

isc Silicon NPN Darlington Power Transistor

MJ10016

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

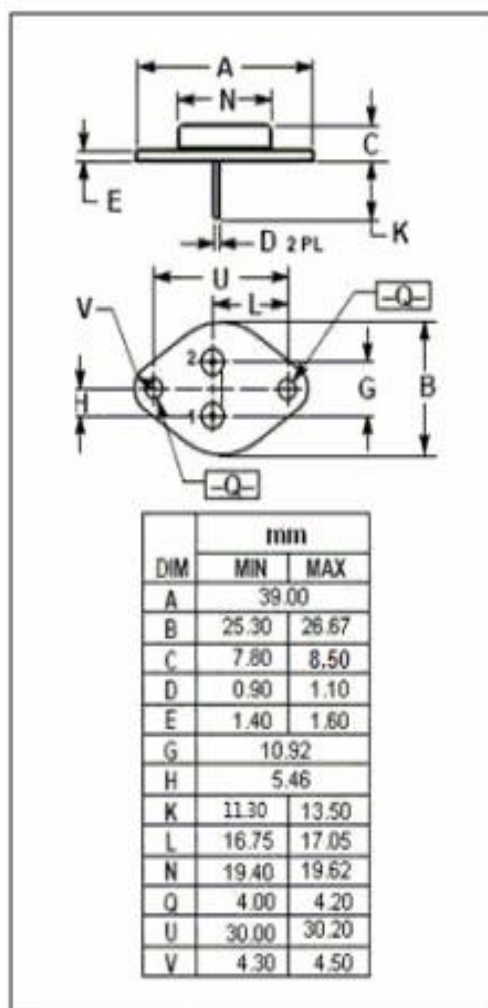
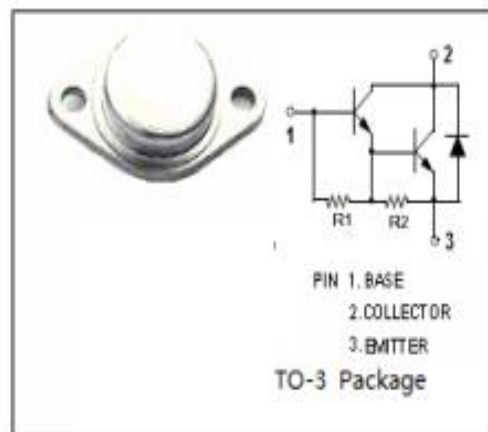
- Electronic ignition
- Alternator regulator
- Motor controls

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	700	V
V_{CEO}	Collector-Emitter Voltage	500	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current-Continuous	50	A
I_{CM}	Collector Current-Peak	75	A
I_B	Base Current- Continuous	10	A
P_C	Collector Power Dissipation	250	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	0.7	$^{\circ}\text{C/W}$



isc Silicon NPN Darlington Power Transistor**MJ10016****ELECTRICAL CHARACTERISTICS****T_c=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 100mA, I _B = 0	500		V
V _{CE(sat)1}	Collector-Emitter Saturation Voltage	I _C = 20A ,I _B = 1.0A		2.2	V
V _{CE(sat)2}	Collector-Emitter Saturation Voltage	I _C = 50A ,I _B = 10A		5.0	V
V _{BE(sat)1}	Base-Emitter Saturation Voltage	I _C = 20A ,I _B = 1.0mA		2.75	V
I _{CEV}	Collector Cutoff Current	V _{CE} = 700V, I _B = 0;V _{BE} =1.5V		0.25	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 2V; I _C = 0		350	mA
h _{FE-1}	DC Current Gain	I _C = 20A ; V _{CE} = 5V	20		
h _{FE-2}	DC Current Gain	I _C = 40A ; V _{CE} =5V	10		

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