

isc Silicon NPN Power Transistors

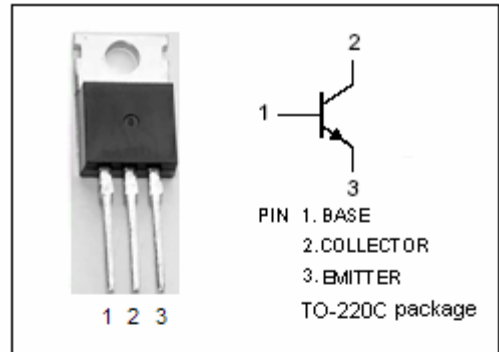
D44H Series

DESCRIPTION

- Low Saturation Voltage
- Fast Switching Speeds
- Complement to Type D45H Series

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.

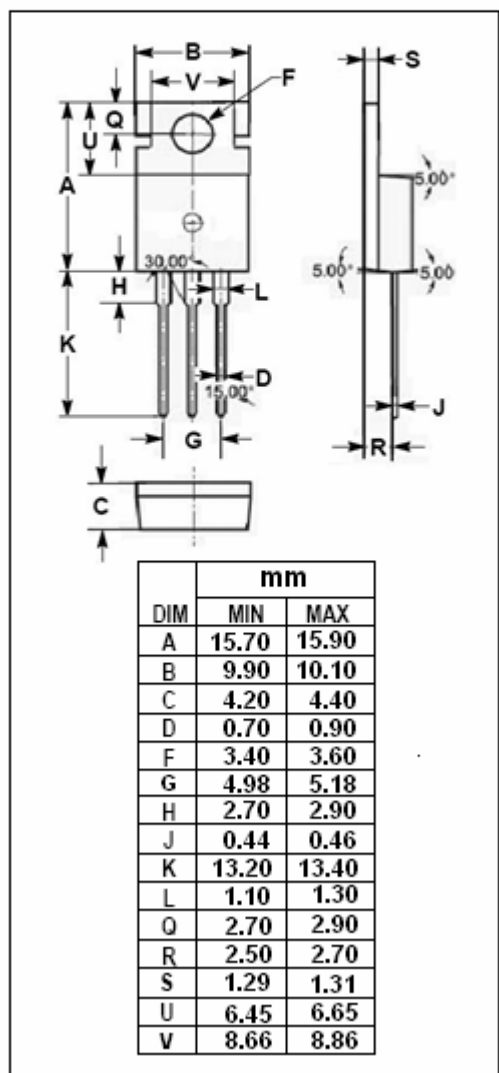


ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT	
V _{CEO}	Collector-Emitter Voltage	D44H8	60	V
		D44H10,11	80	
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



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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	D44H10	$I_C=8\text{A}; I_B=0.8\text{A}$			1	V
		D44H8,11					
$V_{BE(sat)}$	Base-Emitter Saturation Voltage		$I_C=8\text{A}; I_B=0.8\text{A}$			1.5	V
I_{CES}	Collector Cutoff Current		$V_{CE}=\text{Rated } V_{CE0};$			10	μA
I_{EBO}	Emitter Cutoff Current		$V_{EB}=5\text{V}; I_C=0$			100	μA
h_{FE-1}	DC Current Gain	D44H10	$I_C=2\text{A}; V_{CE}=1\text{V}$				
		D44H8,11					
h_{FE-2}	DC Current Gain	D44H10	$I_C=4\text{A}; V_{CE}=1\text{V}$				
		D44H8,11					
C_{OB}	Output Capacitance		$V_{CB}=10\text{V}, f=0.1\text{MHz}$		130		pF
f_T	Current-Gain—Bandwidth Product		$I_C=0.5\text{A}; V_{CE}=10\text{V}; f_{\text{test}}=20\text{MHz}$		50		MHz

Switching Times

t_s	Storage Time	$I_C=5\text{A}; I_{B1}=-I_{B2}=0.5\text{A}$ $V_{CC}=20\text{V}$		0.5		μs
t_f	Fall Time			0.14		μs

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