

MPSA62 MPSA65
MPSA63 MPSA66
MPSA64

**SILICON
PNP DARLINGTON TRANSISTORS**



TO-92 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR MPSA62 series devices are silicon PNP Darlington transistors, manufactured by the epitaxial planar process, designed for applications requiring extremely high gain.

MARKING: FULL PART NUMBER

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

Collector-Base Voltage	V_{CB0}	20	30	30	V
Collector-Emitter Voltage	V_{CES}	20	30	30	V
Emitter-Base Voltage	V_{EBO}	10	10	8.0	V
Continuous Collector Current	I_C		500		mA
Power Dissipation	P_D		625		mW
Operating and Storage Junction Temperature	T_J, T_{stg}		-65 to +150		$^\circ\text{C}$
Thermal Resistance	θ_{JA}		200		$^\circ\text{C/W}$

SYMBOL	MPSA63	MPSA65	UNITS		UNITS
	MPSA62	MPSA64	MPSA66		
V_{CB0}	20	30	30		V
V_{CES}	20	30	30		V
V_{EBO}	10	10	8.0		V
I_C		500			mA
P_D		625			mW
T_J, T_{stg}		-65 to +150			$^\circ\text{C}$
θ_{JA}		200			$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MPSA62		MPSA63		MPSA64		MPSA65		MPSA66		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	
I_{CBO}	$V_{CB}=15\text{V}$	-	100	-	-	-	-	-	-	-	-	nA
I_{CBO}	$V_{CB}=30\text{V}$	-	-	-	100	-	100	-	100	-	100	nA
I_{EBO}	$V_{EB}=10\text{V}$	-	100	-	100	-	100	-	-	-	-	nA
I_{EBO}	$V_{EB}=8.0\text{V}$	-	-	-	-	-	-	-	100	-	100	nA
BV_{CES}	$I_C=100\mu\text{A}$	20	-	30	-	30	-	30	-	30	-	V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=10\mu\text{A}$	-	1.0	-	-	-	-	-	-	-	-	V
$V_{CE(SAT)}$	$I_C=100\text{mA}, I_B=0.1\text{mA}$	-	-	-	1.5	-	1.5	-	1.5	-	1.5	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_B=10\text{mA}$	-	1.4	-	-	-	-	-	-	-	-	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_B=100\text{mA}$	-	-	-	2.0	-	2.0	-	2.0	-	2.0	V
h_{FE}	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	20K	-	5K	-	10K	-	50K	-	75K	-	
h_{FE}	$V_{CE}=5.0\text{V}, I_C=100\text{mA}$	-	-	10K	-	20K	-	20K	-	40K	-	
f_T	$V_{CE}=5.0\text{V}, I_C=100\text{mA}, f=100\text{MHz}$	-	-	125	-	125	-	-	-	-	-	MHz
f_T	$V_{CE}=10\text{V}, I_C=30\text{mA}, f=50\text{MHz}$	-	-	-	-	-	-	100	-	100	-	MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=100\text{kHz}$	2.5 (TYP)		2.5 (TYP)		2.5 (TYP)		2.5 (TYP)		2.5 (TYP)		pF
NF	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, R_S=100\text{k}\Omega, f=1.0\text{kHz}$	2.0 (TYP)		2.0 (TYP)		2.0 (TYP)		2.0 (TYP)		2.0 (TYP)		dB

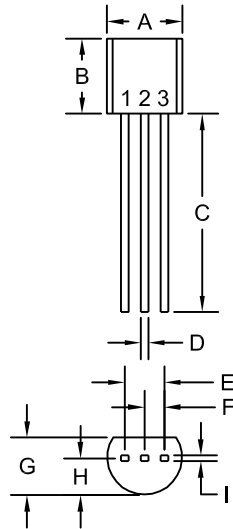
R1 (18-March 2014)

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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

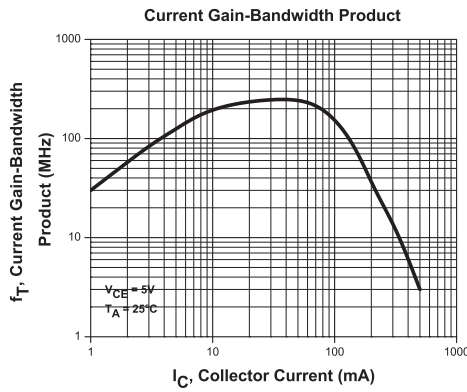
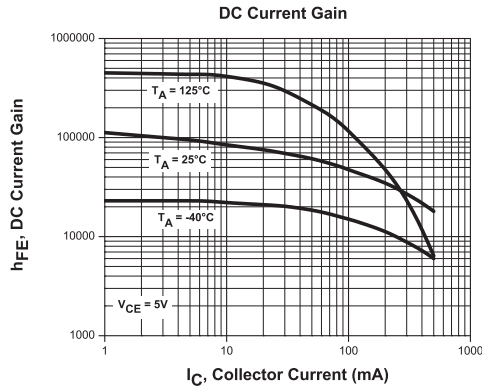
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TYPICAL ELECTRICAL CHARACTERISTICS



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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

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