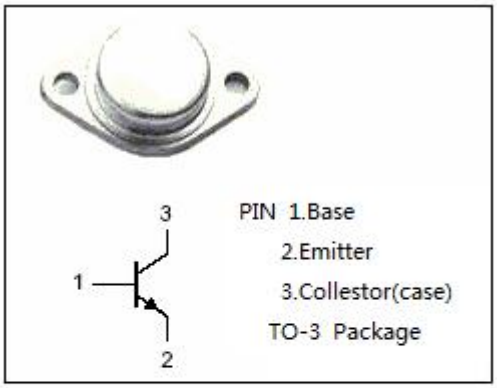
isc Silicon NPN Power Transistor BDY37

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 140V (Min)
- Low Collector-Emitter Saturation Voltage
- Excellent Safe Operating Area
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

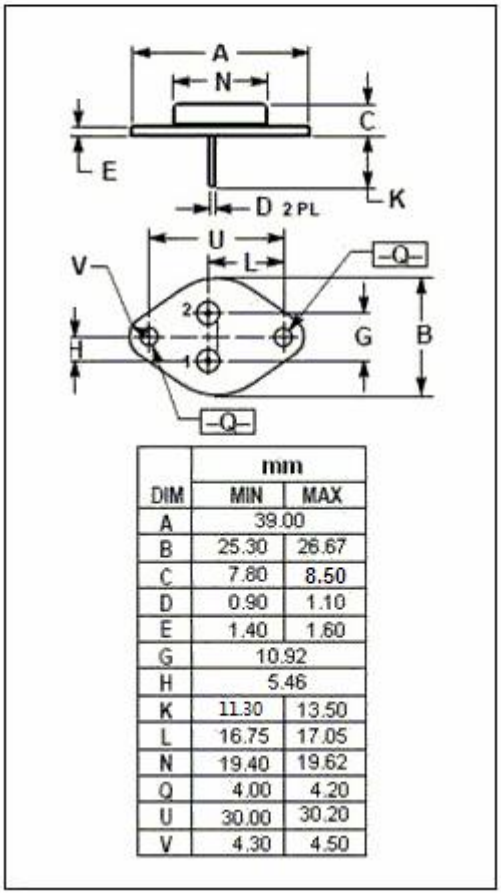
- Designed for high power audio, disk head positioners, linear amplifiers, switching regulators,solenoid drivers,and DC-DC converters or inverters.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	160	V
V_{CEO}	Collector-Emitter Voltage	140	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	16	A
I_{CM}	Collector Current-Peak	30	A
I_B	Base Current-Continuous	4	A
P_C	Collector Power Dissipation @T_C=25℃	150	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.17	℃/W



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

isc Silicon NPN Power Transistor BDY37

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 50mA ; I_B= 0	140		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 8A; I_B= 0.8A		1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 16A; I_B= 3.2A		2.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 8A ; V_{CE}= 2V		2.0	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 140V; I_B= 0		0.5	mA
I_{CEX}	Collector Cutoff Current	V_{CE}= 150V; $V_{BE(off)}$= 1.5V		2.0	mA
I_{CBO}	Collector Cutoff Current	V_{CB}= 150V; I_E= 0		0.2	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 7V; I_C= 0		0.1	mA
h_{FE-1}	DC Current Gain	I_C= 8A ; V_{CE}= 4V	15	60	
h_{FE-2}	DC Current Gain	I_C= 16A ; V_{CE}= 4V	10		