

# isc Silicon NPN Darlington Power Transistor

MJ15018

## 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

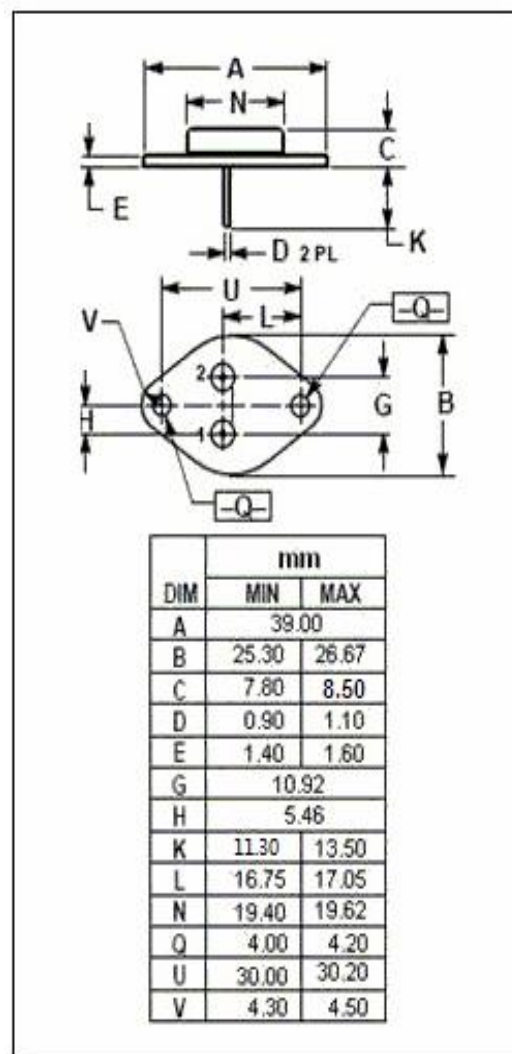
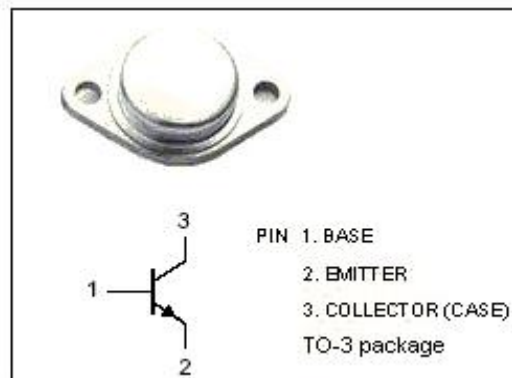
- Electronic ignition
- Alternator regulator
- Motor controls

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	200	V
$V_{CEO}$	Collector-Emitter Voltage	200	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	4	A
$I_B$	Base Current- Continuous	2	A
$P_D$	Collector Power Dissipation	150	W
$T_j$	Max.Junction Temperature	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	1.17	$^{\circ}\text{C/W}$



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## ELECTRICAL CHARACTERISTICS

 $T_c=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CE(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=100\text{mA}$ , $I_B=0$	200		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=1.0\text{A}$ , $I_B=0.1\text{A}$		1.0	V
$V_{BE(on)}$	Base-Emitter Saturation Voltage	$I_C=1.0\text{A}$ , $V_{CE}=4.0\text{V}$		2	V
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=150\text{V}$ , $I_B=0$		0.5	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=7\text{V}$ ; $I_C=0$		0.5	mA
$h_{FE-1}$	DC Current Gain	$I_C=1\text{A}$ ; $V_{CE}=4\text{V}$	30		
$h_{FE-2}$	DC Current Gain	$I_C=3\text{A}$ ; $V_{CE}=4\text{V}$	10		

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