

isc Silicon PNP Darlington Power Transistor

MP1620

DESCRIPTION

- With TO-3PN packaging
- Very high DC current gain
- Monolithic darlington transistor with integrated antiparallel collector-emitter diode
- Complement to type MJH6284
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

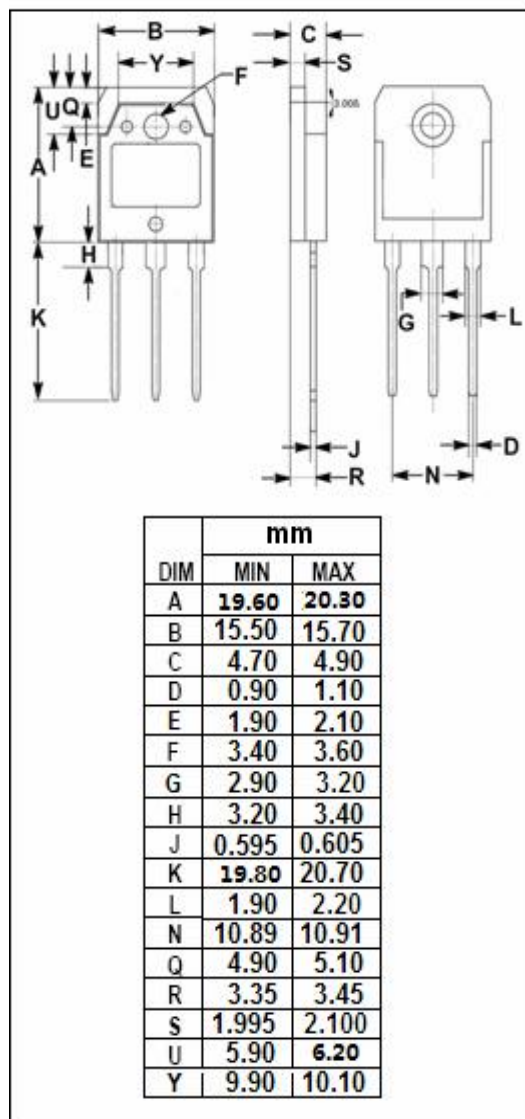
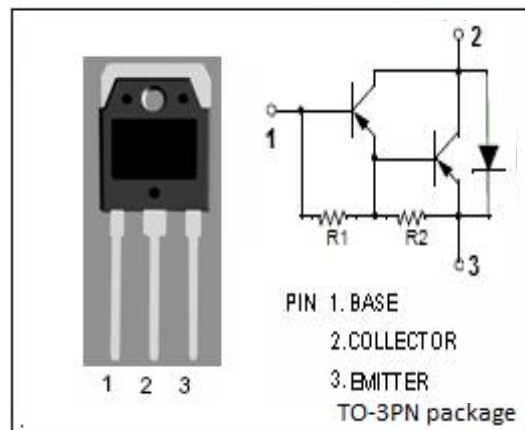
- AC-DC motor control
- Electronic ignition
- Alternator regulator

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-160	V
V_{CEO}	Collector-Emitter Voltage	-150	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-10	A
I_B	Base Current	-1	A
P_C	Collector Power Dissipation	150	W
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.78	$^{\circ}\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^{\circ}\text{C/W}$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = -30\text{mA}$, $I_B = 0$	-150		V
$V_{CE(sat)1}$	Collector-Emitter Saturation Voltage	$I_C = -7\text{A}$, $I_B = -7\text{mA}$		-2.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -7\text{A}$, $I_B = -7\text{mA}$		-3.0	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -160\text{V}$, $I_E = 0$		-0.1	mA
I_{CEO}	Collector Cutoff Current	$V_{CE} = -150\text{V}$, $I_B = 0$		-0.1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -5\text{V}$, $I_C = 0$		-0.1	mA
h_{FE-1}	DC Current Gain	$I_C = -7\text{A}$; $V_{CE} = -4\text{V}$	5000	30000	

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