

isc Silicon NPN Darlington Power Transistor
MJH11018
DESCRIPTION

- High DC Current Gain-
: $h_{FE} = 400(\text{Min})@ I_C = 10\text{A}$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(\text{SUS})} = 150\text{V}(\text{Min})$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(\text{sat})} = 2.5\text{V}(\text{Max})@ I_C = 10\text{A}$
= $4.0\text{V}(\text{Max})@ I_C = 15\text{A}$
- Complement to Type MJH11017
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

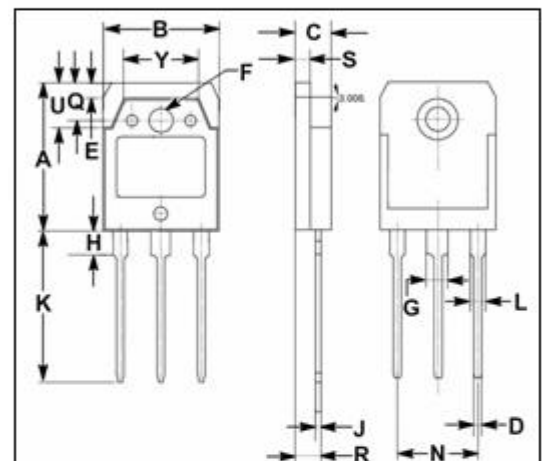
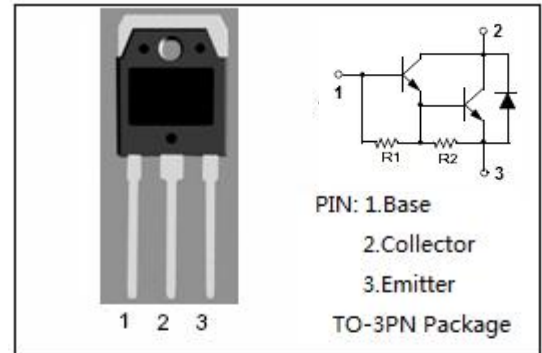
- Designed for general purpose amplifiers ,low frequency switching and motor control applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	150	V
V_{CEO}	Collector-Emitter Voltage	150	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	15	A
I_{CM}	Collector Current-Peak	30	A
I_B	Base Current- Continuous	0.5	A
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	150	W
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance,Junction to Case	0.83	$^\circ\text{C}/\text{W}$



DIM	mm	
	MIN	MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

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ELECTRICAL CHARACTERISTICS

 T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 30mA, I _B = 0	150			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 10A ,I _B = 0.1A			2.5	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 15A ,I _B = 0.15A			4.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 15A ,I _B = 0.15A			3.8	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 10A ; V _{CE} = 5V			2.8	V
I _{CBO}	Collector Cutoff Current	V _{CB0} =150V,I _E =0 ; V _{CB0} =150V,I _E =0 ;T _C =150°C			0.5 5.0	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = 150V, I _B =0			1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C =0			2	mA
h _{FE-1}	DC Current Gain	I _C = 10A ; V _{CE} = -5V	400		15000	
h _{FE-2}	DC Current Gain	I _C = 15A ; V _{CE} = -5V	100			

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