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2N3771 (SILICON)

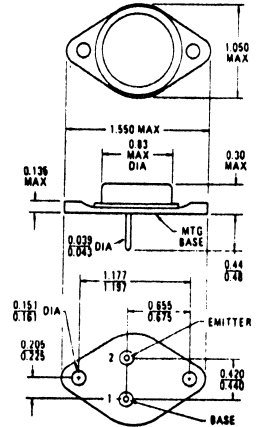
HIGH-POWER NPN SILICON TRANSISTOR

***MAXIMUM RATINGS**

Rating	Symbol		Unit
Collector-Emitter Voltage	V _{CEO}	40	Vdc
Collector-Emitter Voltage	V _{CEX}	50	Vdc
Collector-Base Voltage	V _{CB}	50	Vdc
Emitter-Base Voltage	V _{EB}	5.0	Vdc
Collector Current - Continuous	I _C	30	Adc
Collector Current - Peak		30	
Base Current - Continuous	I _B	7.5	Adc
Total Device Dissipation @ T _C = 25°C	P _D	150	Watts
Derate above 25°C		0.86	W/°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}	1.17	°C/W

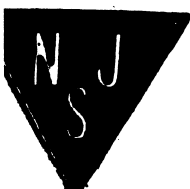


TO-3

Collector Connected to Case

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

Characteristic	Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS					
*Collector-Emitter Sustaining Voltage (Note 1) (I _C = 200 mA, I _B = 0)	V _{CEO(sus)}	40	-	-	Vdc
*Collector Cutoff Current (V _{CE} = 30 Vdc, I _B = 0) (V _{CE} = 50 Vdc, I _B = 0)	I _{CEO}	-	-	10	mA
*Collector Cutoff Current (V _{CE} = Rated V _{CB} , V _{EB(off)} = 1.5 Vdc) (V _{CE} = 30 Vdc, V _{EB(off)} = 1.5 Vdc, T _C = 150°C)	I _{CEX}	-	-	2.0 10	mA
Collector Cutoff Current *(V _{CB} = Rated V _{CB} , I _E = 0) (V _{CB} = 30 Vdc, I _E = 0, T _C = 150°C)	I _{CBO}	-	-	2.0 10	mA
*Emitter Cutoff Current (V _{BE} = Rated V _{BE} , I _C = 0)	I _{EBO}	-	-	5.0	mA
ON CHARACTERISTICS					
*DC Current Gain (Note 1) (I _C = 15 Adc, V _{CE} = 4.0 Vdc) (I _C = 30 Adc, V _{CE} = 4.0 Vdc)	h _{FE}	15 5.0	-	60	-
*Collector-Emitter Saturation Voltage (Note 1) (I _C = 15 Adc, I _B = 1.5 Adc) (I _C = 30 Adc, I _B = 6.0 Adc)	V _{CE(sat)}	-	-	2.0 4.0	Vdc
*Base-Emitter On Voltage (Note 1) (I _C = 15 Adc, V _{CE} = 4.0 Vdc)	V _{BE(on)}	-	-	2.7	Vdc
DYNAMIC CHARACTERISTICS					
Current-Gain-Bandwidth Product (I _C = 1.0 Adc, V _{CE} = 4.0 Vdc, f = 50 kHz)	f _T	0.2	-	-	MHz
Small Signal Current Gain (I _C = 10 Adc, V _{CE} = 4.0 Vdc, f = 1.0 kHz)	h _{fe}	40	-	-	-



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