

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N3713
2N3714
2N3715
2N3716

NPN SILICON TRANSISTOR

JEDEC TO-3 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N3713 Series types are Silicon Power Transistors manufactured by the epitaxial-base process, mounted in a hermetically sealed metal package designed for medium speed switching and amplifier applications.

MAXIMUM RATINGS (T_C=25°C)

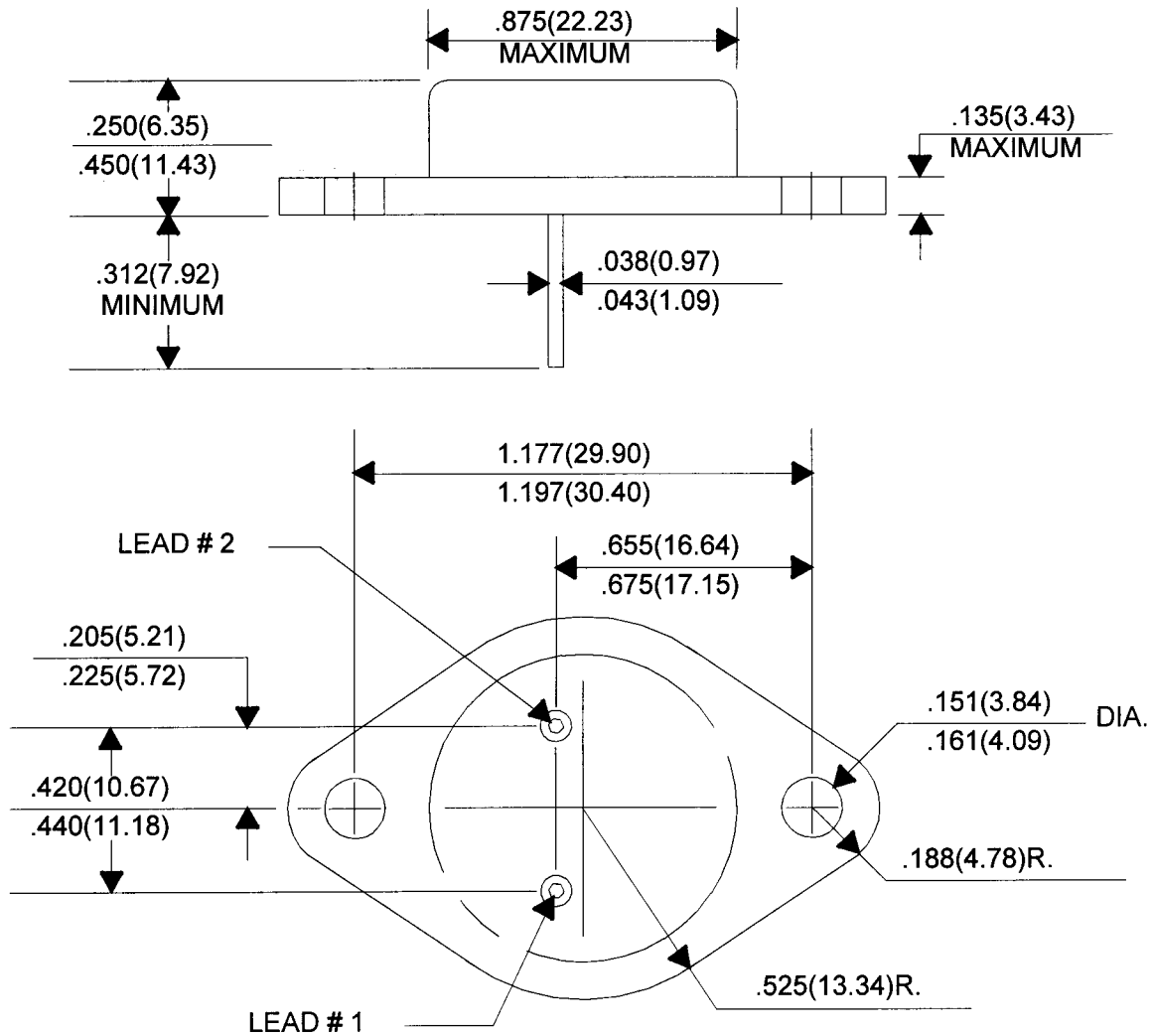
	SYMBOL	2N3713 2N3715	2N3714 2N3716	UNIT
Collector-Base Voltage	V _{CBO}	80	100	V
Collector-Emitter Voltage	V _{CEO}	60	80	V
Emitter-Base Voltage	V _{EBO}	7.0	7.0	V
Collector Current	I _C	10	10	A
Base Current	I _B	4.0	4.0	A
Power Dissipation	PD	150	150	W
Operating and Storage Temperature	T _J , T _{stg}	-65 to +200		°C
Thermal Resistance	θ _{JC}	1.17	1.17	°C/W

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
I _{EBO}	V _{EB} =7.0V			5.0	mA
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
BV _{CEO}	I _C =200mA (2N3713, 2N3715)	60			V
BV _{CEO}	I _C =200mA (2N3714, 2N2716)	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} (ON)	V _{CE} =2.0V, I _C =3.0A			1.5	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
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

(See Reverse Side)

TO-3 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

Lead Code:

- 1) Base
- 2) Emitter
- Case) Collector

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