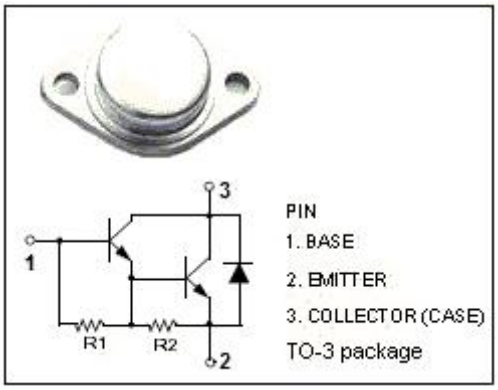
isc Silicon NPN Darlingtion Power Transistor MJ3001

DESCRIPTION

- Built-in Base-Emitter Shunt Resistors
- High DC current gain-
  h_{FE} = 1000 (Min) @ I_C = 5A
- Collector-Emitter Breakdown Voltage-
  $V_{(BR)CEO}$= 80V(Min)
- Complement to PNP type MJ2501
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

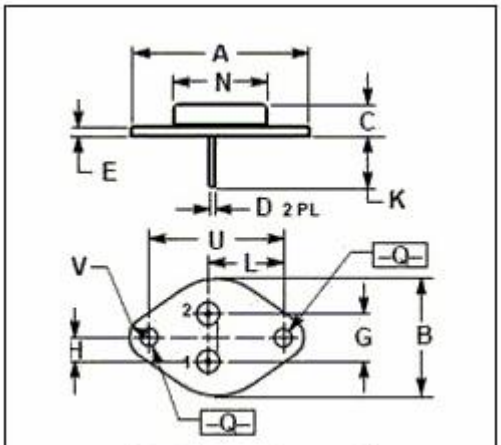


APPLICATIONS

- Designed for use as output devices in complementary general purpose amplifier applications.

ABSOLUTE MAXIMUM RATINGS(T_C=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	10	A
I_B	Base Current	0.2	A
P_C	Collector Power Dissipation@T_C=25℃	150	W
T_J	Junction Temperature	200	℃
T_{stg}	Storage Temperature	-55~200	℃



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

THERMAL CHARACTERISTICS

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

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 50mA; I_B= 0	80		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 5A; I_B= 20mA		2.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 10A; I_B= 50mA		4.0	V
$V_{BE(on)}$	Base-Emitter On voltage	I_C= 5A ; V_{CE}= 3V		3.0	V
I_{CEO}	Collector Cutoff current	V_{CE}= 40V; I_B= 0		1.0	mA
I_{CBO}	Collector Cutoff current	V_{CB}= 80V; I_E= 0,T_C=150℃		1.0	mA
I_{EBO}	Emitter Cut-off current	V_{EB}= 5V; I_C= 0		2.0	mA
h_{FE}	DC Current Gain	I_C= 5A ; V_{CE}= 3V	1000		