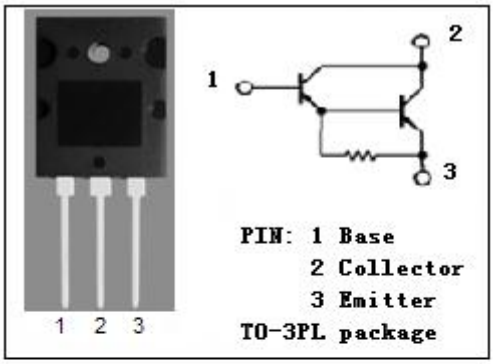
isc Silicon PNP Darlington Power Transistor 2SB1502

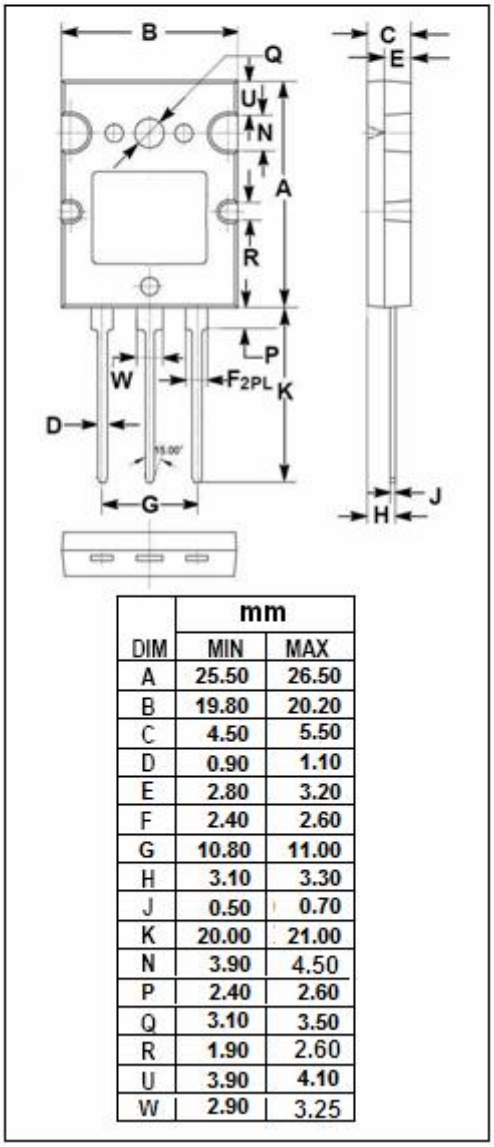
DESCRIPTION

- High DC Current Gain-
  : h_{FE}= 5000(Min)@I_C= -4A
- Low-Collector Saturation Voltage-
  : $V_{CE(sat)}$= -2.5V(Max.)@I_C= -4A
- Complement to Type 2SD2275
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

- Designed for power amplifier applications
- Optimum for 55W HiFi output applications.



DIM	mm MIN	mm MAX
A	25.50	26.50
B	19.80	20.20
C	4.50	5.50
D	0.90	1.10
E	2.80	3.20
F	2.40	2.60
G	10.80	11.00
H	3.10	3.30
J	0.50	0.70
K	20.00	21.00
N	3.90	4.50
P	2.40	2.60
Q	3.10	3.50
R	1.90	2.60
U	3.90	4.10
W	2.90	3.25

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	-5	A
I_{CM}	Collector Current-Peak	-8	A
P_C	Collector Power Dissipation @ T_C=25℃	60	W
	Collector Power Dissipation @ T_a=25℃	3.5	
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= -30mA; I_B= 0	-100			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= -4A; I_B= -4mA			-2.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= -4A; I_B= -4mA			-3.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}= -120V; I_E= 0			-100	μA
I_{CEO}	Collector Cutoff Current	V_{CE}= -100V; I_B= 0			-100	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= -5V; I_C= 0			-100	μA
h_{FE-1}	DC Current Gain	I_C= -1A; V_{CE}= -5V	2000			
h_{FE-2}	DC Current Gain	I_C= -4A; V_{CE}= -5V	5000		30000	
f_T	Current-Gain—Bandwidth Product	I_C= -0.5A; V_{CE}= -10V		20		MHz
Switching Times						
t_{on}	Turn-on Time	I_C= -4A; I_{B1}= -I_{B2}= -4mA, V_{CC}= -50V		1.0		μs
t_{stg}	Storage Time			0.8		μs
t_f	Fall Time			1.0		μs

◆ **h_{FE-2} Classifications**

Q	S	P
5000-15000	7000-21000	8000-30000

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