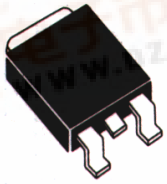
NEW

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

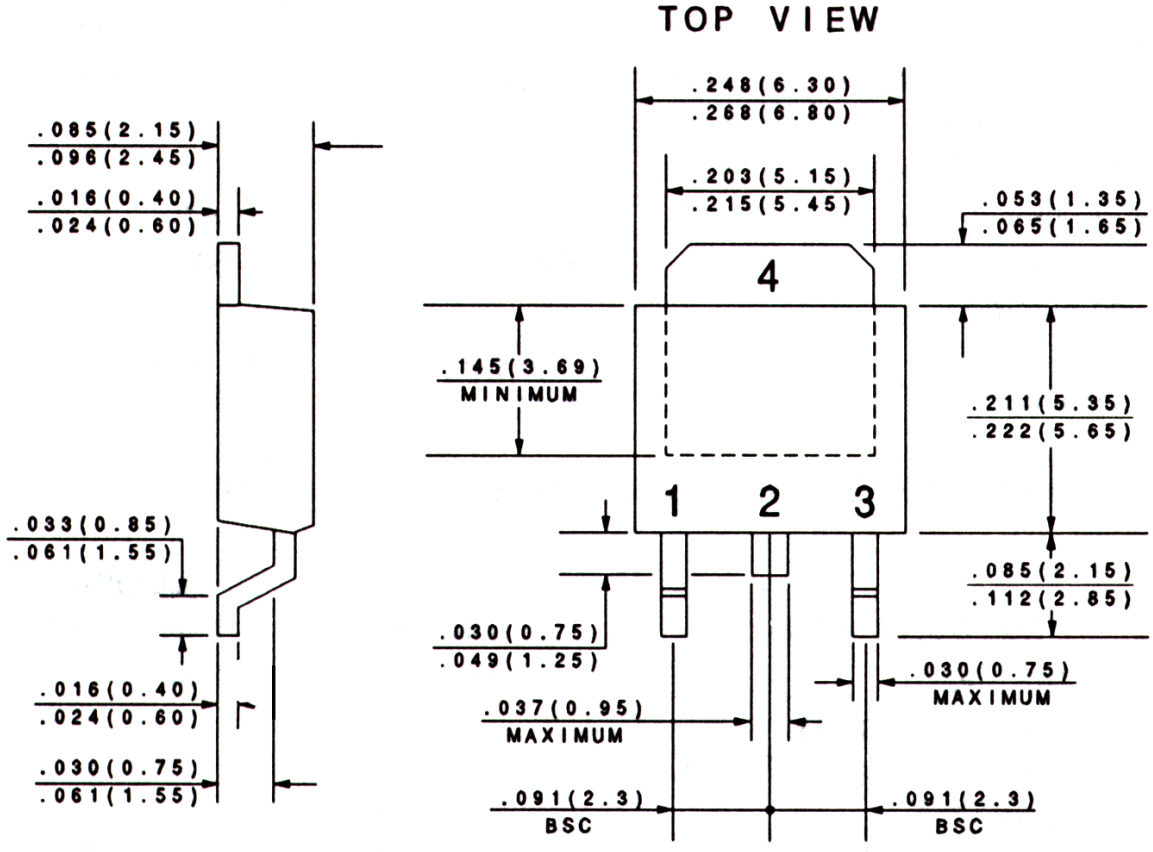
ELECTRICAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

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°C			1.1	V
h_{FE}	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) tp=25µs, Duty Cycle≤1%

All dimensions in inches (mm).



LEAD CODE:

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