

## isc Silicon NPN Power Transistor

D44VH10

## DESCRIPTION

- DC Current Gain-  
:  $h_{FE} = 35(\text{Min}) @ I_C = 2A$
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(\text{SUS})} = 80V(\text{Min})$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

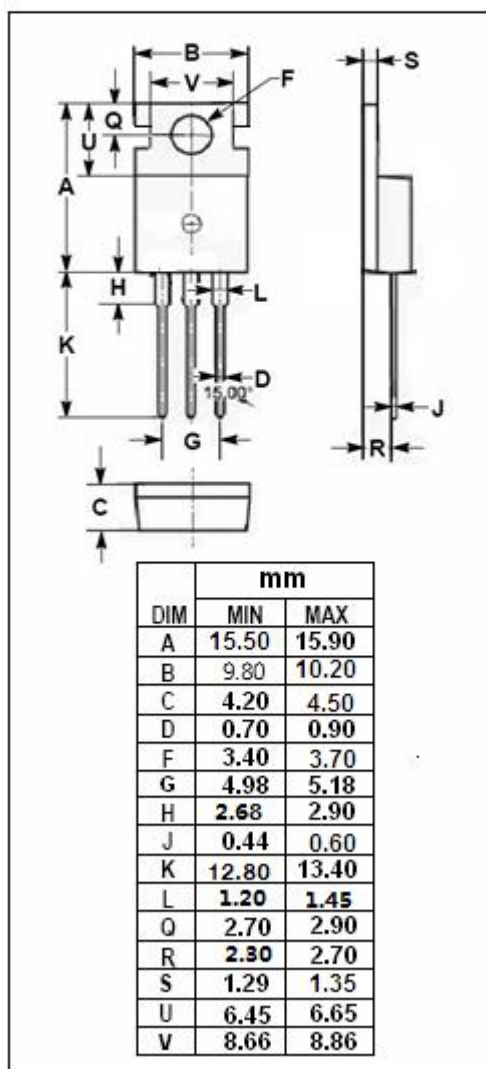
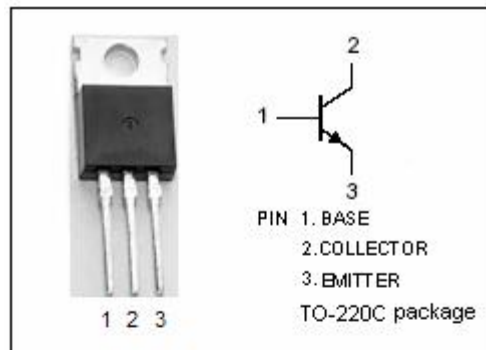
- Designed for use in general purpose power amplifier and switching applications.

ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	80	V
$V_{CEV}$	Collector-Emitter Voltage	100	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current -Continuous	15	A
$I_{CM}$	Collector Current-peak	20	A
$P_C$	Collector Power Dissipation@ $T_C = 25^\circ\text{C}$	83	W
$T_j$	Junction Temperature	-55~150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^\circ\text{C}$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.5	$^\circ\text{C/W}$



**isc Silicon NPN Power Transistor****D44VH10****ELECTRICAL CHARACTERISTICS****T<sub>C</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>CEQ(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 25mA; I <sub>B</sub> = 0	80		V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 8A; I <sub>B</sub> = 0.4A I <sub>C</sub> = 8A; I <sub>B</sub> = 0.4A; T <sub>C</sub> =100°C		0.4 0.8	V
V <sub>BE(sat)</sub>	Base-Emitter On Voltage	I <sub>C</sub> = 8A; V <sub>CE</sub> = 0.4V I <sub>C</sub> = 8A; V <sub>CE</sub> = 0.4V; T <sub>C</sub> =100°C		1.2 1.1	V
V <sub>BE(on)-2</sub>	Base-Emitter On Voltage	I <sub>C</sub> = 25A; V <sub>CE</sub> = 4V			V
I <sub>CEV</sub>	Collector Cutoff Current	V <sub>CE</sub> = 100V; V <sub>EB(off)</sub> =4V V <sub>CE</sub> = 100V; V <sub>EB(off)</sub> =4V; T <sub>C</sub> =100°C		10 100	μA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 7V; I <sub>C</sub> = 0		10	μA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 2A; V <sub>CE</sub> = 1V	35		
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 4A; V <sub>CE</sub> = 1V	20		

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