

isc Silicon NPN Power Transistor

MJ16010

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 450V(\text{Min})$
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

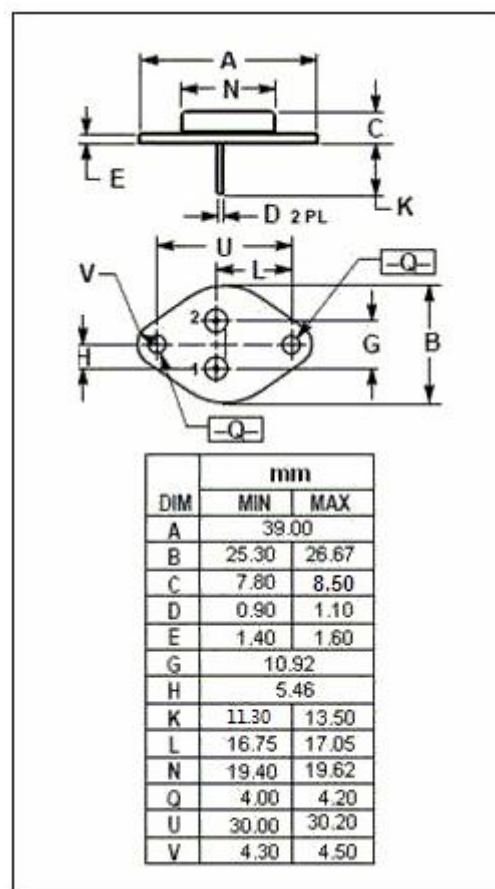
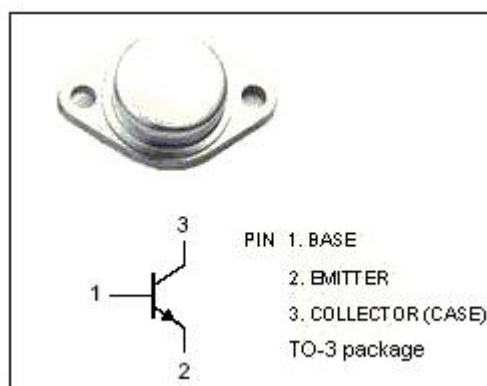
Designed for high-voltage, high-speed, power switching in inductive circuits where fall time is critical. It is particularly suited for line-operated switchmode applications such as: switching regulators, inverters, solenoids, relay drivers, motor controls and deflection circuits and etc.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector- Base Voltage	850	V
V_{CEO}	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@ $T_c=25^\circ\text{C}$	175	W
T_j	Junction Temperature	200	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal Rresistance, Junction to Case	1.0	$^\circ\text{C/W}$



isc Silicon NPN Power Transistor**MJ16010****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA ; 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 I _C = 10A ; I _B = 1.3A ; T _C = 100°C			3.0 3.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 10A ; I _B = 1.3A I _C = 10A ; I _B = 1.3A ; T _C = 100°C			1.5 1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} =850V; I _E =0 V _{CB} =850V; I _E =0; T _C =100°C			0.25 1.5	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C = 0			1.0	mA
h _{FE}	DC Current Gain	I _C = 15A ; V _{CE} = 5V	5			
C _{OB}	Output Capacitance	V _{CB} = 10V, I _E = 0; f _{test} = 1.0kHz			400	pF

NOTICE:

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.