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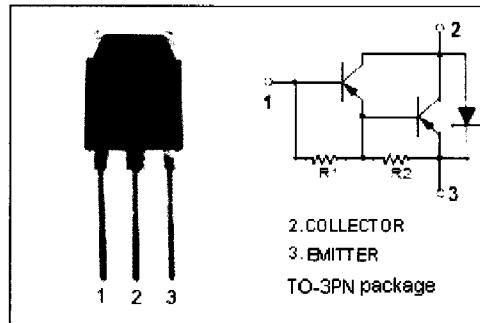
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Silicon PNP Darlington Power Transistor

MJH11017

DESCRIPTION

- High DC Current Gain-
: $h_{FE} = 400$ (Min)@ $I_C = -10A$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = -150V$ (Min)
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = -2.5V$ (Max)@ $I_C = -10A$
= -4.0V(Max)@ $I_C = -15A$
- Complement to Type MJH11018

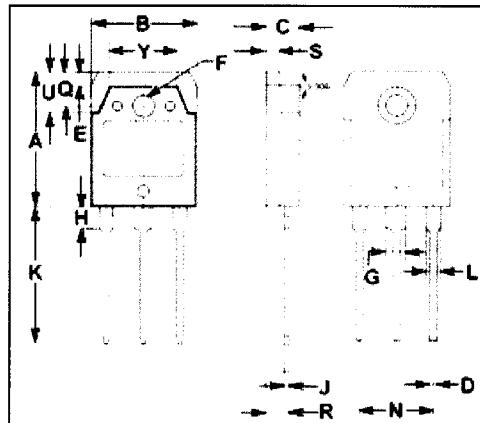


APPLICATIONS

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

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

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 @ $T_c=25^\circ C$	150	W
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature Range	-65~150	°C



DIM	mm	
	MIN	MAX
A	19.90	20.10
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	3.10
H	3.20	3.40
J	0.595	0.605
K	20.50	20.70
L	1.90	2.10
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.005
U	5.90	6.10
Y	9.90	10.10

THERMAL CHARACTERISTICS

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

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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(\text{sus})}$	Collector-Emitter Sustaining Voltage	$I_C = -100\text{mA}$, $I_B = 0$	-150			V
$V_{CE(\text{sat}-1)}$	Collector-Emitter Saturation Voltage	$I_C = -10\text{A}$, $I_B = -0.1\text{A}$			-2.5	V
$V_{CE(\text{sat}-2)}$	Collector-Emitter Saturation Voltage	$I_C = -15\text{A}$, $I_B = -0.15\text{A}$			-4.0	V
$V_{BE(\text{sat})}$	Base-Emitter Saturation Voltage	$I_C = -15\text{A}$, $I_B = -0.15\text{A}$			-3.8	V
$V_{BE(\text{on})}$	Base-Emitter On Voltage	$I_C = -10\text{A}$; $V_{CE} = -5\text{V}$			-2.8	V
I_{CEV}	Collector Cutoff Current	$V_{CEV} = 150\text{V}$; $V_{BE(\text{off})} = 1.5\text{V}$ $V_{CEV} = 150\text{V}$; $V_{BE(\text{off})} = 1.5\text{V}$; $T_c = 150^\circ\text{C}$			-0.5 -5.0	mA
I_{CEO}	Collector Cutoff Current	$V_{CE} = -75\text{V}$, $I_B = 0$			-1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -5\text{V}$; $I_C = 0$			-2	mA
h_{FE-1}	DC Current Gain	$I_C = -10\text{A}$; $V_{CE} = -5\text{V}$	400		15000	
h_{FE-2}	DC Current Gain	$I_C = -15\text{A}$; $V_{CE} = -5\text{V}$	100			
C_{OB}	Output Capacitance	$I_E = 0$; $V_{CB} = -10\text{V}$, $f = 0.1\text{MHz}$			600	pF

Switching times

t_d	Delay Time	$I_C = -10\text{A}$, $V_{CC} = -100\text{V}$; $I_B = -0.1\text{A}$; $V_{BE(\text{off})} = -5\text{V}$; Duty Cycle $\leq 2.0\%$		75		ns
t_r	Rise Time			0.5		μs
t_s	Storage Time			2.7		μs
t_f	Fall Time			2.5		μs