

isc Silicon PNP Darlington Power Transistor

MJ901

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = -80V(\text{Min.})$
- High DC Current Gain-
: $h_{FE} = 1000(\text{Min.}) @ I_C = -3A$
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = -2.0V(\text{Max.}) @ I_C = -3A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

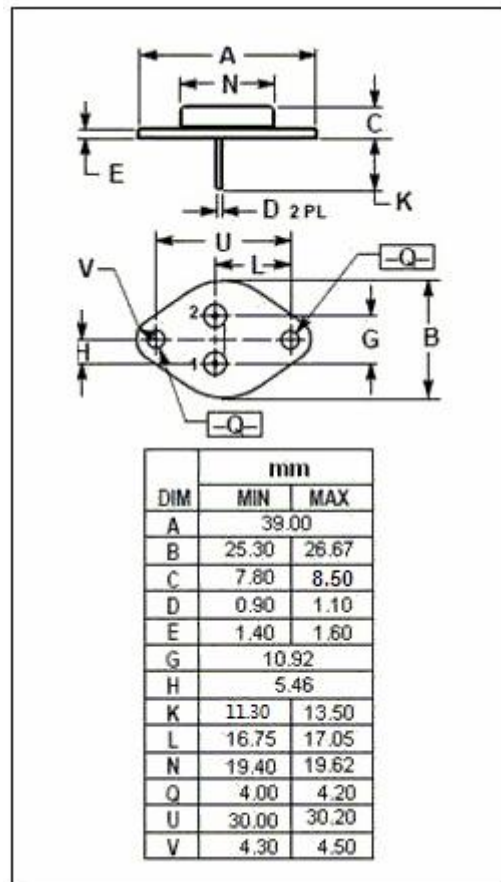
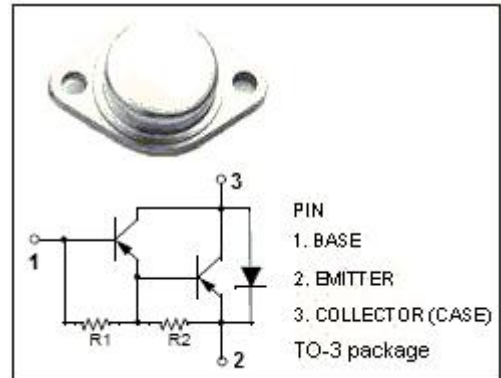
- Designed for power linear and switching applications

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

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	-8	A
I_B	Base Current-Continuous	-0.1	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	90	W
T_j	Junction Temperature	-65~+200	$^\circ\text{C}$
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	1.94	$^\circ\text{C/W}$



isc Silicon PNP Darlington Power Transistor**MJ901****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = -0.1A; I _B = 0	-80			V
V _{CE(sat)-1*}	Collector-Emitter Saturation Voltage	I _C = -3A; I _B = -12mA			-2.0	V
V _{CE(sat)-2*}	Collector-Emitter Saturation Voltage	I _C = -8A; I _B = -40mA			-4.0	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = -3A, V _{CE} = -3V			-2.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = -40V; I _E =0			-0.5	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = -5V; I _C = 0			-2.0	mA
h _{FE-1*}	DC Current Gain	I _C = -3A, V _{CE} = -3V	1000			
h _{FE-2*}	DC Current Gain	I _C = -4A, V _{CE} = -3V	750			

*:Pulse test:PW≤300us,duty cycle≤2%

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