Central™
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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)

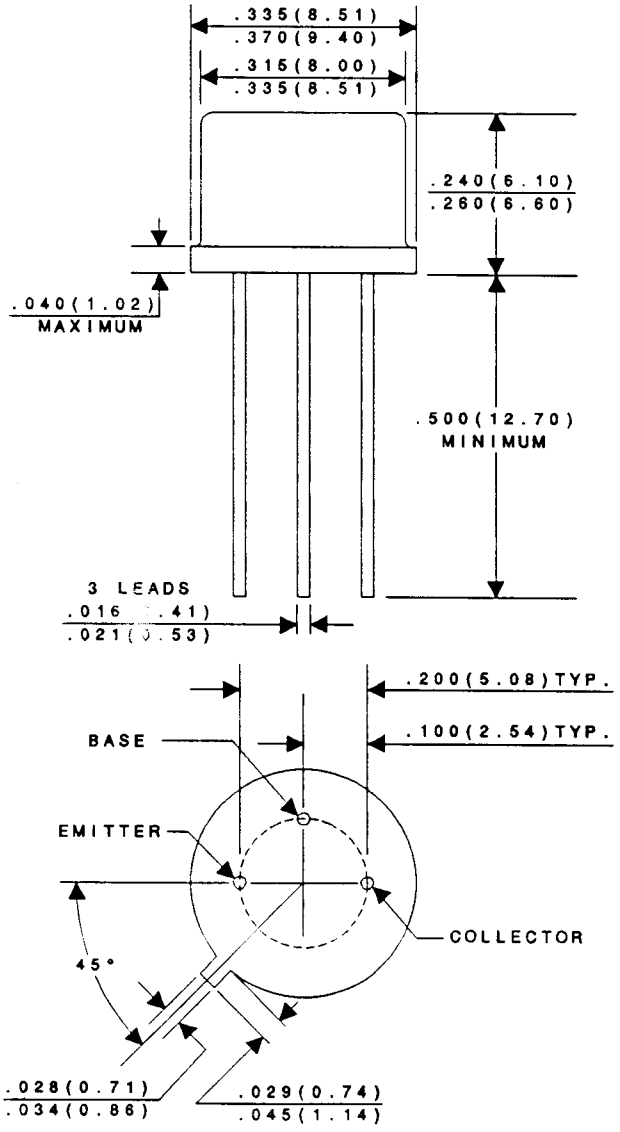
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CEV}	V_{CE}=75V, $V_{BE(off)}$=1.5V (2N6190, 2N6191)		10	μA
I_{CEV}	V_{CE}=90V, $V_{BE(off)}$=1.5V (2N6192, 2N6193)		10	μA
I_{CEV}	V_{CE}=75V, $V_{BE(off)}$=1.5V, T_C=150°C (2N6190, 2N6191)		1.0	mA
I_{CEV}	V_{CE}=90V, $V_{BE(off)}$=1.5V, T_C=150°C (2N6192, 2N6193)		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)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
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



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