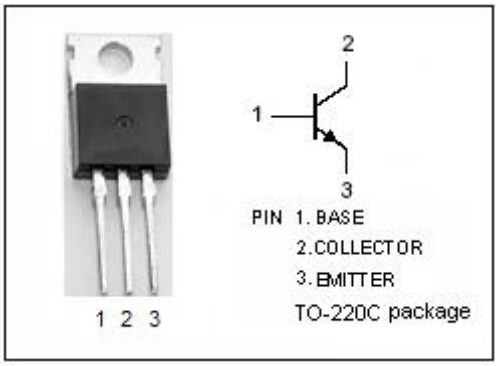
SPTECH Silicon NPN Power Transistor

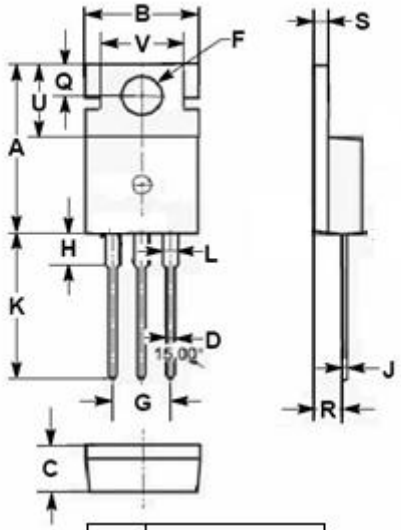


DESCRIPTION

- High transition frequency
- Wide area of safe operation

APPLICATIONS

- 27MHz Power Amplifier Applications
- Recommended for output stage application of AM 4W transmitter



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	80	V
V_{CER}	Collector-Emitter Voltage R_{BE}=150 Ω	80	V
V_{EBO}	Emitter-Base Voltage	4	V
I_C	Collector Current-Continuous	4	A
I_E	Emitter current	4	A
Pc	Collector Power Dissipation @ T_C=25℃	10	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

SPTECH Silicon NPN Power Transistor

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CER}$	Collector-Emitter Breakdown Voltage	I_C=10mA; R_{BE}=500Ω	80			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E=1mA; I_C= 0	4			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C=3A; I_B= 0.3A			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 30V ; I_E= 0			10	μA
h_{FE-1}	DC Current Gain	I_C= 500mA ; V_{CE}= 5V	25			
h_{FE-2}	DC Current Gain	I_C= 3A ; V_{CE}=2V	15			
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f_{test}= 1MHz		40		pF
f_T	Current-Gain—Bandwidth Product	I_C= 500mA; V_{CE}=5V		100		MHz
P_O	Output Power	V_{CC}= 12V;P_{in}=0.3W, f=27MHz	3.5			W