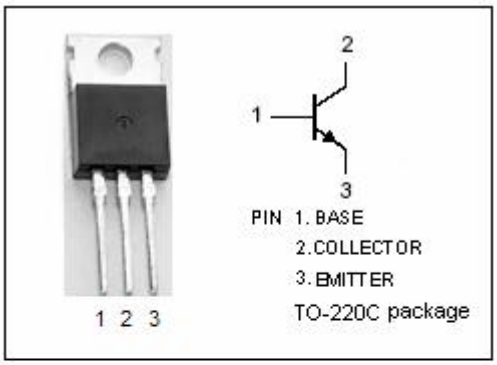
isc Silicon NPN Power Transistors — D44T1/2

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 250V (Min)
- High Switching Speed
- Low Saturation Voltage
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

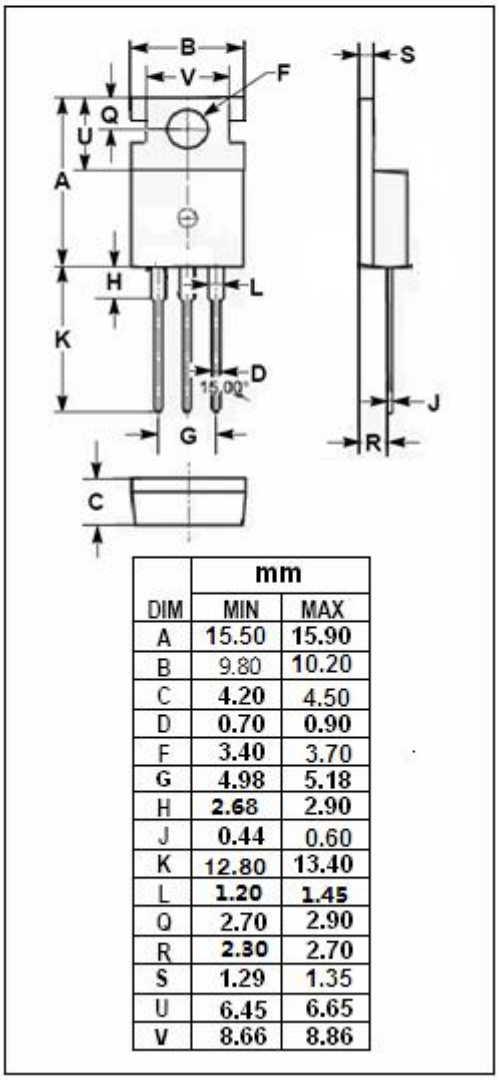
- Designed for general purpose amplifier and switching applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CES}	Collector-Emitter Voltage V_{BE}=0	300	V
V_{CEO}	Collector-Emitter Voltage	250	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	2	A
I_{CM}	Collector Current-Peak	4	A
I_B	Base Current-Continuous	0.5	A
P_C	Collector Power Dissipation @ T_C=25℃	31.2	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	4	℃/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

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage		I_C= 0.5A; I_B= 50mA			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage		I_C= 0.5A; I_B= 50mA			1.2	V
I_{CES}	Collector Cutoff Current		V_{CE}= 300V; V_{BE}= 0			10	μA
I_{EBO}	Emitter Cutoff Current		V_{EB}= 5V; I_C= 0			10	μA
h_{FE-1}	DC Current Gain	D44T1	I_C= 0.5A ; V_{CE}= 10V	30		90	
		D44T2		75		175	
h_{FE-2}	DC Current Gain	D44T1	I_C= 50mA ; V_{CE}= 10V	20			
		D44T2		40			
f_T	Current-Gain—Bandwidth Product		I_C= 0.1A ; V_{CE}= 10V; f_{test}= 1MHz		15		MHz
t_r	Rise Time		I_C= 0.5A; I_{B1}= -I_{B2}= 50mA			0.3	μs
t_{stg}	Storage Time					3.0	μs
t_f	Fall Time					0.7	μs

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