



THE DATASHEET OF CJD50 TR13



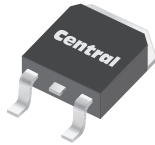
CJD47
CJD50

**SURFACE MOUNT SILICON
NPN POWER TRANSISTORS**



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DPAK
POWER!



DPAK CASE

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CJD47 and CJD50 are silicon NPN power transistors manufactured in a surface mount package, and designed for high voltage applications such as power supplies and other switching applications.

MARKING: FULL PART NUMBER

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

	SYMBOL	CJD47	CJD50	UNITS
Collector-Base Voltage	V_{CBO}	350	500	V
Collector-Emitter Voltage	V_{CEO}	250	400	V
Emitter-Base Voltage	V_{EBO}	5.0		V
Continuous Collector Current	I_C	1.0		A
Peak Collector Current	I_{CM}	2.0		A
Continuous Base Current	I_B	600		mA
Power Dissipation	P_D	15		W
Power Dissipation ($T_A=25^\circ\text{C}$)	P_D	1.56		W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150		$^\circ\text{C}$
Thermal Resistance	θ_{JC}	8.33		$^\circ\text{C/W}$
Thermal Resistance	θ_{JA}	80.1		$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CEO}	$V_{CE}=150\text{V}$ (CJD47)		200	μA
I_{CEO}	$V_{CE}=300\text{V}$ (CJD50)		200	μA
I_{CES}	$V_{CE}=350\text{V}$ (CJD47)		100	μA
I_{CES}	$V_{CE}=500\text{V}$ (CJD50)		100	μA
I_{EBO}	$V_{EB}=5.0\text{V}$		1.0	mA
BV_{CEO}	$I_C=30\text{mA}$ (CJD47)	250		V
BV_{CEO}	$I_C=30\text{mA}$ (CJD50)	400		V
$V_{CE(SAT)}$	$I_C=1.0\text{A}, I_B=200\text{mA}$		1.0	V
$V_{BE(ON)}$	$V_{CE}=10\text{V}, I_C=1.0\text{A}$		1.5	V
h_{FE}	$V_{CE}=10\text{V}, I_C=300\text{mA}$	30	150	
h_{FE}	$V_{CE}=10\text{V}, I_C=1.0\text{A}$	10		
f_T	$V_{CE}=10\text{V}, I_C=200\text{mA}, f=2.0\text{MHz}$	10		MHz
h_{fe}	$V_{CE}=10\text{V}, I_C=200\text{mA}, f=1.0\text{kHz}$	25		

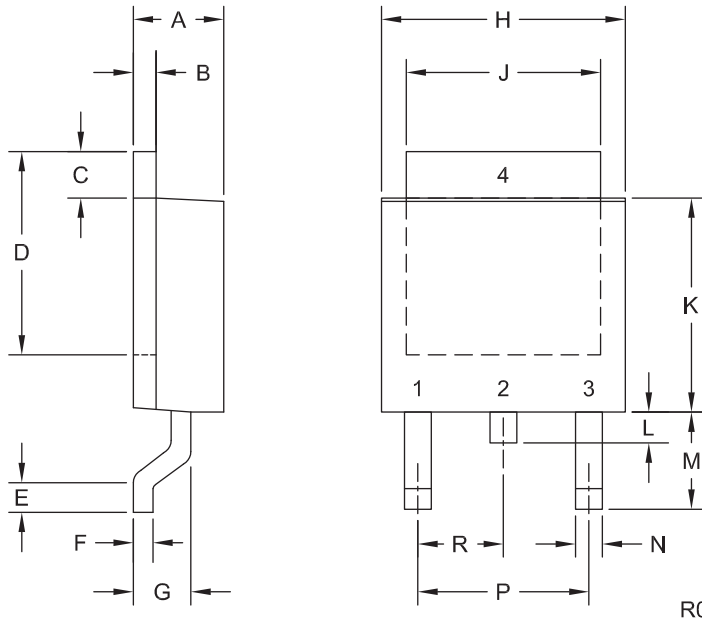
R3 (21-January 2013)

CJD47
CJD50

SURFACE MOUNT SILICON
NPN POWER 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)

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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)
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- Custom bar coding for shipments
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- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
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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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