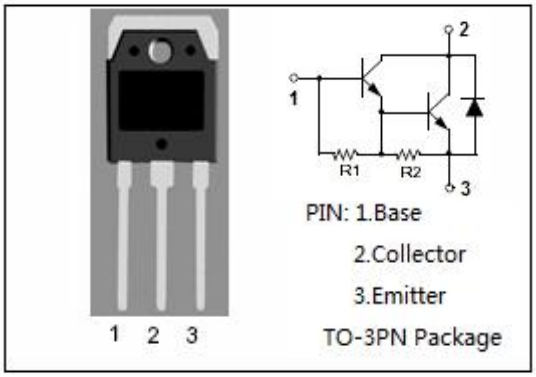
isc Silicon NPN Darlington Power Transistor 2SD1297

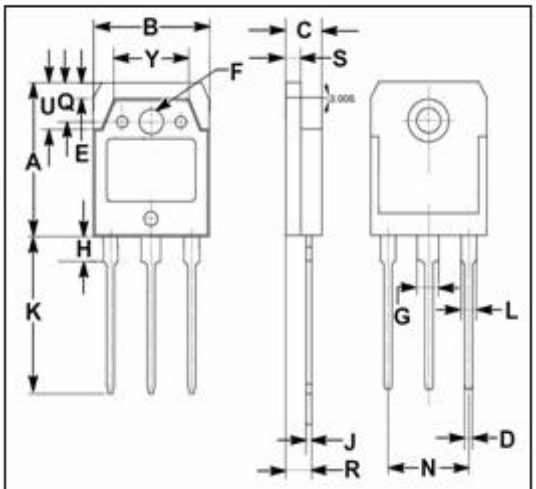


DESCRIPTION

- High DC Current Gain
  : h_{FE}= 1000(Min.)@ I_C= 15A, V_{CE}= 2V
- High Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$ = 100V(Min)
- Low Collector Saturation Voltage
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for audio frequency power amplifier and low speed high current switching industrial applications.



DIM	mm MIN	MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	150	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current-Continuous	25	A
I_{CM}	Collector Current-Peak	50	A
I_B	Base Current- Continuous	1.5	A
P_C	Collector Power Dissipation @T_C=25℃	100	W
	Collector Power Dissipation @T_a=25℃	3.0	
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 10mA, I_B= 0	100			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 15A ,I_B= 30mA			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 15A ,I_B= 30mA			2.2	V
I_{CBO}	Collector Cutoff current	V_{CB}= 100V, I_E= 0			0.1	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 8V; I_C= 0			10	mA
h_{FE-1}	DC Current Gain	I_C= 15A ; V_{CE}= 2V	1000		30000	
h_{FE-2}	DC Current Gain	I_C= 25A ; V_{CE}= 2V	250			
Switching Times						
t_{on}	Turn-On Time	I_C = 15A,I_{B1} = I_{B2}= 30mA; R_L= 4Ω ;V_{CC}≈ 60V		1.0		μs
t_{stg}	Storage Time			5.0		μs
t_f	Fall Time			2.0		μs

◆ **h_{FE-1} classifications**

M	L	K	J
1000-3000	2000-5000	4000-10000	8000-30000

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