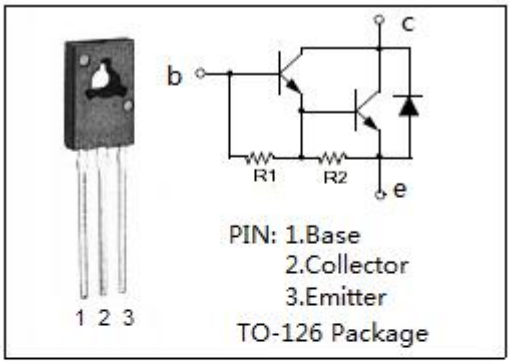
isc Silicon NPN Power Transistor — BD333

DESCRIPTION

- High DC Current Gain
- Complement to type BD334
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- NPN epitaxial base transistors in monolithic Darlington circuit for audio output stages and general amplifier and switching applications.

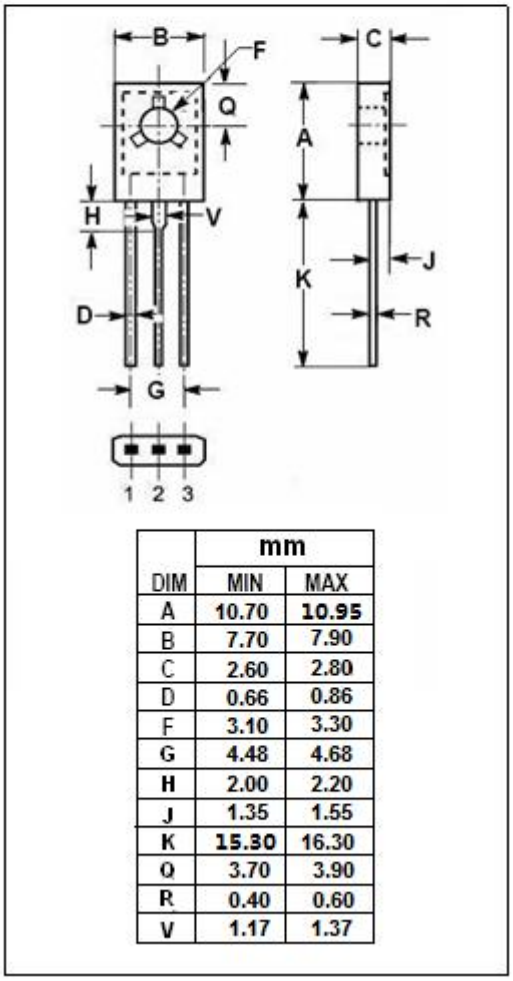


ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	6	A
I_{BM}	Base Current-Peak	0.15	A
P_C	Collector Power Dissipation @ T_C=25℃	60	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	2.08	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	100	℃/W



DIM	mm MIN	MAX
A	10.70	10.95
B	7.70	7.90
C	2.60	2.80
D	0.66	0.86
F	3.10	3.30
G	4.48	4.68
H	2.00	2.20
J	1.35	1.55
K	15.30	16.30
Q	3.70	3.90
R	0.40	0.60
V	1.17	1.37

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 10mA; I_B= 0	80			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 3A; I_B= 12mA			2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 3A; V_{CE}= 3V			2.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 60V; I_E= 0 V_{CB}= 60V; I_E= 0,T_C=150℃			0.1 1.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			5	mA
h_{FE-1}*	DC Current Gain	I_C= 0.5A; V_{CE}= 3V		1900		
h_{FE-2}*	DC Current Gain	I_C= 3A; V_{CE}=3V	750			
h_{FE-3}*	DC Current Gain	I_C= 6A; V_{CE}= 3V		3000		

*:Measured under pulse conditions:tp<300us,σ<2%