

isc Silicon PNP Power Transistors

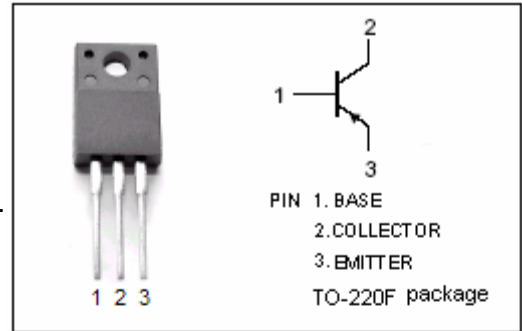
MJF45H11

DESCRIPTION

- Low Collector Saturation Voltage-
: $V_{CE(sat)} = -1.0V(\text{Max.}) @ I_C = -8A$
- Fast Switching Speeds
- Complement to Type MJF44H11

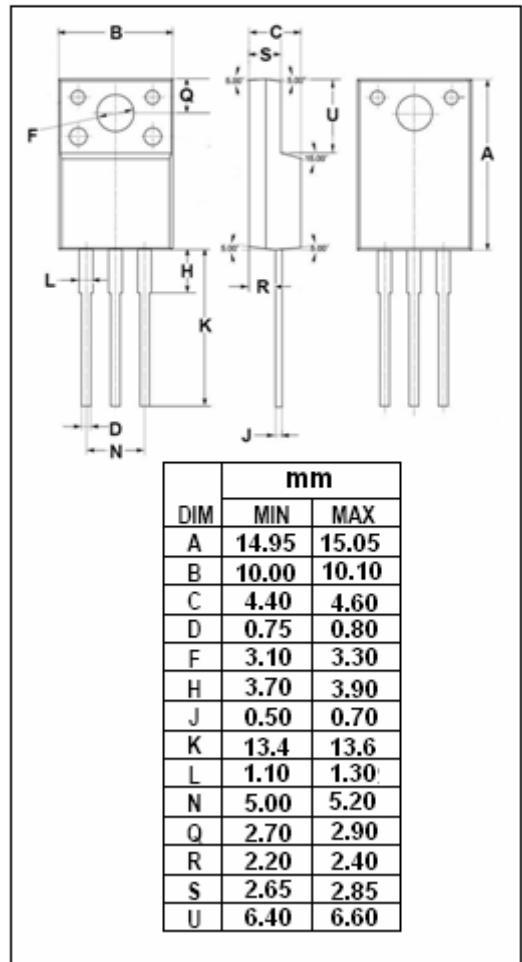
APPLICATIONS

- 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($T_a=25^\circ\text{C}$)

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 @ $T_C=25^\circ\text{C}$	36	W
	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	2	
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



THERMAL CHARACTERISTICS

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

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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = -30\text{mA}; I_B = 0$	-80			V
$V_{CE(sat)}$	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	$V_{CE} = \text{Rated } V_{CEO}$;			-1.0	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -5\text{V}; I_C = 0$			-10	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	$V_{CB} = -10\text{V}, f = 0.1\text{MHz}$		230		pF
f_T	Current-Gain—Bandwidth Product	$I_C = -0.5\text{A}; V_{CE} = -10\text{V}; f_{test} = 20\text{MHz}$		40		MHz

Switching Times

t_{on}	Turn-On Time	$I_C = -5\text{A}; I_{B1} = -0.5\text{A}$		135		ns
t_s	Storage Time	$I_C = -5\text{A}; I_{B1} = -I_{B2} = -0.5\text{A}$		500		ns
t_f	Fall Time			100		ns