

isc Silicon NPN Power Transistor
D44H11
DESCRIPTION

- Low Collector-Emitter Saturation Voltage
: $V_{CE(sat)} = 1.0V(\text{Max}) @ I_C = 8A$
- Fast Switching Speeds
- Complement to Type D45H11
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

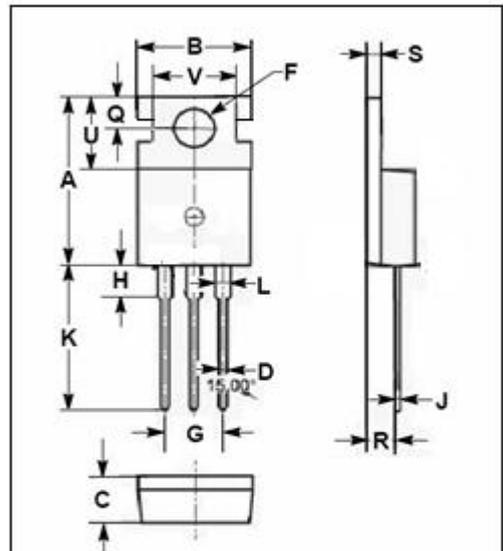
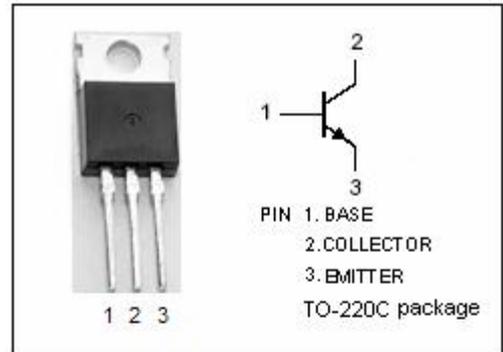
- Designed for general purpose power amplification and switching such as output or driver stages in applications such as switching regulators, converters and power amplifier.

Absolute maximum ratings(Ta=25°C)

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 @ $T_C=25^\circ\text{C}$	50	W
T_j	Junction Temperature	-55~150	°C
T_{stg}	Storage Temperature Range	-55~150	°C

THERMAL CHARACTERISTICS

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

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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V _{CE(sat)}	Collector-Emitter Saturation 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

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