

isc Silicon NPN Power Transistors

D44H11

DESCRIPTION

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

APPLICATIONS

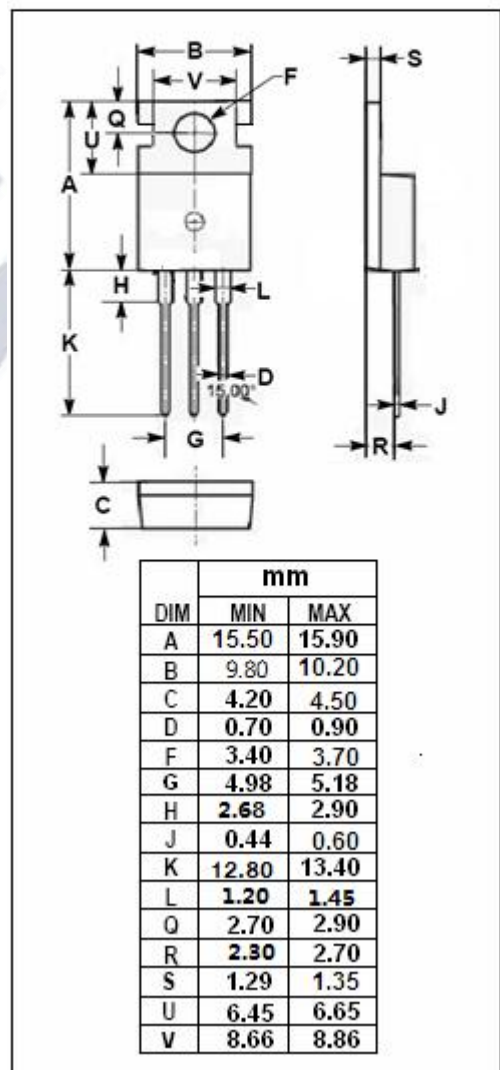
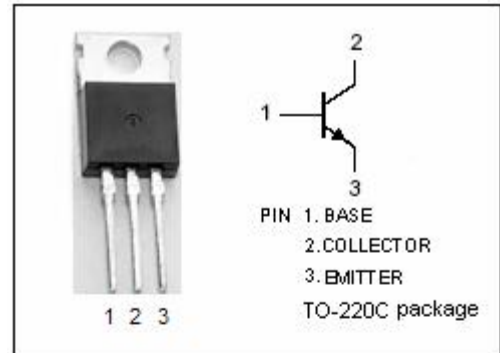
- Designed for general purpose power amplification and switching such as output or driver stages in applications such as switching regulators, converters and power amplifier.

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

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

THERMAL CHARACTERISTICS

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



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ELECTRICAL CHARACTERISTICS

 $T_c=25^\circ\text{C}$ unless otherwise specified

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