0.8	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	I_C= -8A; I_B= -0.4A			-1.8	V
I_{CBO}	Collector Cutoff Current	V_{CB}= -60V ; I_E=0			-10	μ A
I_{CER}	Collector Cutoff Current	V_{CE}= -60V ; R_{BE}= 50Ω ,T_a=125℃			-1.0	mA
I_{CEX}	Collector Cutoff Current	V_{CE}= -60V; $V_{BE(off)}$= -1.5V V_{CE}= -60V; $V_{BE(off)}$= -1.5V,T_a=125℃			-10 -1.0	μ A mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= -5V; I_C=0			-10	μ A
h_{FE-1}	DC Current Gain	I_C= -1.5A; V_{CE}= -2V	100			
h_{FE-2}	DC Current Gain	I_C= -3.0A; V_{CE}= -2V	100		400	
h_{FE-3}	DC Current Gain	I_C= -8.0A; V_{CE}= -2V	60			
C_{OB}	Output Capacitance	I_E=0; V_{CB}= -10V; f= 1.0MHz		300		pF
f_T	Current-Gain—Bandwidth Product	I_C= -1.5A; V_{CE}= -10V		80		MHz
Switching times						
t_{on}	Turn-on Time	I_C= -8.0A, R_L= 6.3Ω , I_{B1}= -I_{B2}= -0.4A, V_{CC}≈ -50V			0.3	μ s
t_{stg}	Storage Time				1.5	μ s
t_f	Fall Time				0.3	μ s

◆ h_{FE-2} Classifications

M	L	K
100-200	150-300	200-400