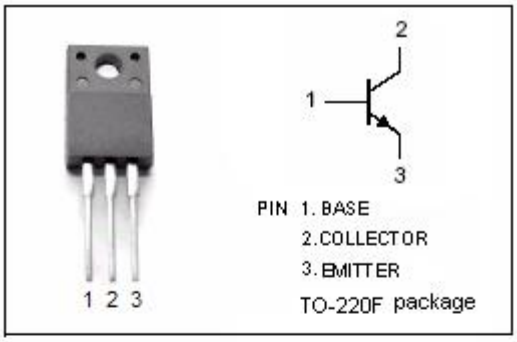
SPTECH Silicon NPN Power Transistor

DESCRIPTION

- Large current capacitance
- High speed switching
- Low saturation voltage
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

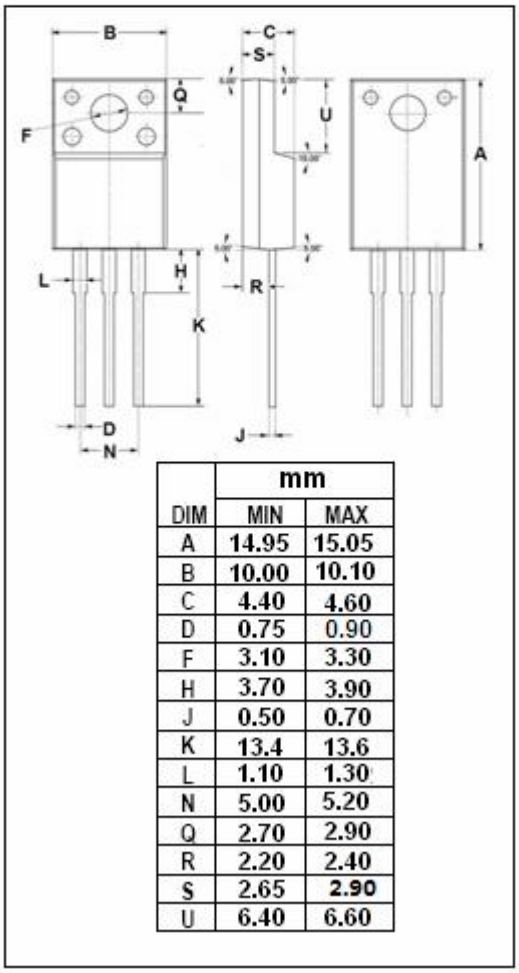


APPLICATIONS

- High speed switching applications

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current- Continuous	15	A
I_B	Base Current- Continuous	3	A
I_{CP}	Collector Current-Pulse	20	A
P_C	Collector Power Dissipation @ T_a=25℃	2	W
	Collector Power Dissipation @ T_C=25℃	23	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	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

SPTECH Silicon NPN Power Transistor

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 7.5A; I_B= 0.375A			0.4	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 7.5A; I_B= 0.375A			1.2	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 40V; I_E= 0			10	μA
h_{FE-1}	DC Current Gain	I_C= 330mA; V_{CE}= 2V	200		560	
h_{FE-2}	DC Current Gain	I_C= 10A; V_{CE}= 2V	50			
t_{stg}	Storage Time	I_C= 5A, I_{B1}= 0.25A; I_{B2}= -0.25A		560		ns
t_f	Fall Time			37		ns