

isc Silicon NPN Power Transistor

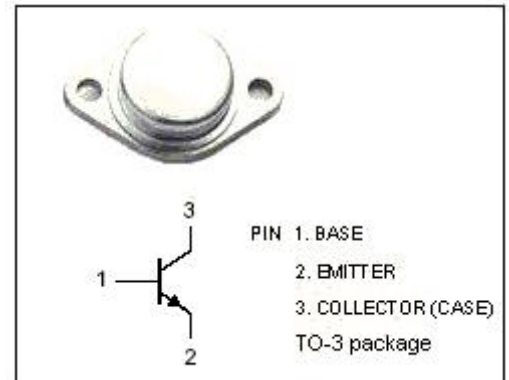
MJ410

DESCRIPTION

- High Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 200V(\text{Min.})$
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 0.8V(\text{Max}) @ I_C = 1A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

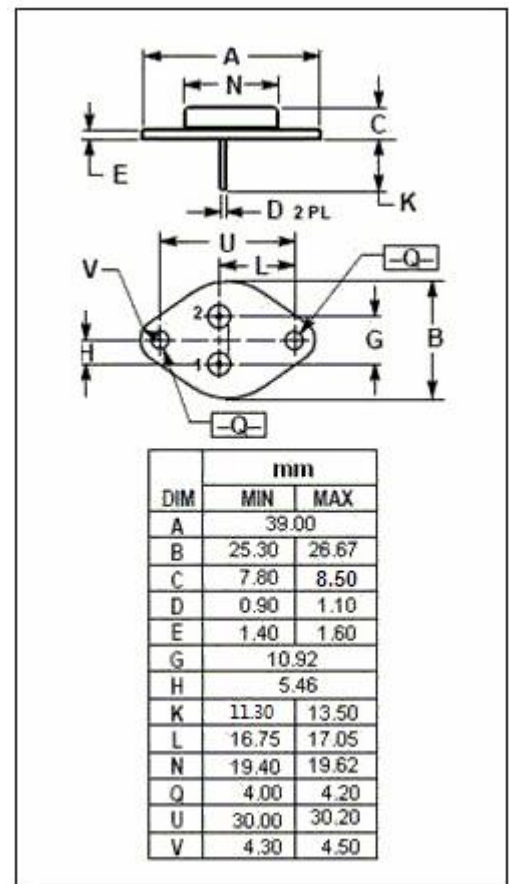
- Designed for medium to high voltage inverters, converters, regulators and switching circuits.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	200	V
V_{CEO}	Collector-Emitter Voltage	200	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	5	A
I_{CM}	Collector Current-Peak	10	A
I_B	Base Current-Continuous	2	A
P_C	Collector Power Dissipation@ $T_c=25^\circ\text{C}$	100	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.75	$^\circ\text{C/W}$



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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	200			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 1A; I _B = 0.1A			0.8	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 1A; I _B = 0.1A			1.2	V
I _{CEO}	Collector Cutoff Current	V _{CE} = 200V; I _B = 0			0.25	mA
I _{CBO}	Collector Cutoff Current	V _{CB} = 200V; I _E = 0; T _C =125°C			0.5	mA
I _{EBO}	Emitter Cutoff current	V _{EB} = 5V; I _C = 0			5.0	mA
h _{FE-1}	DC Current Gain	I _C = 1A; V _{CE} =5V	30		90	
h _{FE-2}	DC Current Gain	I _C = 2.5A; V _{CE} =5V	10			
f _T	Current-Gain—Bandwidth Product	I _C = 0.2A; V _{CE} =10V; f=1.0MHz	2.5			MHz

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