

MPS6520  
MPS6521

SILICON  
NPN TRANSISTORS



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**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	$V_{CBO}$	40	V
Collector-Emitter Voltage	$V_{CEO}$	25	V
Emitter-Base Voltage	$V_{EBO}$	4.0	V
Continuous Collector Current	$I_C$	100	mA
Power Dissipation	$P_D$	625	mW
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$

SYMBOL			UNITS
$V_{CBO}$	40		V
$V_{CEO}$	25		V
$V_{EBO}$	4.0		V
$I_C$	100		mA
$P_D$	625		mW
$T_J, T_{stg}$	-65 to +150		$^\circ\text{C}$

**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	$\mu\text{A}$
$BV_{CEO}$	$I_C=500\mu\text{A}$	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	$V_{CE}=5.0\text{V}, I_C=10\mu\text{A},$ $R_S=10\text{K}\Omega, \text{BW}=15.7\text{kHz},$ 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

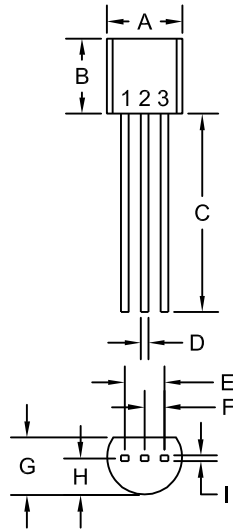
R1 (11-November 2014)

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TO-92 CASE - MECHANICAL OUTLINE



R1

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



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### 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

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### DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2<sup>nd</sup> 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

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### CONTACT US

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