

isc Silicon NPN Power Transistor

MJH16012

DESCRIPTION

- Collector-Emitter Voltage-
: $V_{CEO(SUS)} = 450V(\text{Min})$
- Fast Turn-Off Time

APPLICATIONS

Designed for high-voltage, high-speed applications as:

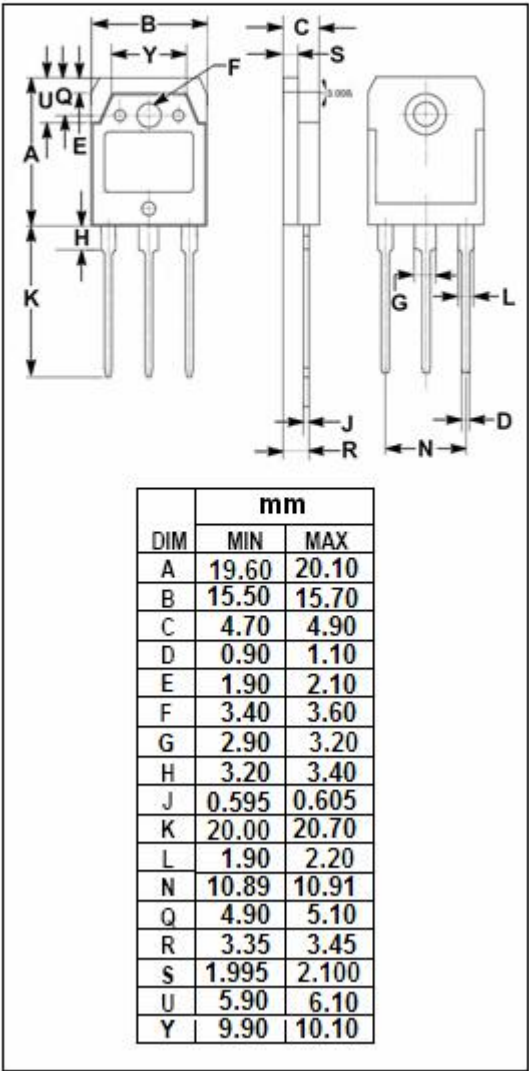
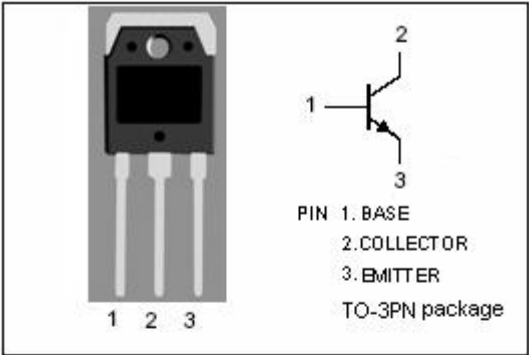
- Switching Regulators
- Inverters
- Relay Drivers
- Deflection Circuits

ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CEV}	Collector-Emitter Voltage	850	V
$V_{CEO(SUS)}$	Collector-Emitter Voltage	450	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	15	A
I_{CM}	Collector Current-Peak	20	A
I_B	Base Current-Continuous	10	A
I_{BM}	Base Current-Peak	15	A
P_C	Collector Power Dissipation @ $T_c=25^{\circ}\text{C}$	135	W
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	0.93	$^{\circ}\text{C/W}$



isc Silicon NPN Power Transistor**MJH16012****ELECTRICAL CHARACTERISTICS****T_j=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 30mA; I _B = 0	450			V
V _{CE(sat)} -1	Collector-Emitter Saturation Voltage	I _C = 5A ;I _B = 0.7A			2.5	V
V _{CE(sat)} -2	Collector-Emitter Saturation Voltage	I _C = 10A ;I _B = 1.3A ;			3.0	V
V _{CE(sat)} -3	Collector-Emitter Saturation Voltage	I _C = 10A ;I _B = 1.3A ;T _C =100°C			3.0	V
V _{BE(sat)} -1	Base-Emitter Saturation Voltage	I _C = 5A ;I _B = 0.7A			1.5	V
V _{BE(sat)} -2	Base-Emitter Saturation Voltage	I _C =10A ;I _B = 1.3A ;			1.5	V
V _{BE(sat)} -3	Base-Emitter Saturation Voltage	I _C =10A ;I _B = 1.3A ;T _C =100°C			1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} =850V,I _E =0,			0.25	mA
I _{CBO}	Collector Cutoff Current	V _{CB} =850V,I _E =0,T _C =100°C			1.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C = 0			1.0	mA
h _{FE1}	DC Current Gain	I _C =1A ; V _{CE} = 5V	10		40	
h _{FE2}	DC Current Gain	I _C =1 5A ; V _{CE} = 5V	5			
C _{OB}	Output Capacitance	I _E = 0; f= 1kHz ; V _{CB} = 10V	400			pF