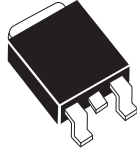


CJD122 NPN  
CJD127 PNP

COMPLEMENTARY SILICON  
POWER DARLINGTON TRANSISTOR

**DPAK**  
POWER!



DPAK TRANSISTOR CASE

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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CJD122, CJD127 types are Complementary Silicon Power Darlington Transistors manufactured in a surface mount package designed for low speed switching and amplifier applications.

**MARKING CODE: 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	$I_C$	8.0	A
Peak Collector Current	$I_{CM}$	16	A
Base Current	$I_B$	120	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	$^\circ\text{C/W}$

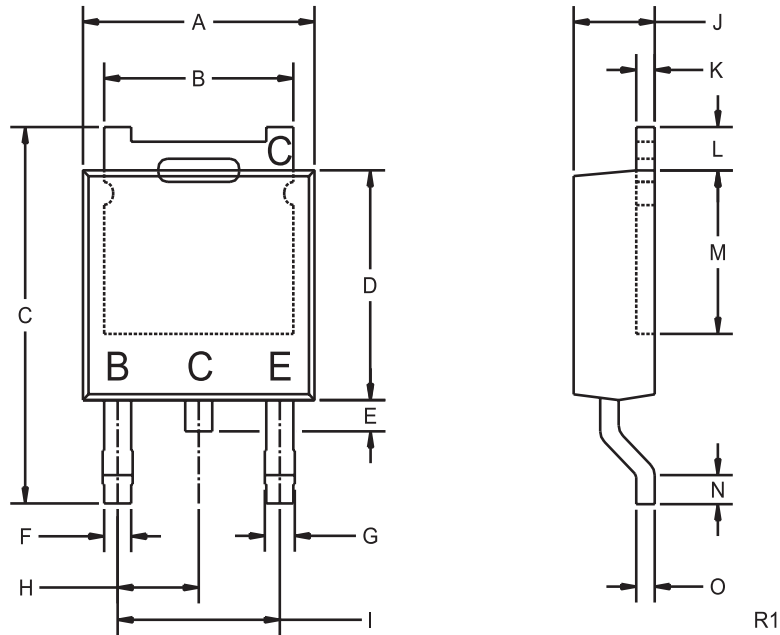
**ELECTRICAL CHARACTERISTICS:** ( $T_C=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CEO}$	$V_{CE}=50\text{V}$		10	$\mu\text{A}$
$I_{CEV}$	$V_{CE}=100\text{V}, V_{BE(\text{off})}=1.5\text{V}$		10	$\mu\text{A}$
$I_{CEV}$	$V_{CE}=100\text{V}, V_{BE(\text{off})}=1.5\text{V}, T_C=125^\circ\text{C}$		500	$\mu\text{A}$
$I_{CBO}$	$V_{CB}=100\text{V}$		10	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=5.0\text{V}$		2.0	mA
$BV_{CEO}$	$I_C=30\text{mA}$	100		V
$V_{CE(\text{SAT})}$	$I_C=4.0\text{A}, I_B=16\text{mA}$		2.0	V
$V_{CE(\text{SAT})}$	$I_C=8.0\text{A}, I_B=80\text{mA}$		4.0	V
$V_{BE(\text{SAT})}$	$I_C=8.0\text{A}, I_B=80\text{mA}$		4.5	V
$V_{BE(\text{ON})}$	$V_{CE}=4.0\text{V}, I_C=4.0\text{A}$		2.8	V
$h_{FE}$	$V_{CE}=4.0\text{V}, I_C=4.0\text{A}$	1000	12000	
$h_{FE}$	$V_{CE}=4.0\text{V}, I_C=8.0\text{A}$	100		
$f_T$	$V_{CE}=4.0\text{V}, I_C=3.0\text{A}, f=1.0\text{MHz}$	4.0		MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$ (CJD122)		200	pF
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$ (CJD127)		300	pF
$h_{fe}$	$V_{CE}=4.0\text{V}, I_C=3.0\text{A}, f=1.0\text{kHz}$		300	

R1 (26-September 2002)

**COMPLEMENTARY SILICON  
POWER DARLINGTON TRANSISTOR**

**DPAK TRANSISTOR CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

- B) BASE
- C) COLLECTOR
- E) EMITTER
- C) COLLECTOR

**MARKING CODE:**

**FULL PART NUMBER**

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.250	0.265	6.35	6.73
B	0.205	0.215	5.21	5.46
C	0.374	0.409	9.50	10.40
D	0.235	0.245	5.97	6.22
E	0.025	0.040	0.64	1.02
F	0.025	0.035	0.64	0.88
G	0.030	0.045	0.76	1.14
H	0.090		2.28	
I	0.180		4.57	
J	0.086	0.094	2.19	2.38
K	0.018	0.023	0.46	0.58
L	0.040	0.050	1.02	1.27
M	0.170	-	4.32	-
N	0.020	-	0.51	-
O	0.018	0.023	0.46	0.58

DPAK TRANSISTOR (REV: R1)

R1 (26-September 2002)