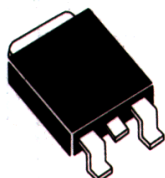




CJD13003

**NPN SILICON
POWER TRANSISTOR**

DPAK POWER!™



DPAK CASE

Central™
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CJD13003 type is an NPN Silicon Power Transistors manufactured in a surface mount package designed for high voltage, high speed power switching inductive applications.

MAXIMUM RATINGS (T_C=25°C)

	SYMBOL		UNITS
Collector-Emitter Voltage	V _{CEV}	700	V
Collector-Emitter Voltage	V _{CEO}	400	V
Emitter-Base Voltage	V _{EBO}	9.0	V
Continuous Collector Current	I _C	1.5	A
Peak Collector Current	I _{CM}	3.0	A
Continuous Base Current	I _B	750	mA
Peak Base Current	I _{BM}	1.5	A
Continuous Emitter Current	I _E	2.25	A
Peak Emitter Current	I _{EM}	4.5	A
Power Dissipation (T _C =25°C)	P _D	15	W
Power Dissipation (T _A =25°C)	P _D	1.56	W
Operating and Storage			
Junction Temperature	T _J , T _{stg}	-65 to +150	°C
Thermal Resistance	θ _{JC}	8.33	°C/W
Thermal Resistance	θ _{JA}	80.1	°C/W

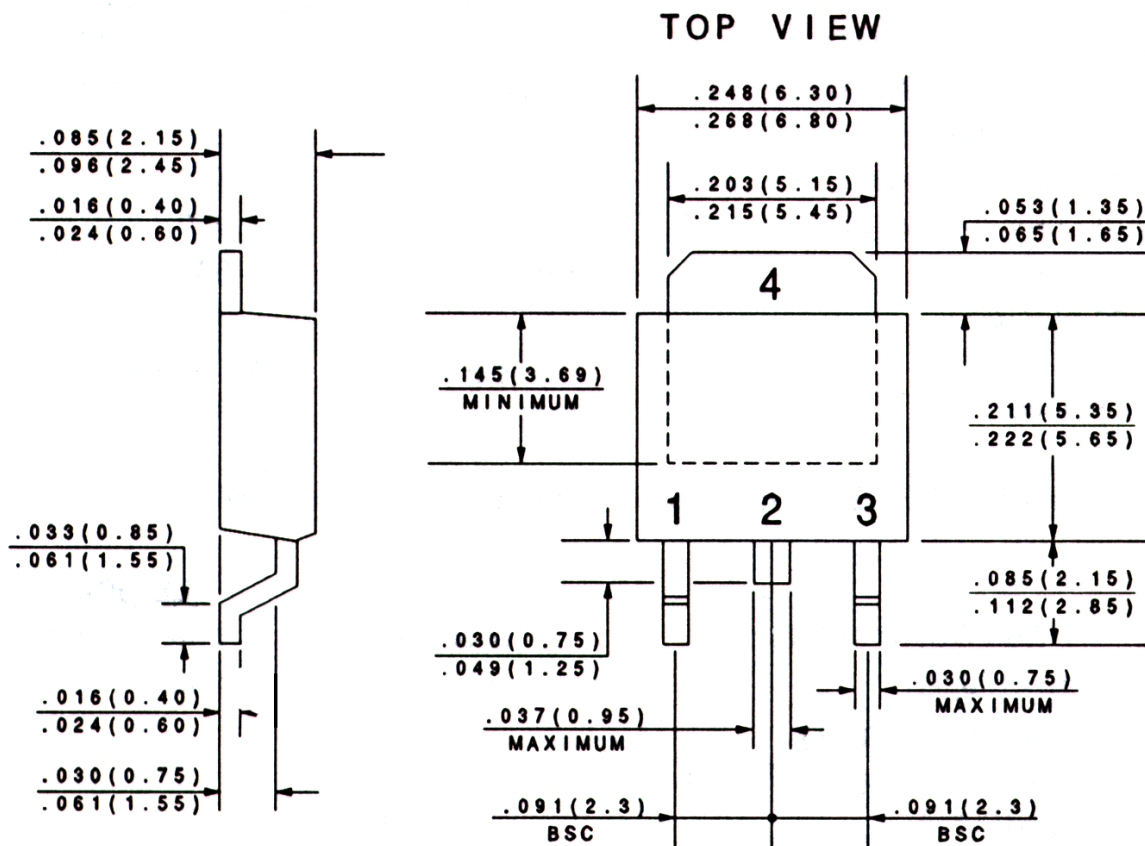
ELECTRICAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I _{CEV}	V _{CE} =700V, V _{BE(off)} =1.5V			100	μA
I _{CEV}	V _{CE} =700V, V _{BE(off)} =1.5V, T _C =100°C			2.0	mA
I _{EBO}	V _{EB} =9.0V			1.0	mA
BV _{CEO}	I _C =10mA	400			V
V _{CE(SAT)}	I _C =500mA, I _B =100mA			0.5	V
V _{CE(SAT)}	I _C =1.0A, I _B =250mA			1.0	V
V _{CE(SAT)}	I _C =1.5A, I _B =500mA			3.0	V
V _{CE(SAT)}	I _C =1.0A, I _B =250mA, T _C =100°C			1.0	V

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$V_{BE(SAT)}$	$I_C=500mA, I_B=100mA$			1.0	V
$V_{BE(SAT)}$	$I_C=1.0A, I_B=250mA$			1.2	V
$V_{BE(SAT)}$	$I_C=1.0A, I_B=250mA, T_C=100^\circ C$			1.1	V
V_{CE}	$V_{CE}=2.0V, I_C=500mA$	8.0		40	
h_{FE}	$V_{CE}=2.0V, I_C=1.0A$	5.0		25	
f_T	$V_{CE}=10V, I_C=100mA, f=1.0MHz$	4.0			MHz
C_{ob}	$V_{CB}=10V, I_E=0, f=0.1MHz$		20		pF
t_d	$V_{CC}=125V, I_C=1.0A, I_{B1}=I_{B2}=200mA (1)$			0.1	μs
t_r	$V_{CC}=125V, I_C=1.0A, I_{B1}=I_{B2}=200mA (1)$			1.0	μs
t_s	$V_{CC}=125V, I_C=1.0A, I_{B1}=I_{B2}=200mA (1)$			4.0	μs
t_f	$V_{CC}=125V, I_C=1.0A, I_{B1}=I_{B2}=200mA (1)$			0.7	μs

(1) $t_p=25\mu s$, Duty Cycle $\leq 1\%$

All dimensions in inches (mm).



LEAD CODE:

- 1) BASE
- 2) COLLECTOR
- 3) EMITTER
- 4) COLLECTOR