

isc Silicon PNP Darlington Power Transistor

BD698

DESCRIPTION

- Collector-Emitter Sustaining Voltage—
: $V_{CEO(SUS)} = -60V(\text{Min.})$
- DC Current Gain—
: $h_{FE} = 750(\text{Min}) @ I_C = -3A$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

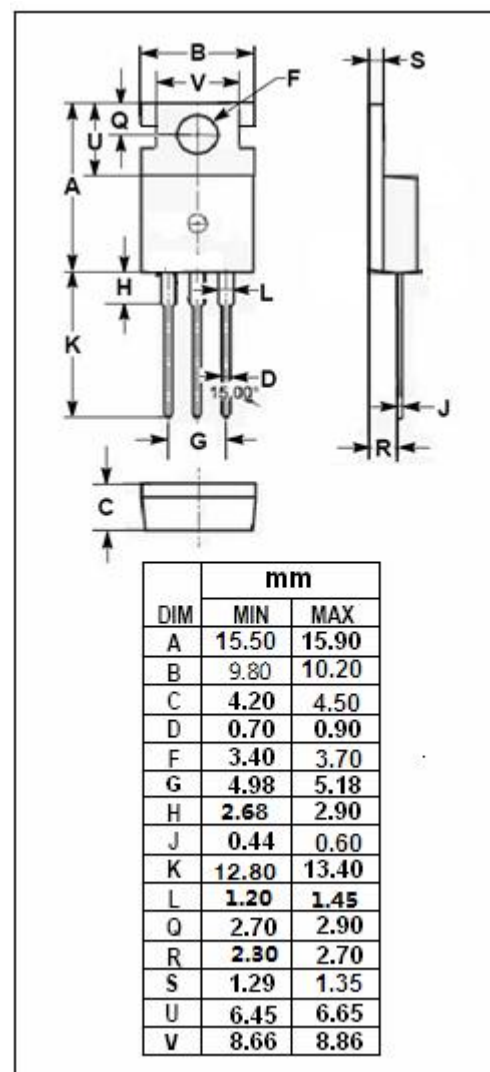
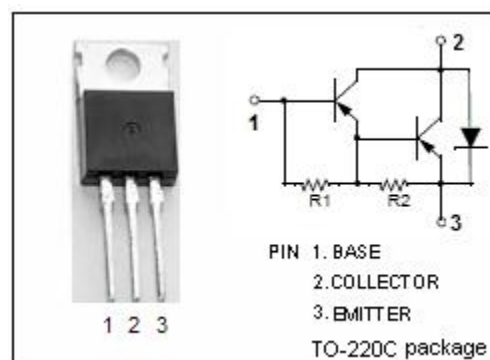
- Designed for general-purpose amplifier and low-speed switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-5	A
I_{CM}	Collector Current-Peak	-8	A
I_B	Base Current-DC	-120	mA
P_C	Collector Power Dissipation $T_C=25^\circ\text{C}$	70	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	1.92	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ\text{C/W}$



isc Silicon PNP Darlington Power Transistor**BD698****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	-60			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = -3A ,I _B = -12mA			-2.0	V
V _{CE(sat)-2}	Collector-Emitter Saturation voltage	I _C = -5A ,I _B = -20mA			-4.0	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = -3.0A ; V _{CE} = -3V			-2.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = -60V, I _E = 0			-0.2	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = -60V, I _B = 0			-0.5	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = -5V; I _C = 0			-2	mA
h _{FE-1}	DC Current Gain	I _C = -0.5A ; V _{CE} = -3V	1000			
h _{FE-2}	DC Current Gain	I _C = -3.0A ; V _{CE} = -3V	750			
f _T	Current-Gain—Bandwidth Product	I _C = -0.1A; V _{CE} = -5V	3			MHz

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