

isc Silicon NPN Darlington Power Transistor

2SD1607

DESCRIPTION

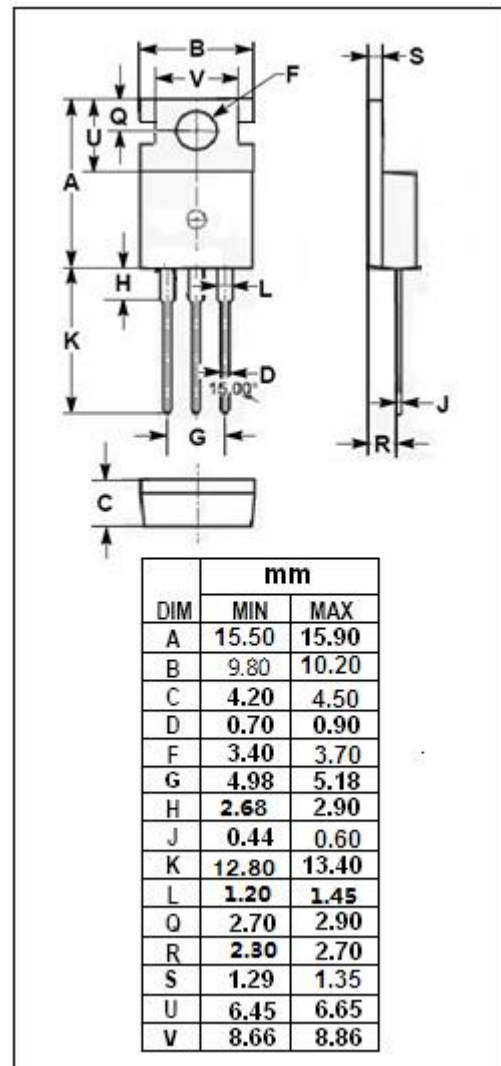
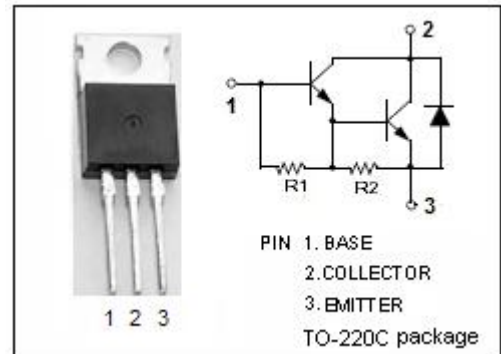
- High DC Current Gain-
: $h_{FE} = 1000(\text{Min}) @ I_C = 5A$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(\text{SUS})} = 120V(\text{Min})$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(\text{sat})} = 2.0V(\text{Max}) @ I_C = 5A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for general purpose amplifier and low speed switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	120	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Peak	15	A
I_B	Base Current- Continuous	0.5	A
P_C	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	40	W
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Darlington Power Transistor**2SD1607****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 30mA, I _B = 0	120			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 5A ,I _B = 10mA			2.0	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 10A ,I _B = 40mA			3.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 10A ,I _B = 40mA			3.5	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 10A ; V _{CE} = 4V			3.0	V
I _{CBO}	Collector Cutoff current	V _{CB} = 120V, I _E = 0			0.1	mA
I _{CEO}	Collector Cutoff current	V _{CE} = 120V, I _B = 0			0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C = 0			3	mA
h _{FE-1}	DC Current Gain	I _C = 5A ; V _{CE} = 3V	1000			
h _{FE-2}	DC Current Gain	I _C = 10A ; V _{CE} = 3V	500			

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