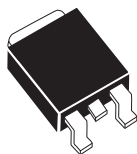


**CJD47  
CJD50**

**NPN SILICON  
POWER TRANSISTOR**

**DPAK**  
POWER!



**DPAK TRANSISTOR CASE**

# Central<sup>TM</sup>

**Semiconductor Corp.**

**DESCRIPTION:**

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

**MARKING CODE: FULL PART NUMBER**

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

	<b>SYMBOL</b>	<b>CJD47</b>	<b>CJD50</b>	<b>UNITS</b>
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
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	$\theta_{JC}$		8.33	$^\circ\text{C/W}$
Thermal Resistance	$\theta_{JA}$		80.1	$^\circ\text{C/W}$

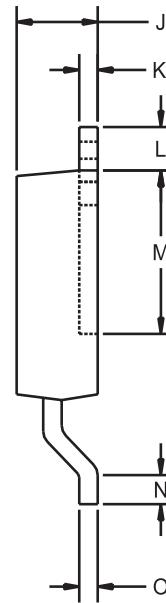
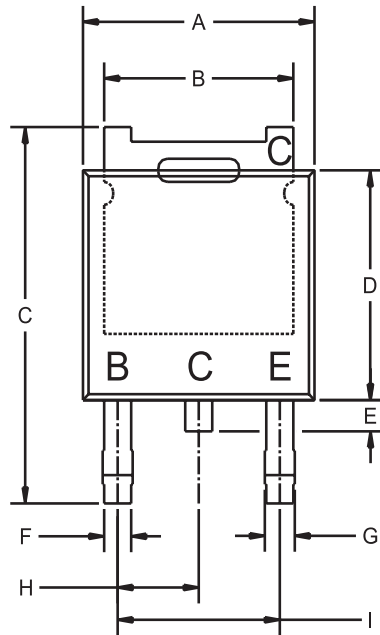
**ELECTRICAL CHARACTERISTICS:** ( $T_C=25^\circ\text{C}$  unless otherwise noted)

<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>MIN</b>	<b>MAX</b>	<b>UNITS</b>
$I_{CEO}$	$V_{CE}=150\text{V}$ (CJD47)		200	$\mu\text{A}$
$I_{CEO}$	$V_{CE}=300\text{V}$ (CJD50)		200	$\mu\text{A}$
$I_{CES}$	$V_{CE}=350\text{V}$ (CJD47)		100	$\mu\text{A}$
$I_{CES}$	$V_{CE}=500\text{V}$ (CJD50)		100	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=5.0\text{V}$		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		

R1 (26-August 2002)

**NPN SILICON  
POWER TRANSISTOR**

**DPAK TRANSISTOR CASE - MECHANICAL OUTLINE**



R1

**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-August 2002)