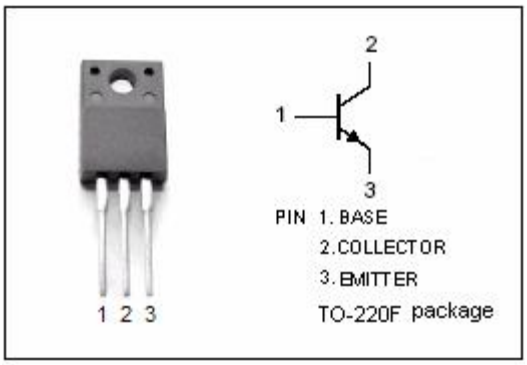
isc Silicon NPN Power Transistors — MJF44H11

DESCRIPTION

- Low Collector Saturation Voltage-
  : $V_{CE(sat)}$= 1.0V(Max.)@ I_C= 8A
- Fast Switching Speeds
- Complement to Type MJF45H11
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

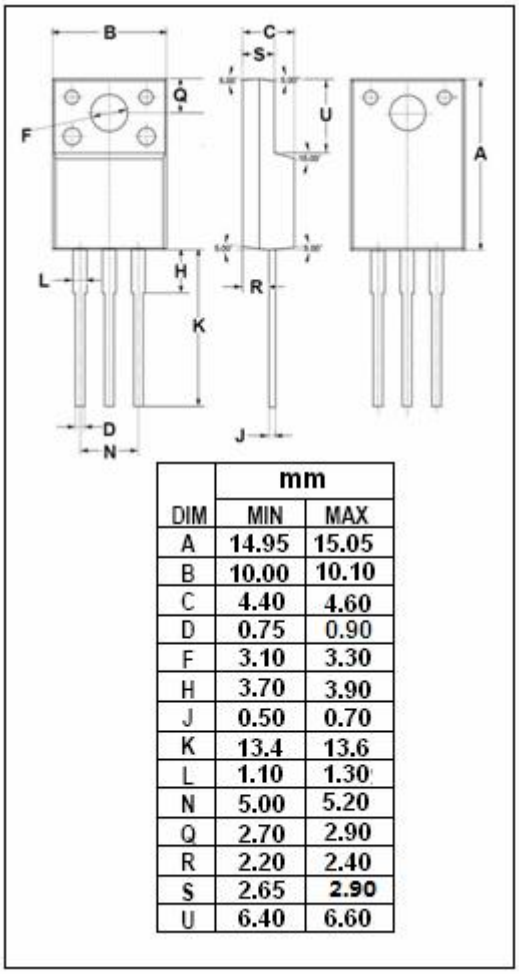


APPLICATIONS

- 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℃)

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℃	36	W
	Collector Power Dissipation @T_a=25℃	2	
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.90
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.90
U	6.40	6.60

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	3.5	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	62.5	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 30mA; I_B= 0	80			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 8A ;I_B= 0.4 A			1.0	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};			1.0	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			10	μA
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			