

**MPS6520
MPS6521**

**SILICON
NPN TRANSISTORS**



TO-92 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR MPS6520 and MPS6521 are silicon NPN epitaxial transistors designed for complementary amplifier applications requiring low noise and high DC current gains. The PNP complementary devices are MPS6522 and MPS6523 respectively.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: ($T_A=25^{\circ}\text{C}$)

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Power Dissipation
Operating and Storage Junction Temperature

SYMBOL

V_{CB0} 40
 V_{CEO} 25
 V_{EBO} 4.0
 I_C 100
 P_D 625
 T_J, T_{stg} -65 to +150

UNITS

V
V
V
mA
mW
 $^{\circ}\text{C}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{CBO}	$V_{CB}=30\text{V}$			50	nA
I_{CBO}	$V_{CB}=30\text{V}, T_A=60^{\circ}\text{C}$			1.0	μA
BV_{CEO}	$I_C=500\mu\text{A}$	25			V
BV_{EBO}	$I_E=10\mu\text{A}$	4.0			V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$			0.5	V
f_T	$V_{CE}=10\text{V}, I_C=2.0\text{mA}$		300		MHz
f_T	$V_{CE}=10\text{V}, I_C=10\text{mA}$		400		MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=100\text{kHz}$			3.5	pF
NF	$V_{CE}=5.0\text{V}, I_C=10\mu\text{A},$ $R_S=10\text{K}\Omega, BW=15.7\text{kHz},$ 3.0dB points @ 10Hz and 10kHz			3.0	dB

SYMBOL	TEST CONDITIONS	MPS6520		MPS6521	
		MIN	MAX	MIN	MAX
h_{FE}	$V_{CE}=10\text{V}, I_C=100\mu\text{A}$	100	-	150	-
h_{FE}	$V_{CE}=10\text{V}, I_C=2.0\text{mA}$	200	400	300	600

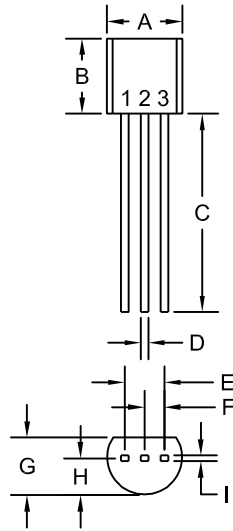
R1 (11-November 2014)

MPS6520
MPS6521

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TO-92 CASE - MECHANICAL OUTLINE



R1

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.500	-	12.70	-
D	0.016	0.022	0.41	0.56
E	0.100		2.54	
F	0.050		1.27	
G	0.125	0.165	3.18	4.19
H	0.080	0.105	2.03	2.67
I	0.015		0.38	

TO-92 (REV: R1)

LEAD CODE:

- 1) Emitter
- 2) Base
- 3) Collector

MARKING:

FULL PART NUMBER

R1 (11-November 2014)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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