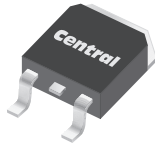


CJD112 NPN  
CJD117 PNP

**SURFACE MOUNT SILICON  
COMPLEMENTARY  
POWER DARLINGTON TRANSISTORS**

**DPAK**  
**POWER!**



**DPAK CASE**



[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CJD112 and CJD117 are complementary silicon power Darlington transistors manufactured in a surface mount package designed for low speed switching and amplifier applications.

**MARKING: FULL PART NUMBER**

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

	SYMBOL		UNITS
Collector-Base Voltage	$V_{CBO}$	100	V
Collector-Emitter Voltage	$V_{CEO}$	100	V
Emitter-Base Voltage	$V_{EBO}$	5.0	V
Continuous Collector Current	$I_C$	2.0	A
Peak Collector Current	$I_{CM}$	4.0	A
Continuous Base Current	$I_B$	50	mA
Power Dissipation	$P_D$	20	W
Power Dissipation ( $T_A=25^\circ\text{C}$ )	$P_D$	1.75	W
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
Thermal Resistance	$\theta_{JC}$	6.25	$^\circ\text{C/W}$
Thermal Resistance	$\theta_{JA}$	71.4	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CEO}$	$V_{CE}=50\text{V}$		20	$\mu\text{A}$
$I_{CEV}$	$V_{CE}=80\text{V}, V_{BE(\text{off})}=1.5\text{V}$		10	$\mu\text{A}$
$I_{CEV}$	$V_{CE}=80\text{V}, V_{BE(\text{off})}=1.5\text{V}, T_C=125^\circ\text{C}$		500	$\mu\text{A}$
$I_{CBO}$	$V_{CB}=80\text{V}$		10	$\mu\text{A}$
$I_{CBO}$	$V_{CB}=100\text{V}$		20	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=5.0\text{V}$		2.0	mA
$BV_{CEO}$	$I_C=30\text{mA}$		100	V
$V_{CE(\text{SAT})}$	$I_C=2.0\text{A}, I_B=8.0\text{mA}$		2.0	V
$V_{CE(\text{SAT})}$	$I_C=4.0\text{A}, I_B=40\text{mA}$		3.0	V
$V_{BE(\text{SAT})}$	$I_C=4.0\text{A}, I_B=40\text{mA}$		4.0	V
$V_{BE(\text{ON})}$	$V_{CE}=3.0\text{V}, I_C=2.0\text{A}$		2.8	V
$h_{FE}$	$V_{CE}=3.0\text{V}, I_C=0.5\text{A}$	500		
$h_{FE}$	$V_{CE}=3.0\text{V}, I_C=2.0\text{A}$	1000	12000	
$h_{FE}$	$V_{CE}=3.0\text{V}, I_C=4.0\text{A}$	200		
$f_T$	$V_{CE}=10\text{V}, I_C=750\text{mA}, f=1.0\text{MHz}$	25		MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=0.1\text{MHz}$ (CJD112)		100	pF
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=0.1\text{MHz}$ (CJD117)		200	pF

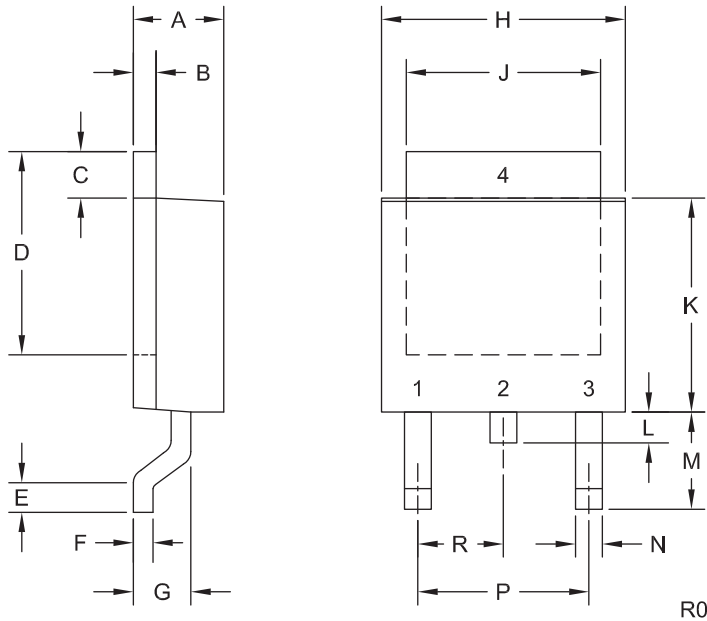
R3 (21-January 2013)

CJD112 NPN  
CJD117 PNP

**SURFACE MOUNT SILICON  
COMPLEMENTARY  
POWER DARLINGTON TRANSISTORS**



**DPAK CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

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

**MARKING:**

**FULL PART NUMBER**

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.083	0.108	2.10	2.75
B	0.016	0.032	0.40	0.81
C	0.035	0.063	0.89	1.60
D	0.203	0.228	5.15	5.79
E	0.020	-	0.51	-
F	0.018	0.024	0.45	0.60
G	0.051	0.071	1.30	1.80
H	0.248	0.268	6.30	6.81
J	0.197	0.217	5.00	5.50
K	0.209	0.245	5.30	6.22
L	0.025	0.040	0.64	1.02
M	0.090	0.115	2.30	2.91
N	0.012	0.045	0.30	1.14
P	0.180		4.60	
R	0.090		2.30	

DPAK (REV: R0)

R3 (21-January 2013)

## 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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### 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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### CONTACT US

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