

## HIGH-POWER PNP SILICON POWER TRANSISTORS

...designed for use in general-purpose amplifier and switching application.

### FEATURES

- \* Recommend for 100W High Fidelity Audio Frequency Amplifier Output stage
- \* complementary 2SD424

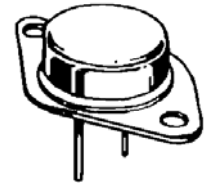
**PNP  
2SB554**

**15 AMPERES  
POWER  
TRANSISTOR**

**180 VOLTS  
150 WATTS**

### MAXIMUM RATINGS

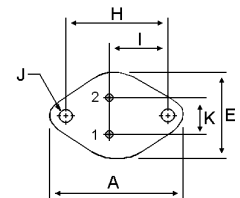
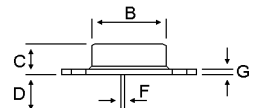
Rating	Symbol	2SB554	Unit
Collector-Emitter Voltage	$V_{CEO}$	180	V
Collector-Base Voltage	$V_{CBO}$	180	V
Emitter-Base Voltage	$V_{EB}$	5.0	V
Collector Current-Continuous	$I_C$	15	A
-Peak	$I_{CM}$	18	A
Base Current	$I_B$	3.0	A
Total Device Dissipation @ $T_C=25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	150 1.2	W W/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	$T_J, T_{STG}$	-55 to +150	$^\circ\text{C}$



**TO-3**

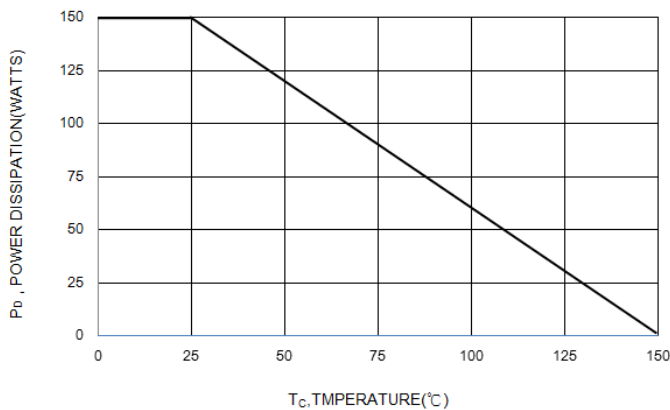
### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance Junction to Case	$R_{\theta JC}$	0.83	$^\circ\text{C/W}$



PIN 1 BASE  
2 EMITTER  
COLLECTOR(CASE)

**FIGURE-1 POWER DERATING**



DIM	MILLIMETERS	
	MIN	MAX
A	38.75	39.96
B	19.28	22.23
C	7.96	9.28
D	11.18	12.19
E	25.20	26.67
F	0.92	1.09
G	1.38	1.62
H	29.90	30.40
I	16.64	17.30
J	3.88	4.36
K	10.67	11.18

**ELECTRICAL CHARACTERISTICS (T<sub>C</sub>=25°C unless otherwise noted)**

Characteristic	Symbol	Min.	Max	Unit
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**OFF CHARACTERISTICS**

Collector-Emitter Breakdown Voltage ( I <sub>C</sub> = 50 mA, I <sub>B</sub> = 0 )	V <sub>(BR)CEO</sub>	180		V
Collector-Cutoff Current ( V <sub>CB</sub> = 180 V, I <sub>E</sub> = 0 )	I <sub>CBO</sub>		100	uA
Emitter Cutoff Current ( V <sub>BE</sub> = 5.0 V, I <sub>C</sub> = 0 )	I <sub>EBO</sub>		100	uA

**ON CHARACTERISTICS(1)**

DC current gain ( I <sub>C</sub> = 2.0 A, V <sub>CE</sub> = 5.0 V )	h <sub>FE</sub>	40	140	
Collector-Emitter Saturation Voltage ( I <sub>C</sub> = 10 A, I <sub>B</sub> = 1.0 A )	V <sub>CE(sat)</sub>		3.0	V
Base-Emitter On Voltage ( I <sub>C</sub> = 10 A, V <sub>CE</sub> = 5.0 V )	V <sub>BE(on)</sub>		2.5	V

**DYNAMIC CHARACTERISTICS**

Current-Gain-Bandwidth Product ( I <sub>C</sub> = 2.0 A, V <sub>CE</sub> = 5.0 V f = 1.0 MHz )	f <sub>T</sub>	6.0(typ)		MHz
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(1) Pulse test: Pulse Width ≤ 300 s, Duty Cycle ≤ 2.0%

\*h<sub>FE</sub>(2) Classification :

40 R 80	70 O 140
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