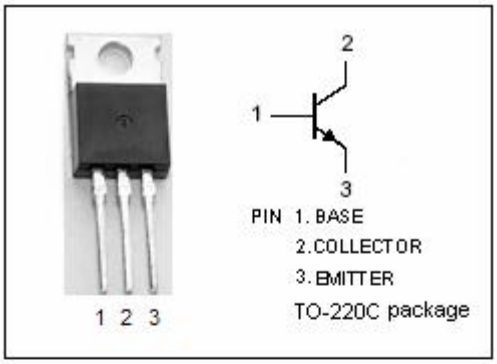
SPTECH Silicon NPN Power Transistors D44H11

DESCRIPTION

- Low Collector-Emitter Saturation Voltage
  : $V_{CE(sat)}$= 1.0V(Max)@ I_C = 8A
- Fast Switching Speeds
- Complement to Type D45H11
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

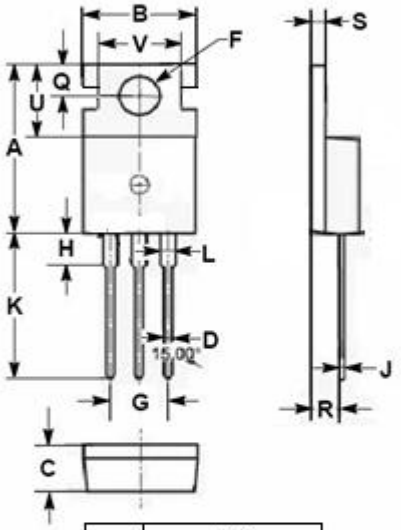
- Designed for general purpose power amplification and switching such as output or driver stages in applications such as switching regulators,converters and power amplifier.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Peak	20	A
P_C	Collector Power Dissipation @T_C=25℃	50	W
T_j	Junction Temperature	-55~150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	2.5	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	75	℃/W



DIM	mm MIN	MAX
A	15.50	15.90
B	9.80	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	12.80	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

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{CE(sat)}$	Collector-EmitterSaturation Voltage	I_C= 8A ;I_B= 0.4 A			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 8A ;I_B= 0.8 A			1.5	V
I_{CES}	Collector Cutoff Current	V_{CE}=Rated V_{CEO}; V_{BE}= 0			10	μ A
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			100	μ A
h_{FE-1}	DC Current Gain	I_C= 2A ; V_{CE}= 1V	60			
h_{FE-2}	DC Current Gain	I_C= 4A ; V_{CE}= 1V	40			
C_{OB}	Output Capacitance	V_{CB}= 10V,f= 1.0MHz		130		pF
f_T	Current-Gain—Bandwidth Product	I_C=0.5A;V_{CE}= 10V;f_{test}=20MHz		50		MHz