

isc Silicon NPN Power Transistors
D44H8
DESCRIPTION

- Low Saturation Voltage
- Fast Switching Speeds
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

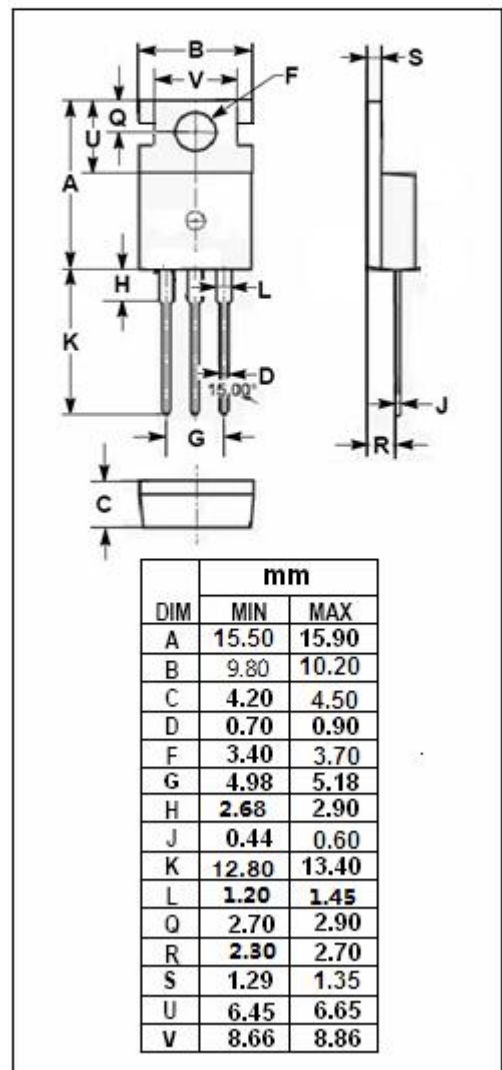
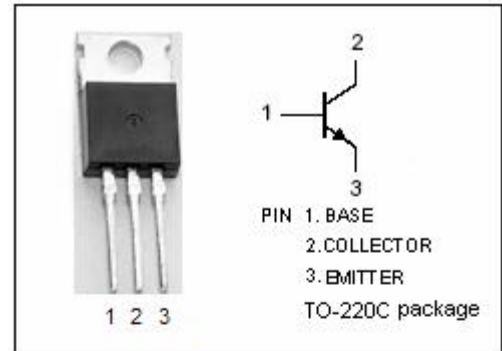
- Designed for general purpose power amplification and switching such as output or driver stages in applications such as switching regulators, converters and power amplifier.

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CEO}	Collector-Emitter Voltage	60	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°C	50	W
T _j	Junction Temperature	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



isc Silicon NPN Power Transistors

D44H8

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 = 0.8 A			1	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} ;			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= 0.1MHz		130		pF
f _T	Current-Gain—Bandwidth Product	I _C = 0.5A; V _{CE} = 10V; f _{test} =20MHz		50		MHz

Switching Times

t _s	Storage Time	I _C = 5A; I _{B1} = -I _{B2} = 0.5A V _{CC} = 20V		0.5		μ s
t _f	Fall Time			0.14		μ s

NOTICE:

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.