

isc Silicon NPN Darlington Power Transistor

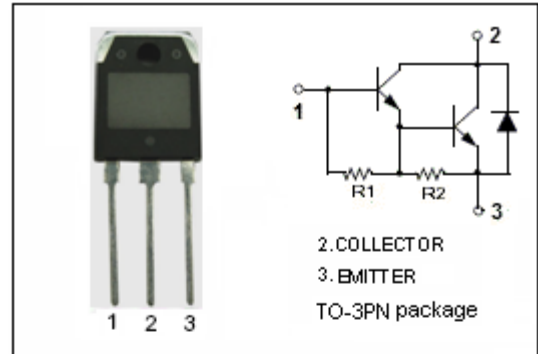
2SD1210

DESCRIPTION

- High DC Current Gain
: $h_{FE} = 1000(\text{Min.}) @ I_C = 10A$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 100V(\text{Min})$

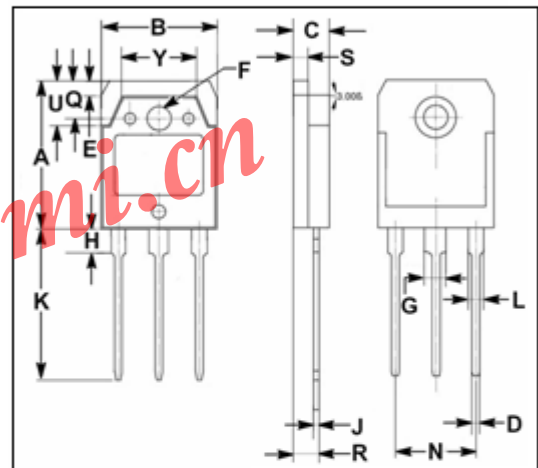
APPLICATIONS

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



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

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	10	A
I_{CM}	Collector Current-Peak	20	A
I_B	Base Current- Continuous	1	A
P_C	Collector Power Dissipation @ $T_a=25^\circ C$	3	W
	Collector Power Dissipation @ $T_C=25^\circ C$	80	
T_j	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-55~150	$^\circ C$



DIM	mm	
	MIN	MAX
A	19.90	20.10
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	3.10
H	3.20	3.40
J	0.595	0.605
K	20.50	20.70
L	1.90	2.10
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.005
U	5.90	6.10
Y	9.90	10.10

isc Silicon NPN Darlington Power Transistor**2SD1210****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=10\text{A}, I_B=25\text{mA}$			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=10\text{A}, I_B=25\text{mA}$			2.0	V
I_{CBO}	Collector Cutoff current	$V_{CB}=100\text{V}, I_E=0$			10	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=8\text{V}, I_C=0$			5	mA
h_{FE}	DC Current Gain	$I_C=10\text{A}; V_{CE}=2\text{V}$	1000			

Switching Times

t_{on}	Turn-On Time			1.0		μs
t_{stg}	Storage Time	$I_C=10\text{A}, I_{B1}=-I_{B2}=25\text{mA};$ $R_{th}=5\Omega; V_{CC}\approx 50\text{V}$		5.0		μs
t_f	Fall Time			2.0		μs