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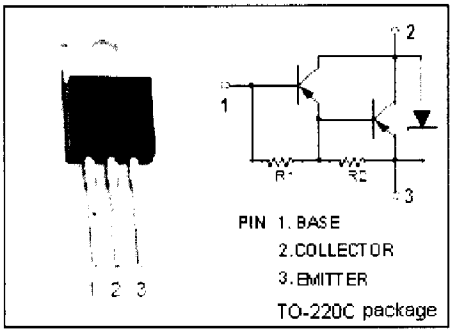
Silicon PNP Darlington Power Transistor — BD650

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= -100V(Min)
- High DC Current Gain
  : h_{FE}= 750(Min) @I_C= -3A
- Low Saturation Voltage
- Complement to Type BD649

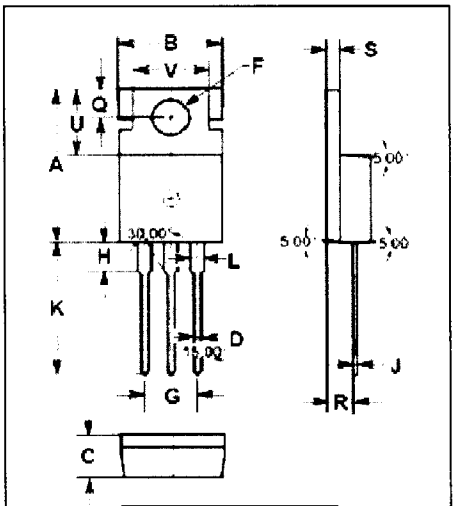
APPLICATIONS

- Designed for use as complementary AF push-pull output stage applications



ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-120	V
V_{CEO}	Collector-Emitter Voltage	-100	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-8	A
I_{CP}	Collector Current-Peak	-12	A
I_B	Base Current-Continuous	-0.3	A
P_C	Collector Power Dissipation @ T_a=25℃	2	W
	Collector Power Dissipation @ T_C=25℃	62.5	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃



DIM	mm MIN	MAX
A	15.70	15.90
B	9.90	10.10
C	4.20	4.40
D	0.70	0.90
F	3.40	3.60
G	4.98	5.18
H	2.70	2.90
J	0.44	0.46
K	13.20	13.40
L	1.10	1.30
Q	2.70	2.90
R	2.50	2.70
S	1.29	1.31
U	6.45	6.65
V	8.66	8.86

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	2	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	62.5	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Breakdown Voltage	I_C= -30mA; I_B= 0	-100			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= -50mA			-2.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= -5A; I_B= -50mA			-3.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= -3A; V_{CE}= -3V			-2.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= -100V; I_E= 0			-0.2	mA
		V_{CB}= -60V; I_E= 0; T_C= 150℃			-2.0	
I_{CEO}	Collector Cutoff Current	V_{CE}= -50V; I_B= 0			-0.5	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= -5V; I_C= 0			-5	mA
h_{FE}	DC Current Gain	I_C= -3A; V_{CE}= -3V	750			

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