

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N6190
2N6191
2N6192
2N6193

PNP SILICON
POWER TRANSISTOR

JEDEC TO-39 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N6190 series types are PNP Silicon Power Transistors designed for switching and amplifier applications.

MAXIMUM RATINGS (T_C=25°C)

	SYMBOL	2N6190	2N6191	2N6192	2N6193	UNITS
Collector-Base Voltage	V _{CBO}	80	80	100	100	V
Collector-Emitter Voltage	V _{CEO}	80	80	100	100	V
Emitter-Base Voltage	V _{EBO}	6.0	6.0	6.0	6.0	V
Collector Current	I _C	5.0	5.0	5.0	5.0	A
Base Current	I _B	1.0	1.0	1.0	1.0	A
Power Dissipation	P _D	10	10	10	10	W
Operating and Storage						
Junction Temperature	T _J , T _{stg}		-65 to +200			°C
Thermal Resistance	θ _{JC}	17.5	17.5	17.5	17.5	°C/W

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

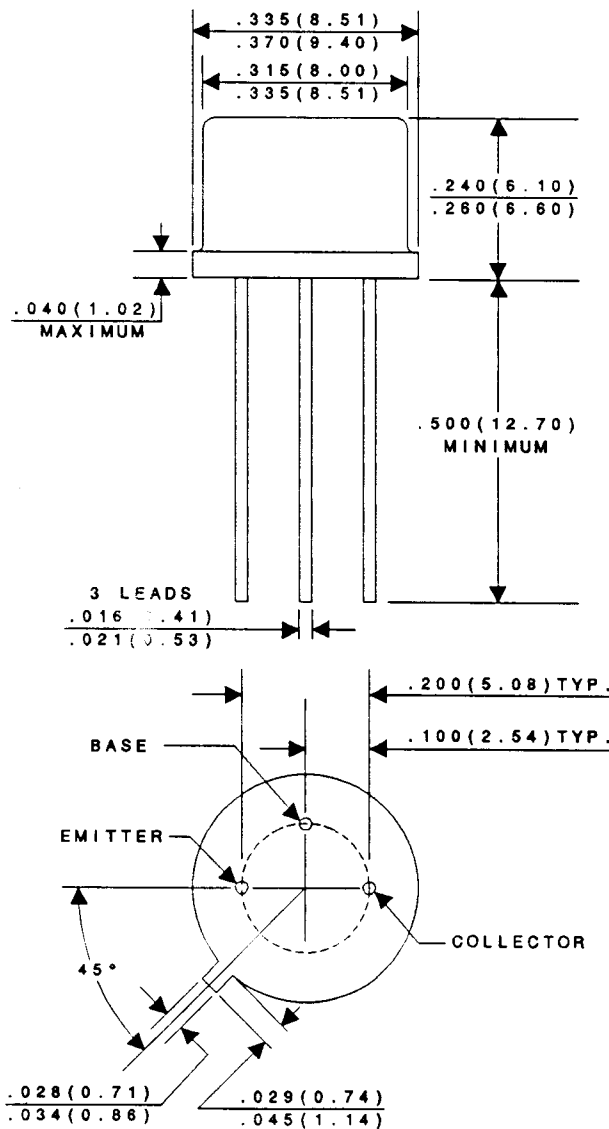
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I _{CEV}	V _{CE} =75V, V _{BE(off)} =1.5V (2N6190, 2N6191)		10	μA
I _{CEV}	V _{CE} =90V, V _{BE(off)} =1.5V (2N6192, 2N6193)		10	μA
I _{CEV}	V _{CE} =75V, V _{BE(off)} =1.5V, T _C =150°C (2N6190, 2N6191)		1.0	mA
I _{CEV}	V _{CE} =90V, V _{BE(off)} =1.5V, T _C =150°C (2N6192, 2N6193)		1.0	mA
I _{CEO}	V _{CE} =75V (2N6190, 2N6191)		100	μA
I _{CEO}	V _{CE} =90V (2N6192, 2N6193)		100	μA
I _{CBO}	V _{CB} =80V (2N6190, 2N6191)		10	μA
I _{CBO}	V _{CB} =100V (2N6192, 2N6193)		10	μA
I _{EBO}	V _{EB} =6.0V		100	μA
BV _{CEO}	I _C =10mA (2N6190, 2N6191)	80		V
BV _{CEO}	I _C =10mA (2N6192, 2N6193)	100		V
V _{CE(SAT)}	I _C =2.0A, I _B =200mA		0.7	V
V _{CE(SAT)}	I _C =5.0A, I _B =500mA		1.2	V
V _{BE(SAT)}	I _C =2.0A, I _B =200mA		1.2	V
V _{BE(SAT)}	I _C =5.0A, I _B =500mA		1.8	V

(CONTINUED ON REVERSE SIDE)

ELECTRICAL CHARACTERISTICS (CONTINUED)

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>MAX</u>	<u>UNITS</u>
h_{FE}	$V_{CE}=2.0V, I_C=500mA$ (2N6190, 2N6192)	30		
h_{FE}	$V_{CE}=2.0V, I_C=500mA$ (2N6191, 2N6193)	50		
h_{FE}	$V_{CE}=2.0V, I_C=2.0A$ (2N6190, 2N6192)	30	120	
h_{FE}	$V_{CE}=2.0V, I_C=2.0A$ (2N6191, 2N6193)	40	240	
h_{FE}	$V_{CE}=2.0V, I_C=5.0A$ (2N6190, 2N6192)	20		
h_{FE}	$V_{CE}=2.0V, I_C=5.0A$ (2N6191, 2N6193)	20		
f_T	$V_{CE}=10V, I_C=500mA, f=10MHz$	30		MHz
C_{ob}	$V_{CB}=10V, I_E=0, f=100kHz$		300	pF
C_{ib}	$V_{CE}=2.0V, I_C=0, f=100kHz$		1250	pF
t_d	$V_{CC}=40V, V_{BE(off)}=3.0V, I_C=2.0A, I_{B1}=200mA$		100	ns
t_r	$V_{CC}=40V, V_{BE(off)}=3.0V, I_C=2.0A, I_{B1}=200mA$		100	ns
t_s	$V_{CC}=40V, I_C=2.0A, I_{B1}=I_{B2}=200mA$		2.0	μs
t_f	$V_{CC}=40V, I_C=2.0A, I_{B1}=I_{B2}=200mA$		200	ns

TO-39 CASE - MECHANICAL OUTLINE



OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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