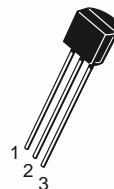
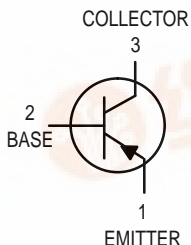


Amplifier Transistor

PNP Silicon

MPS4126



CASE 29-04, STYLE 1
TO-92 (TO-226AA)

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector–Emitter Voltage	V_{CE}	–25	Vdc
Collector–Base Voltage	V_{CB}	–25	Vdc
Emitter–Base Voltage	V_{EB}	–4.0	Vdc
Collector Current — Continuous	I_C	–200	mAdc
Total Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	625 5.0	mW mW/ $^\circ\text{C}$
Total Power Dissipation @ $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	1.5 12	W mW/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_J, T_{stg}	–55 to +150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	200	$^\circ\text{C/W}$
Thermal Resistance, Junction to Case	$R_{\theta JC}$	83.3	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Collector–Emitter Breakdown Voltage ($I_C = -1.0\text{ mA}$, $I_B = 0$)	$V_{(BR)CEO}$	–25	—	Vdc
Collector–Base Breakdown Voltage ($I_C = -10\text{ }\mu\text{A}$, $I_E = 0$)	$V_{(BR)CBO}$	–25	—	Vdc
Emitter–Base Breakdown Voltage ($I_C = 0$, $I_E = -10\text{ }\mu\text{A}$)	$V_{(BR)EBO}$	–4.0	—	Vdc
Collector Cutoff Current ($V_{CB} = -20\text{ V}$, $I_E = 0$)	I_{CBO}	—	–50	nAdc
Emitter Cutoff Current ($V_{EB} = -3.0\text{ V}$, $I_C = 0$)	I_{EBO}	—	–50	nAdc



MPS4126**ELECTRICAL CHARACTERISTICS** ($T_A = 25^\circ\text{C}$ unless otherwise noted) (Continued)

Characteristic	Symbol	Min	Max	Unit
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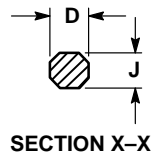
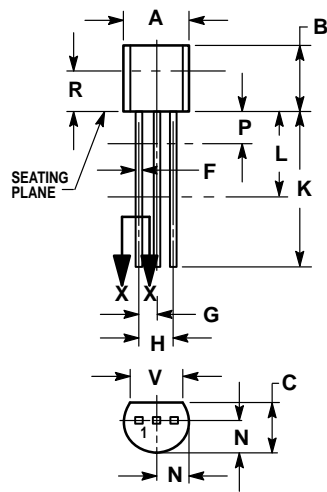
ON CHARACTERISTICS

DC Current Gain ($I_C = -2.0\text{ mA}$, $V_{CE} = -1.0\text{ V}$) ($I_C = -50\text{ mA}$, $V_{CE} = -1.0\text{ V}$)	h_{FE}	120 60	360 —	—
Collector–Emitter Saturation Voltage ($I_C = -50\text{ mA}$, $I_B = -5.0\text{ mA}$)	$V_{CE(sat)}$	—	–0.4	Vdc
Base–Emitter Saturation Voltage ($I_C = -50\text{ mA}$, $I_B = -5.0\text{ mA}$)	$V_{BE(sat)}$	—	–0.95	Vdc

SMALL–SIGNAL CHARACTERISTICS

Current–Gain — Bandwidth Product ($I_C = -10\text{ mA}$, $V_{CE} = -20\text{ V}$, $f = 100\text{ MHz}$)	f_T	170	—	MHz
Output Capacitance ($V_{CB} = -5.0\text{ V}$, $I_E = 0$, $f = 1.0\text{ MHz}$)	C_{ob}	—	4.5	pF
Input Capacitance ($V_{EB} = -0.5\text{ V}$, $I_C = 0$, $f = 1.0\text{ MHz}$)	C_{ib}	—	11.5	pF
Small–Signal Current Gain ($I_C = -2.0\text{ mA}$, $V_{CE} = 1.0\text{ V}$, $f = 1.0\text{ kHz}$)	h_{fe}	120	480	—
Noise Figure ($I_C = -100\text{ }\mu\text{A}$, $V_{CE} = -5.0\text{ V}$, $R_S = 1.0\text{ k}\Omega$, $f = 1.0\text{ kHz}$)	NF	—	4.0	dB

PACKAGE DIMENSIONS



CASE 029-04
(TO-226AA)
ISSUE AD

NOTES:


1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. CONTOUR OF PACKAGE BEYOND DIMENSION R IS UNCONTROLLED.
4. DIMENSION F APPLIES BETWEEN P AND L. DIMENSION D AND J APPLY BETWEEN L AND K MINIMUM. LEAD DIMENSION IS UNCONTROLLED IN P AND BEYOND DIMENSION K MINIMUM.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.175	0.205	4.45	5.20
B	0.170	0.210	4.32	5.33
C	0.125	0.165	3.18	4.19
D	0.016	0.022	0.41	0.55
F	0.016	0.019	0.41	0.48
G	0.045	0.055	1.15	1.39
H	0.095	0.105	2.42	2.66
J	0.015	0.020	0.39	0.50
K	0.500	—	12.70	—
L	0.250	—	6.35	—
N	0.080	0.105	2.04	2.66
P	—	0.100	—	2.54
R	0.115	—	2.93	—
V	0.135	—	3.43	—

STYLE 1:

1. PIN 1. EMITTER
2. BASE
3. COLLECTOR

MPS4126

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How to reach us:

USA/EUROPE/Locations Not Listed: Motorola Literature Distribution;
P.O. Box 5405, Denver, Colorado 80217. 303-675-2140 or 1-800-441-2447

JAPAN: Nippon Motorola Ltd.: SPD, Strategic Planning Office, 4-32-1,
Nishi-Gotanda, Shinagawa-ku, Tokyo 141, Japan. 81-3-5487-8488

Mfax™: RMFAX0@email.sps.mot.com – TOUCHTONE 602-244-6609
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ASIA/PACIFIC: Motorola Semiconductors H.K. Ltd.; 8B Tai Ping Industrial Park,
51 Ting Kok Road, Tai Po, N.T., Hong Kong. 852-26629298

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