

isc Silicon NPN Darlington 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 type MJ2501

APPLICATIONS

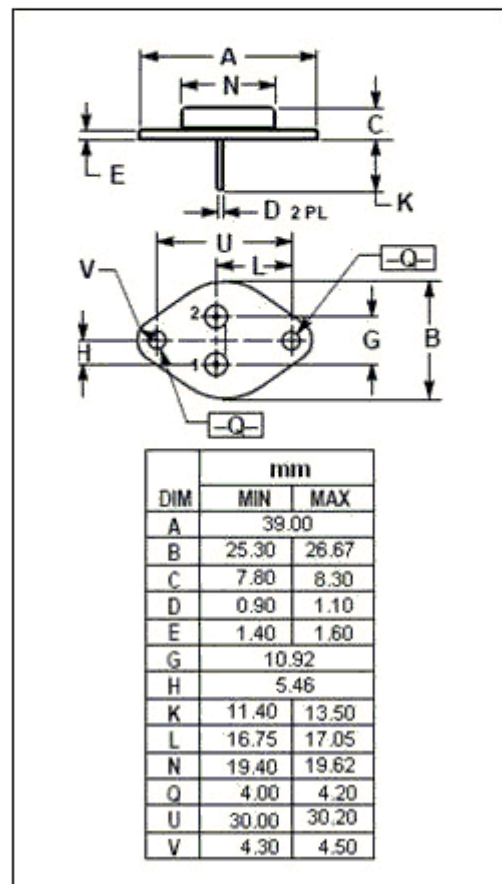
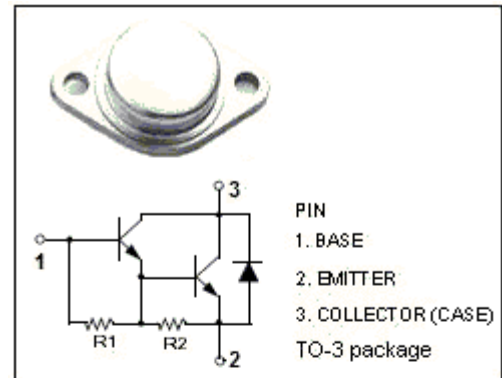
- Designed for use as output devices in complementary general purpose amplifier applications.

ABSOLUTE MAXIMUM RATINGS($T_C=25^\circ C$)

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@ $T_C=25^\circ C$	150	W
T_J	Junction Temperature	200	$^\circ C$
T_{stg}	Storage Temperature	-55~200	$^\circ C$

THERMAL CHARACTERISTICS

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



isc Silicon NPN Darlington Power Transistor**MJ3001****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=100\text{mA}; I_B=0$	80		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=20\text{mA}$		2.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=50\text{mA}$		4.0	V
$V_{BE(on)}$	Base-Emitter On voltage	$I_C=5\text{A}; V_{CE}=3\text{V}$		3.0	V
I_{CEO}	Collector Cutoff current	$V_{CE}=40\text{V}; I_B=0$		1.0	mA
I_{CER}	Collector Cutoff current	$V_{CE}=80\text{V}; R_{BE}=1.0\text{k}\Omega$ $V_{CE}=80\text{V}; R_{BE}=1.0\text{k}\Omega, T_C=150^{\circ}\text{C}$		1.0 5.0	mA
I_{EBO}	Emitter Cut-off current	$V_{EB}=5\text{V}; I_C=0$		2.0	mA
h_{FE}	DC Current Gain	$I_C=5\text{A}; V_{CE}=3\text{V}$	1000		