2N3713 2N3715
2N3714 2N3716

SILICON
NPN TRANSISTORS

TO-3 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N3713, 2N3714, 2N3715, and 2N3716 are silicon NPN power transistors manufactured by the epitaxial-base process, mounted in a hermetically sealed metal package designed for medium speed switching and amplifier applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_C=25°C)

	SYMBOL	2N3713 2N3715	2N3714 2N3716	UNITS
Collector-Base Voltage	V_{CBO}	80	100	V
Collector-Emitter Voltage	V_{CEO}	60	80	V
Emitter-Base Voltage	V_{EBO}	7.0		V
Continuous Collector Current	I_C	10		A
Continuous Base Current	I_B	4.0		A
Power Dissipation	P_D	150		W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +200		°C
Thermal Resistance	Θ_{JC}	1.17		°C/W

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{CEV}	V_{CE}=Rated V_{CBO}, V_{BE}=1.5V			1.0	mA
I_{CEV}	V_{CE}=Rated V_{CEO}, V_{BE}=1.5V, T_C=150°C			10	mA
I_{EBO}	V_{EB}=7.0V			5.0	mA
BV_{CEO}	I_C=200mA (2N3713, 2N3715)	60			V
BV_{CEO}	I_C=200mA (2N3714, 2N3716)	80			V
$V_{CE(SAT)}$	I_C=5.0A, I_B=0.5A (2N3713, 2N3714)			1.0	V
$V_{CE(SAT)}$	I_C=5.0A, I_B=0.5A (2N3715, 2N3716)			0.8	V
$V_{BE(SAT)}$	I_C=5.0A, I_B=0.5A (2N3713, 2N3714)			2.0	V
$V_{BE(SAT)}$	I_C=5.0A, I_B=0.5A (2N3715, 2N3716)			1.5	V
$V_{BE(ON)}$	V_{CE}=2.0V, I_C=3.0A			1.5	V
h_{FE}	V_{CE}=2.0V, I_C=1.0A (2N3713, 2N3714)	40		120	
h_{FE}	V_{CE}=2.0V, I_C=1.0A (2N3715, 2N3716)	50		150	
h_{FE}	V_{CE}=2.0V, I_C=3.0A (2N3713, 2N3714)	15			
h_{FE}	V_{CE}=2.0V, I_C=3.0A (2N3715, 2N3716)	30			
f_T	V_{CE}=10V, I_C=0.5A, f=1.0MHz	4.0			MHz
t_r	I_C=5.0A, I_{B1}=I_{B2}=0.5A		0.4		µs
t_s	I_C=5.0A, I_{B1}=I_{B2}=0.5A		0.3		µs
t_f	I_C=5.0A, I_{B1}=I_{B2}=0.5A		0.4		µs

R2 (18-June 2013)

2N3713 2N3715
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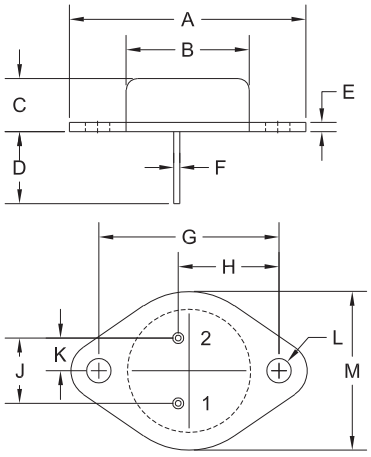
TO-3 CASE - MECHANICAL OUTLINE



R2

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	1.516	1.573	38.50	39.96
B (DIA)	0.748	0.875	19.00	22.23
C	0.250	0.450	6.35	11.43
D	0.433	0.516	11.00	13.10
E	0.054	0.065	1.38	1.65
F	0.035	0.045	0.90	1.15
G	1.177	1.197	29.90	30.40
H	0.650	0.681	16.50	17.30
J	0.420	0.440	10.67	11.18
K	0.205	0.225	5.21	5.72
L (DIA)	0.151	0.172	3.84	4.36
M	0.984	1.050	25.00	26.67

TO-3 (REV: R2)

LEAD CODE:
1) Base
2) Emitter
Case) Collector

MARKING:
FULL PART NUMBER

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