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MPS4126

Amplifier Transistor

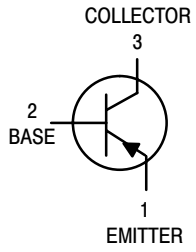
PNP Silicon

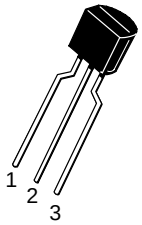
ON Semiconductor®

http://onsemi.com

Features

- This is a Pb−Free Device*





BENT LEAD
TAPE & REEL
AMMO PACK

TO−92
CASE 29
STYLE 1

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 Device Dissipation @ T_A = 25°C Derate above 25°C	P_D	625 5.0	W mW/°C
Total Device Dissipation @ T_C = 25°C Derate above 25°C	P_D	1.5 12	W mW/°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}	−55 to +150	°C

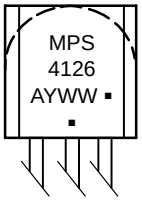
THERMAL CHARACTERISTICS

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

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

*For additional information on our Pb−Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

MARKING DIAGRAM



A = Assembly Location
Y = Year
WW = Work Week
▪ = Pb−Free Package

(Note: Microdot may be in either location)

ORDERING INFORMATION

Device	Package	Shipping†
MPS4126RLRAG	TO−92 (Pb−Free)	2,000/Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

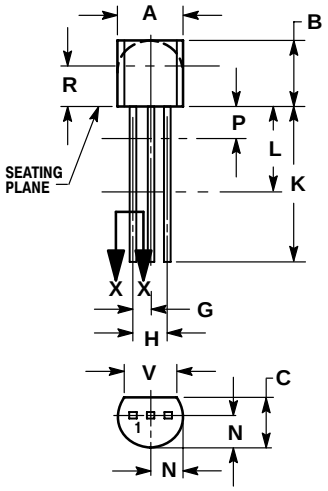
ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector−Emitter Breakdown Voltage (I_C = −1.0 mA, I_B = 0)	$V_{(BR)CEO}$	−25	−	Vdc
Collector−Base Breakdown Voltage (I_C = −10 μA, I_E = 0)	$V_{(BR)CBO}$	−25	−	Vdc
Emitter−Base Breakdown Voltage (I_C = 0, I_E = −10 μA)	$V_{(BR)EBO}$	−4.0	−	Vdc
Collector Cutoff Current (V_{CB} = −20 V, I_E = 0)	I_{CBO}	−	−50	nAdc
Emitter Cutoff Current (V_{EB} = −3.0 V, I_C = 0)	I_{EBO}	−	−50	nAdc
ON CHARACTERISTICS				
DC Current Gain (I_C = −2.0 mA, V_{CE} = −1.0 V) (I_C = −50 mA, V_{CE} = −1.0 V)	h_{FE}	120 60	360 −	−
Collector−Emitter Saturation Voltage (I_C = −50 mA, I_B = −5.0 mA)	$V_{CE(sat)}$	−	−0.4	Vdc
Base−Emitter Saturation Voltage (I_C = −50 mA, I_B = −5.0 mA)	$V_{BE(sat)}$	−	−0.95	Vdc
SMALL−SIGNAL CHARACTERISTICS				
Current−Gain — Bandwidth Product (I_C = −10 mA, V_{CE} = −20 V, f = 100 MHz)	f_T	170	−	MHz
Output Capacitance (V_{CB} = −5.0 V, I_E = 0, f = 1.0 MHz)	C_{ob}	−	4.5	pF
Input Capacitance (V_{EB} = −0.5 V, I_C = 0, f = 1.0 MHz)	C_{ib}	−	11.5	pF
Small−Signal Current Gain (I_C = −2.0 mA, V_{CE} = 1.0 V, f = 1.0 kHz)	h_{fe}	120	480	−
Noise Figure (I_C = −100 μA, V_{CE} = −5.0 V, R_S = 1.0 kΩ, f = 1.0 kHz)	NF	−	4.0	dB

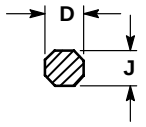
MPS4126

PACKAGE DIMENSIONS

TO−92 (TO−226)
CASE 29−11
ISSUE AM



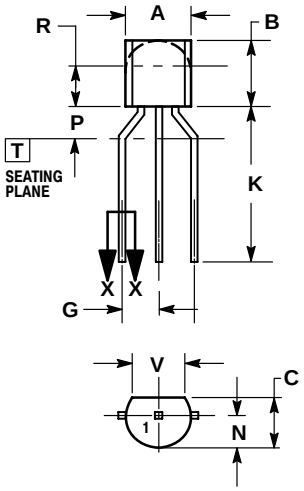
STRAIGHT LEAD
BULK PACK



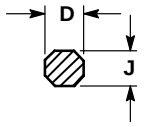
SECTION X−X

NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. CONTOUR OF PACKAGE BEYOND DIMENSION R IS UNCONTROLLED.
4. LEAD DIMENSION IS UNCONTROLLED IN P AND BEYOND DIMENSION K MINIMUM.

	INCHES		MILLIMETERS	
DIM	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	0.021	0.407	0.533
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	---



BENT LEAD
TAPE & REEL
AMMO PACK



SECTION X−X

NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. CONTOUR OF PACKAGE BEYOND DIMENSION R IS UNCONTROLLED.
4. LEAD DIMENSION IS UNCONTROLLED IN P AND BEYOND DIMENSION K MINIMUM.

	MILLIMETERS	
DIM	MIN	MAX
A	4.45	5.20
B	4.32	5.33
C	3.18	4.19
D	0.40	0.54
G	2.40	2.80
J	0.39	0.50
K	12.70	---
N	2.04	2.66
P	1.50	4.00
R	2.93	---
V	3.43	---

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

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
Literature Distribution Center for ON Semiconductor
P.O. Box 5163, Denver, Colorado 80217 USA
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