

HIGH-POWER NPN 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 2SB554

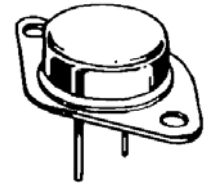
**NPN
2SD424**

**15 AMPERES
POWER
TRANSISTOR**

**180 VOLTS
150 WATTS**

MAXIMUM RATINGS

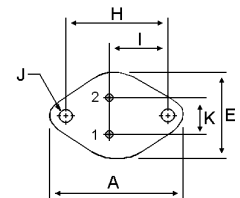
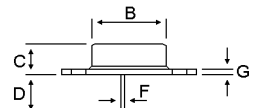
Rating	Symbol	2SD424	Unit
Collector-Emitter Voltage	V_{CEO}	180	V
Collector-Base Voltage	V_{CBO}	180	V
Emitter-Base Voltage	V_{EB}	5.0	V
Collector Current-Continuous	I_C	15	A
-Peak	I_{CM}	18	A
Base Current	I_B	3.0	A
Total Device Dissipation @ $T_C=25^\circ\text{C}$ Derate above 25°C	P_D	150 1.2	W W/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$



TO-3

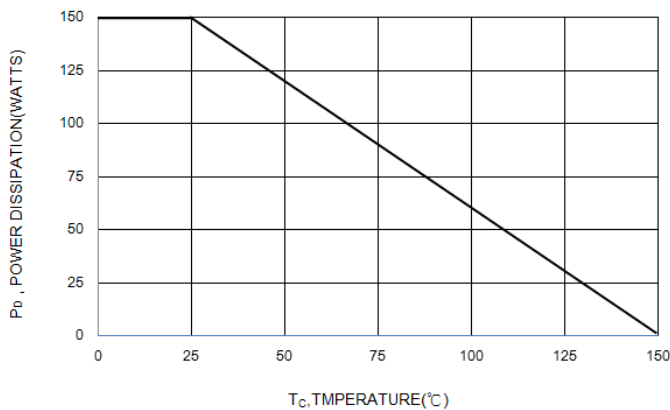
THERMAL CHARACTERISTICS

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_C=25°C unless otherwise noted)

Characteristic	Symbol	Min.	Max	Unit
----------------	--------	------	-----	------

OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage (I _C = 50 mA, I _B = 0)	V _{(BR)CEO}	180		V
Collector-Cutoff Current (V _{CB} = 180 V, I _E = 0)	I _{CBO}		100	uA
Emitter Cutoff Current (V _{BE} = 5.0 V, I _C = 0)	I _{EBO}		100	uA

ON CHARACTERISTICS(1)

DC current gain (I _C = 2.0 A, V _{CE} = 5.0 V)	h _{FE}	40	140	
Collector-Emitter Saturation Voltage (I _C = 10 A, I _B = 1.0 A)	V _{CE(sat)}		3.0	V
Base-Emitter On Voltage (I _C = 10 A, V _{CE} = 5.0 V)	V _{BE(on)}		2.5	V

DYNAMIC CHARACTERISTICS

Current-Gain-Bandwidth Product (I _C = 2.0 A, V _{CE} = 5.0 V f = 1.0 MHz)	f _T	6.0(typ)		MHz
---	----------------	----------	--	-----

(1) Pulse test: Pulse Width ≤ 300 s, Duty Cycle ≤ 2.0%

*h_{FE}(2) Classification :

40 R 80	70 O 140
---------	----------

Notice

MOSPEC reserves the rights to make changes of the content herein the document anytime without notification. MOSPEC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies. Please refer to MOSPEC website for the last document.

MOSPEC disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially incurred.

Application shown on the herein document are examples of standard use and operation. Customers are responsible for comprehending suitable use in particular applications. MOSPEC makes no representation or warranty that such application will be suitable for the specified use without further testing or modification.

The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by MOSPEC for any infringements of patents or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of MOSPEC or others.

These MOSPEC products are intended for usage in general electronic equipment. Please make sure to consult with MOSPEC before you use these MOSPEC products in equipment which require specialized quality and/or reliability, and in equipment which could have major impact to the welfare of human life (atomic energy control, aeronautics , traffic control, combustion control, safety devices etc.)