

isc Silicon NPN Darlington Power Transistor
MJ14002
DESCRIPTION

- With TO-3 packaging
- Very high DC current gain
- Monolithic darlington transistor with integrated antiparallel collector-emitter diode
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

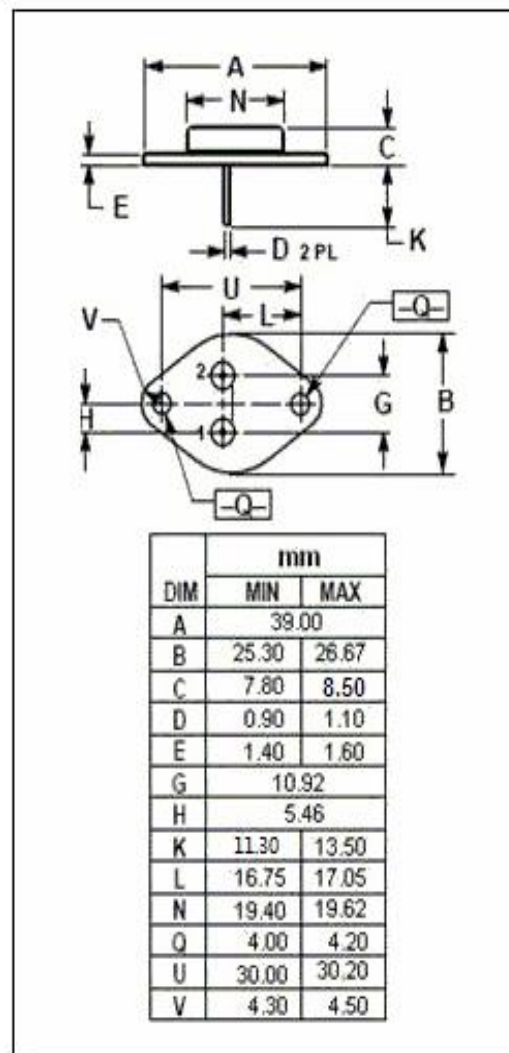
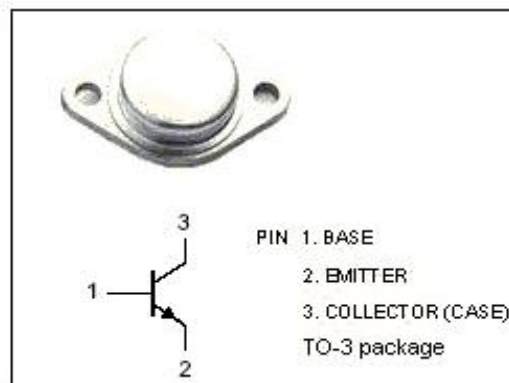
- Electronic ignition
- Alternator regulator
- Motor controls

ABSOLUTE MAXIMUM RATINGS(T_a=25°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	60	A
I _B	Base Current- Continuous	15	A
P _D	Collector Power Dissipation	300	W
T _j	Max.Junction Temperature	200	°C
T _{stg}	Storage Temperature Range	-65~200	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	0.58	°C/W



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ELECTRICAL CHARACTERISTICS
T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 250mA, I _B = 0	80		V
V _{CE(sat)1}	Collector-Emitter Saturation Voltage	I _C = 25A ,I _B = 2.5A		1.0	V
V _{CE(sat)2}	Collector-Emitter Saturation Voltage	I _C = 50A ,I _B = 5.0A		2.5	V
V _{CE(sat)3}	Collector-Emitter Saturation Voltage	I _C = 60A ,I _B = 12A		3.0	V
V _{BE(sat)1}	Base-Emitter Saturation Voltage	I _C = 25A ,I _B = 2.5A		2	V
V _{BE(sat)2}	Base-Emitter Saturation Voltage	I _C = 50A ,I _B = 5.0A		3	V
V _{BE(sat)3}	Base-Emitter Saturation Voltage	I _C = 60A ,I _B = 12A		4	V
I _{CBO}	Collector Cutoff Current	V _{CB} =80V, I _E = 0		1.0	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = 40V, I _B = 0		1.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0		1.0	mA
h _{FE-1}	DC Current Gain	I _C = 25A ; V _{CE} =3V	30		
h _{FE-2}	DC Current Gain	I _C = 50A ; V _{CE} =3V	15	100	
h _{FE-3}	DC Current Gain	I _C = 60A ; V _{CE} =3V	5		

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