

# Central<sup>TM</sup> Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

MPS6560      MPS6561      NPN  
MPS6562      MPS6563      PNP

COMPLEMENTARY SILICON TRANSISTORS

JEDEC TO-92 CASE (EBC)

## DESCRIPTION

The CENTRAL SEMICONDUCTOR MPS6560 series types are complementary silicon epitaxial planar transistors designed for general purpose amplifier and switching applications.

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

	SYMBOL	MPS6560 MPS6562	MPS6561 MPS6563	UNIT
Collector-Base Voltage	$V_{CB0}$	25	20	V
Collector-Emitter Voltage	$V_{CE0}$	25	20	V
Emitter-Base Voltage	$V_{EB0}$		5.0	V
Collector Current	$I_C$		600	mA
Power Dissipation	$P_D$		625	mW
Power Dissipation ( $T_C=25^\circ\text{C}$ )	$P_D$		1.5	W
Operating and Storage Junction Temperature	$T_J, T_{STG}$	-65 TO +150		$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$		0.20	$^\circ\text{C/W}$
Thermal Resistance	$\theta_{JC}$		0.83	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MPS6560 MPS6562		MPS6561 MPS6563		UNIT
		MIN	MAX	MIN	MAX	
$I_{CB0}$	$V_{CB}=20\text{V}$		100		100	nA
$I_{CE0}$	$V_{CE}=\text{Rated } V_{CE0}$		100		100	nA
$I_{EB0}$	$V_{EB}=4.0\text{V}$		100		100	nA
$BV_{CB0}$	$I_C=100\mu\text{A}$	20		25		V
$BV_{CE0}$	$I_C=10\text{mA}$	20		25		V
$BV_{EB0}$	$I_E=100\mu\text{A}$	5.0		5.0		V
$V_{CE}(\text{SAT})$	$I_C=350\text{mA}, I_B=35\text{mA}$		-		0.5	V
$V_{CE}(\text{SAT})$	$I_C=500\text{mA}, I_B=50\text{mA}$		0.5		-	V
$V_{BE}(\text{ON})$	$V_{CE}=1.0\text{V}, I_C=350\text{mA}$		-		1.2	V
$V_{BE}(\text{ON})$	$V_{CE}=1.0\text{V}, I_C=500\text{mA}$		1.2		-	V
$h_{FE}$	$V_{CE}=1.0\text{V}, I_C=10\text{mA}$	35	-	35	-	
$h_{FE}$	$V_{CE}=1.0\text{V}, I_C=100\text{mA}$	50	-	50	-	
$h_{FE}$	$V_{CE}=1.0\text{V}, I_C=350\text{mA}$	-	-	50	200	
$h_{FE}$	$V_{CE}=1.0\text{V}, I_C=500\text{mA}$	50	200	-	-	
$f_T$	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=30\text{MHz}$	60		60		MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		30		30	pF

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- Custom product packing

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- SPICE models
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- 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

#### Corporate Headquarters & Customer Support Team

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