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2N6190
 thru
2N6193



5 AMPERE
 POWER TRANSISTORS

PNP SILICON

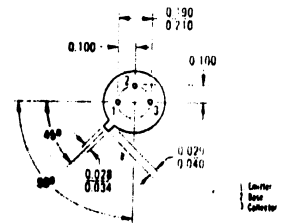
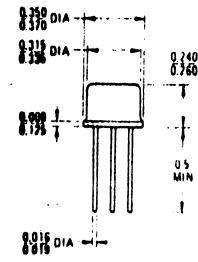
80-100 VOLTS
 10 WATTS

MAXIMUM RATINGS

Rating	Symbol	2N6190 2N6191	2N6192 2N6193	Unit
Collector-Emitter Voltage	V _{CEO}	80	100	V _{dc}
Collector-Base Voltage	V _{CB}	80	100	V _{dc}
Emitter-Base Voltage	V _{EB}	6.0		V _{dc}
Collector Current - Continuous	I _C	5.0		A _{dc}
Base Current	I _B	1.0		A _{dc}
Total Device Dissipation @ T _C = 25°C	P _D	10		Watts
Derate above 25°C		57.1		mW/°C
Operating and Storage Junction Temperature Range	T _J , T _{stg}	-65 to +200		°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	θ _{JC}	17.5	°C/W

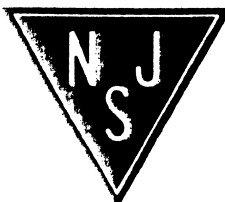


AN JEDEC dimensions and notes apply

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

Characteristic	Fig. No.	Symbol	Min	Max	Unit
OFF CHARACTERISTICS					
Collector-Emitter Sustaining Voltage (1) I _C = 50 mA _{dc} , I _B = 0		V _{CEO(sust)}	80	100	V _{dc}
Collector Cutoff Current V _{CE} = 75 V _{dc} , I _B = 0		I _{CEO}	-	100	μA _{dc}
Collector Cutoff Current V _{CE} = 90 V _{dc} , I _B = 0		I _{CEO}	-	100	μA _{dc}
Collector Cutoff Current V _{CE} = 75 V _{dc} , V _{BE(off)} = 1.5 V _{dc}	12	I _{CEX}	-	10	μA _{dc}
Collector Cutoff Current V _{CE} = 90 V _{dc} , V _{BE(off)} = 1.5 V _{dc}		I _{CEX}	-	10	μA _{dc}
Collector Cutoff Current V _{CE} = 75 V _{dc} , V _{BE(off)} = 1.5 V _{dc} , T _C = 150°C		I _{CEX}	-	1.0	mA _{dc}
Collector Cutoff Current V _{CE} = 90 V _{dc} , V _{BE(off)} = 1.5 V _{dc} , T _C = 150°C		I _{CEX}	-	1.0	mA _{dc}
Collector Cutoff Current V _{CB} = 80 V _{dc} , I _E = 0		I _{CB0}	-	10	μA _{dc}
Collector Cutoff Current V _{CB} = 100 V _{dc} , I _E = 0		I _{CB0}	-	10	μA _{dc}
Emitter Cutoff Current V _{BE} = 6.0 V _{dc} , I _C = 0		I _{EBO}	-	100	μA _{dc}
ON CHARACTERISTICS (1)					
DC Current Gain I _C = 500 mA _{dc} , V _{CE} = 2.0 V _{dc}	8	h _{FE}	30	-	-
DC Current Gain I _C = 2.0 A _{dc} , V _{CE} = 2.0 V _{dc}		h _{FE}	60	-	-
DC Current Gain I _C = 2.0 A _{dc} , V _{CE} = 2.0 V _{dc}		h _{FE}	30	120	-
DC Current Gain I _C = 5.0 A _{dc} , V _{CE} = 2.0 V _{dc}		h _{FE}	60	240	-
DC Current Gain I _C = 5.0 A _{dc} , V _{CE} = 2.0 V _{dc}		h _{FE}	20	-	-
DC Current Gain I _C = 5.0 A _{dc} , V _{CE} = 2.0 V _{dc}		h _{FE}	40	-	-
Collector-Emitter Saturation Voltage I _C = 2.0 A _{dc} , I _B = 0.2 A _{dc}	9,10,11	V _{CE(sat)}	-	0.7	V _{dc}
Collector-Emitter Saturation Voltage I _C = 5.0 A _{dc} , I _B = 0.5 A _{dc}		V _{CE(sat)}	-	1.2	V _{dc}
Base-Emitter Saturation Voltage I _C = 2.0 A _{dc} , I _B = 0.2 A _{dc}	10,11	V _{BE(sat)}	-	1.2	V _{dc}
Base-Emitter Saturation Voltage I _C = 5.0 A _{dc} , I _B = 0.5 A _{dc}		V _{BE(sat)}	-	1.8	V _{dc}
DYNAMIC CHARACTERISTICS					
Current Gain Bandwidth Product (2) I _C = 0.5 A _{dc} , V _{CE} = 10 V _{dc} , f _{Test} = 10 MHz		f _T	30	-	MHz
Output Capacitance V _{CB} = 10 V _{dc} , I _B = 0, f = 100 kHz	7	C _{ob}	-	300	pF
Input Capacitance V _{BE} = 2.0 V _{dc} , I _C = 0, f = 100 kHz	7	C _{ib}	-	1250	pF
SWITCHING CHARACTERISTICS					
Delay Time V _{CC} = 40 V _{dc} , V _{BE(off)} = 3.0 V _{dc} , I _C = 2.0 A _{dc} , I _B = 0.2 A _{dc}	2,3	t _d	-	100	ns
Rise Time I _C = 2.0 A _{dc} , I _B = 0.2 A _{dc}		t _r	-	100	ns
Storage Time V _{CC} = 40 V _{dc} , I _C = 2.0 A _{dc}	2,6	t _s	-	2.0	μs
Fall Time I _B = I _B 2 = 0.2 A _{dc}		t _f	-	200	ns

Indicates JEDEC Registered Data
 1) Pulse Test, Pulse Width ≤ 300 μs, Duty Cycle ≤ 2.0%
 2) f_T = 1/f_β Test



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