

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N5781 PNP
2N5784 NPN

COMPLEMENTARY SILICON
POWER TRANSISTOR

JEDEC TO-39 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N5781, 2N5784 types are Complementary Silicon Power Transistors designed for general purpose switching and amplifier applications.

MAXIMUM RATINGS (T_C=25°C)

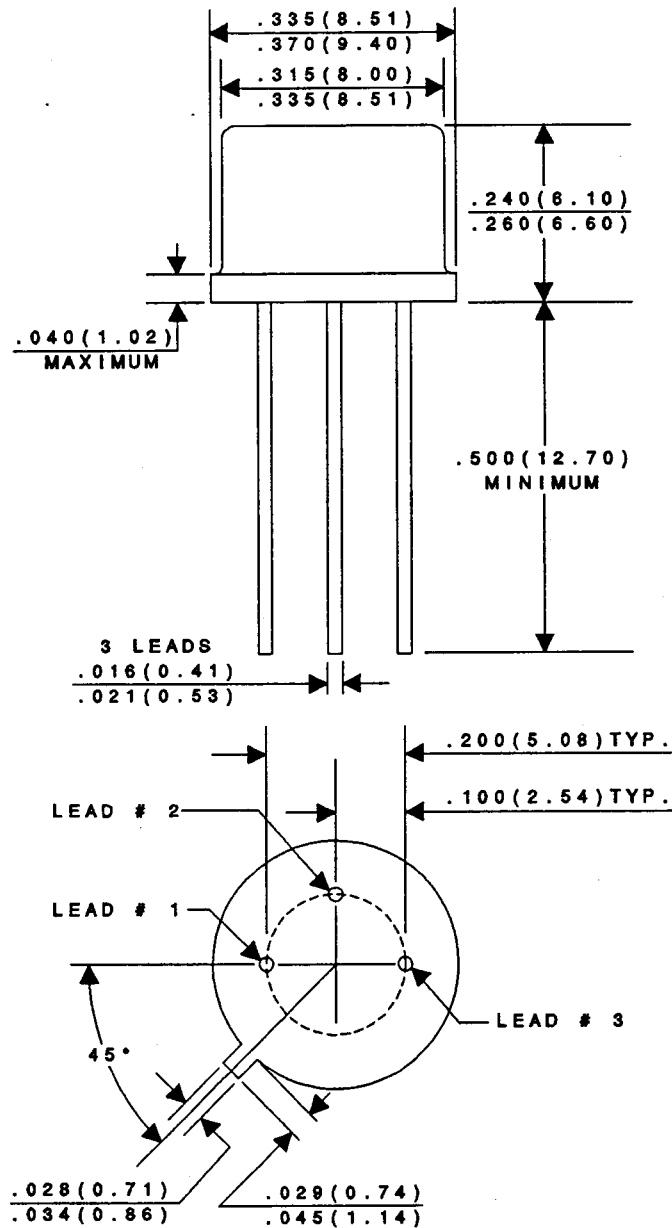
	SYMBOL		UNITS
Collector-Base Voltage	V _{CB0}	80	V
Collector-Emitter Voltage	V _{CER}	80	V
Collector-Emitter Voltage	V _{CEO}	65	V
Emitter-Base Voltage	V _{EBO}	5.0	V
Collector Current	I _C	3.5	A
Base Current	I _B	1.0	A
Power Dissipation	P _D	10	W
Power Dissipation (T _A =25°C)	P _D	1.0	W
Operating and Storage			
Junction Temperature	T _J , T _{stg}	-65 to +200	°C
Thermal Resistance	θ _{JC}	17.5	°C/W
Thermal Resistance	θ _{JA}	175	°C/W

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I _{CEV}	V _{CE} =75V, V _{BE(off)} =1.5V		10	μA
I _{CEV}	V _{CE} =75V, V _{BE(off)} =1.5V, T _C =150°C		1.0	mA
I _{CER}	V _{CE} =65V, R _{BE} =100Ω		10	μA
I _{CER}	V _{CE} =65V, R _{BE} =100Ω, T _C =150°C		1.0	mA
I _{CEO}	V _{CE} =50V		100	μA
I _{EBO}	V _{EB} =5.0V		10	μA
BV _{CER}	I _C =10mA, R _{BE} =100Ω	80		V
BV _{CEO}	I _C =10mA	65		V
V _{CE(SAT)}	I _C =1.0A, I _B =100mA		0.5	V
V _{BE(ON)}	V _{CE} =2.0V, I _C =1.0A		1.5	V
h _{FE}	V _{CE} =2.0V, I _C =1.0A	20	100	
h _{FE}	V _{CE} =2.0V, I _C =3.2A	4.0		
f _T	V _{CE} =2.0V, I _C =100mA, f=4.0MHz (2N5781)	8.0	60	MHz
f _T	V _{CE} =2.0V, I _C =100mA, f=200kHz (2N5784)	1.0	4.0	MHz
h _{fe}	V _{CE} =2.0V, I _C =100mA, f=1.0kHz	25		
t _{ON}	V _{CC} =30V, I _C =1.0A, I _{B1} =I _{B2} =100mA (2N5781)		0.5	μs
t _{ON}	V _{CC} =30V, I _C =1.0A, I _{B1} =I _{B2} =100mA (2N5784)		5.0	μs
t _{OFF}	V _{CC} =30V, I _C =1.0A, I _{B1} =I _{B2} =100mA (2N5781)		2.5	μs
t _{OFF}	V _{CC} =30V, I _C =1.0A, I _{B1} =I _{B2} =100mA (2N5784)		15	μs

(SEE REVERSE SIDE)

JEDEC TO-39 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

Lead Code:

1. Emitter
2. Base
3. Collector

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