NPN Power Silicon Transistor



Rev. V1

Features

- High Voltage: V_{CEO(SUS)} = 300 V min.
- Wide Area of Safe Operation
- Designed for use in series regulators, power amplifiers, inverters, deflection circuits, switching regulators, and high voltage bridge amplifiers.
- TO-3 (TO-204AA) Package



Electrical Characteristics

Parameter	Test Conditions	Symbol	Units	Min.	Max.
Collector-Emitter Sustaining Voltage	I _C = 0.2 A; I _B = 0	$I_{\rm C}$ = 0.2 A; $I_{\rm B}$ = 0 $V_{\rm CEO(SUS)}$ V		300	
Collector-Emitter Sustaining Voltage	I_{C} = 0.2 A; $R_{BE} \leq 50 \Omega$ $V_{CEO(SUS)}$ V		V	350	
Emitter-Base Breakdown Voltage	I _E = 0.02 A; I _C = 0 V _{(BR)EBO} V		V	6	
Collector-Emitter Saturation Voltage	I _C = 2 A; I _B = 0.25 A	0.25 A V _{CE(SAT)-1} \			2.5
Collector-Emitter Saturation Voltage	I _C = 4.5 A; I _B = 1.125 A	V _{CE(SAT)-2} V			5.0
Base-Emitter On Voltage	I _C = 2 A; V _{CE} = 10 V	V _{BE(on)} V			3.0
Collector Cutoff Current	V _{BE} = 375 V; V _{BE} = -1.5 V V _{BE} = 300 V; V _{BE} = -1.5 V; T _C = 150°C	I _{CEV} mA			2 3
Collector Cutoff Current	V _{BE} = 200 V; I _B = 0		mA		2
Emitter Cutoff Current	$V_{BE} = 6 \text{ V}; I_C = 0$ I_{ES}		mA		5
Forward Bias, Second Breakdown Collector Current	tp=1 sec, V_{CE} =100 Vdc $I_{S/B}$		А	0.8	
AC Forward Current Transfer Ratio	$F=1\;KHz;V_{CE}=10\;Vdc,I_{C}=0.4\;A\qquad\qquadh_{fe}$			20	
DC Current Gain	I _C = 0.4 A; V _{CE} = 10 V	h _{Fe-1}		20	80
DC Current Gain	I _C = 2 A; V _{CE} = 10 V	h _{Fe-2}		20	80
DC Current Gain	I _C = 4.5 A; V _{CE} = 10 V	10 V h _{Fe-3}		5	
Current-Gain - Bandwidth Product	I _C = 0.2 A; V _{CE} = 10 V	/ f _T MHz		2	
Output Capacitance	I_E = 0; V_{CB} = 10 V; f_{test} = 1.0 MHz	C _{OB}	pF		250

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1

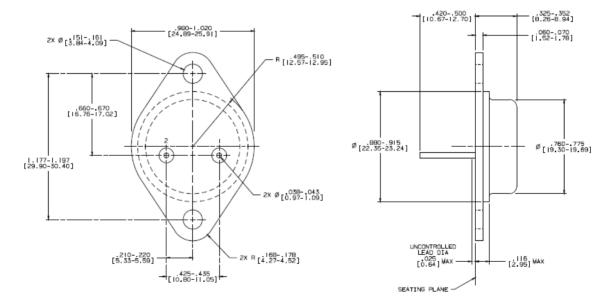
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Absolute Maximum Ratings

Ratings	Symbol	Value	
Collector - Base Voltage	V _{CBO}	375 Vdc	
Collector - Emitter Voltage (R_{BE} <50 Ω)	V _{CER(SUS)}	350 Vdc	
Collector - Emitter Voltage	V _{CEO(SUS)}	300 Vdc	
Emitter - Base Voltage	V _{EBO}	6 Vdc	
Collector Current - Continuous	Ι _C	5 Adc	
Base Current	Ι _Β	2 Adc	
Collector Power Dissipation	Pc	100 W	
Junction Temperature	TJ	+200°C	
Operating & Storage Temperature Range	T _{OP} , T _{STG}	-65°C to +200°C	

Outline Drawing



NOTES.

IL STANDARD HEADER TYPE SOLID BASE. 2. STANDARD HEADER TYPE SOLID BASE. 3. LEAD NOT BENT GREATER THAN 15°. 4. DIMENSIONS BASED ON JEDEC STANDARD TO-3 PUBLICATION 95, PA

2

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