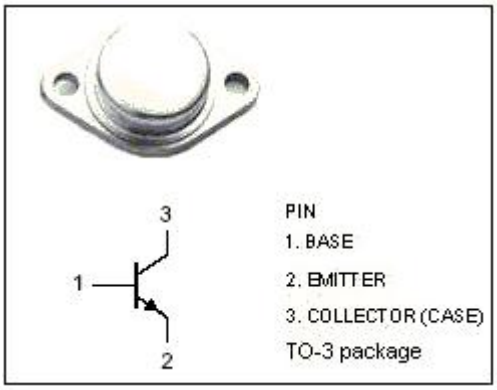
isc Silicon NPN Power Transistor MJ15011

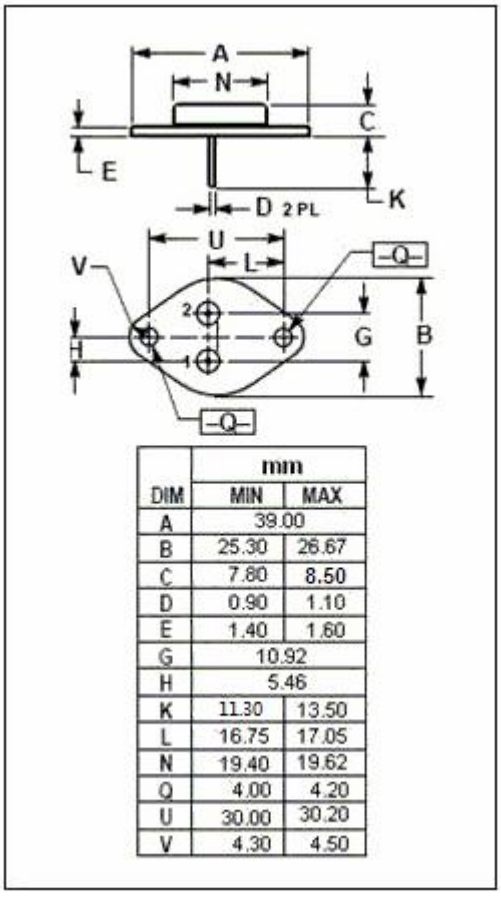
DESCRIPTION

- Excellent Safe Operating Area
- DC Current Gain-
  : h_{FE}= 20(Min.)@I_C = 2A
- Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$= 2.5V(Max)@ I_C = 4A
- Complement to the PNP MJ15012
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for high power audio, disk head positioners , and other linear applications. These devices can also be used in power switching circuits such as relay or solenoid drivers, DC-DC converters or inverters.





DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.50
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.30	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Voltage	250	V
V_{CEX}	Collector-Emitter Voltage	250	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Peak	15	A
I_B	Base Current-Continuous	2	A
I_{BM}	Base Current-Peak	5	A
I_E	Emitter Current-Continuous	-12	A
I_{EM}	Emitter Current-Peak	-20	A
P_D	Total Power Dissipation@T_C=25℃	200	W
T_j	Junction Temperature	200	℃
T_{stg}	Storage Temperature	-65~200	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	0.875	℃/W

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ELECTRICAL CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 50mA ;I_B= 0	250		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 2A; I_B= 0.2A		0.8	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 4A; I_B= 0.4A		2.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 4A ; V_{CE}= 2V		2.0	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 200V; I_B= 0		1.0	mA
I_{CBO}	Collector Cutoff Current	V_{CB}= 250V;I_E= 0		0.5	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0		0.5	mA
h_{FE-1}	DC Current Gain	I_C= 2A ; V_{CE}= 2V	20	100	
h_{FE-2}	DC Current Gain	I_C= 4A ; V_{CE}= 2V	5		
C_{OB}	Output Capacitance	I_E= 0 ; V_{CB}= 10V; f_{test}= 1.0MHz	500		pF