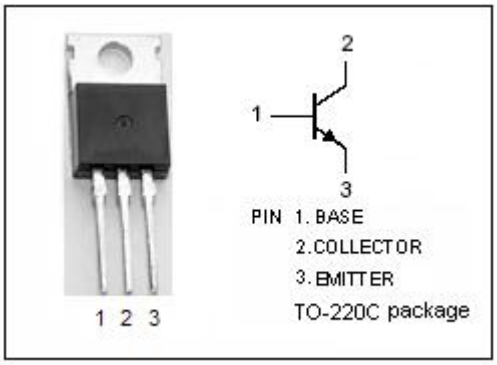
SPTECH Silicon NPN Power Transistor

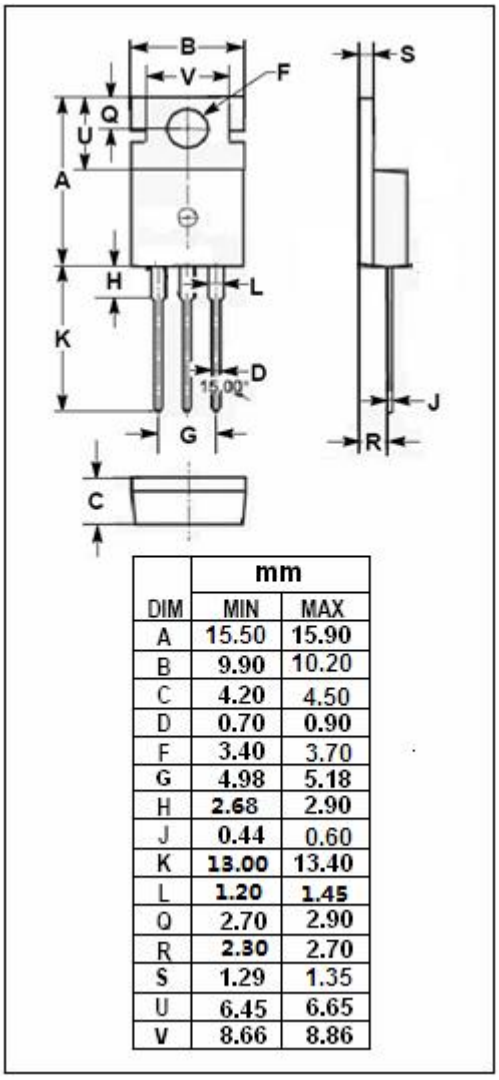


DESCRIPTION

- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$ = 60V(Min)
- High DC Current Gain-
  : h_{FE}= 20-100@I_C= 4A
- Complement to Type MJE2955

APPLICATIONS

- Designed for use in general-purpose amplifier and switching applications.



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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	70	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	10	A
I_B	Base Current-Continuous	6	A
P_C	Collector Power Dissipation @ Tamb=25℃	2	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.67	℃/W

SPTECH Silicon NPN Power Transistor

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 50mA; I_B= 0	60			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 4A; I_B= 0.4A			1.1	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 10A; I_B= 3.3A			8.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 4A ; V_{CE}= 4V			1.8	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 30V; I_B= 0			0.7	mA
I_{CBO}	Collector Cutoff Current	V_{CB}= 70V; I_E= 0			1.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			5.0	mA
h_{FE-1}	DC Current Gain	I_C= 4A ; V_{CE}= 4V	20		100	
h_{FE-2}	DC Current Gain	I_C= 10A ; V_{CE}= 4V	5			
f_T	Current Gain-Bandwidth Product	I_C= 0.5A; V_{CE}= 10V; f= 500kHz	2.0			MHz