2N5240

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	$V_{CEO(SUS)}$	V	300	--
Collector-Emitter Sustaining Voltage	I_C = 0.2 A; R_{BE} ≤50 Ω	$V_{CEO(SUS)}$	V	350	--
Emitter-Base Breakdown Voltage	I_E = 0.02 A; I_C = 0	$V_{(BR)EBO}$	V	6	--
Collector-Emitter Saturation Voltage	I_C = 2 A; I_B = 0.25 A	$V_{CE(SAT)-1}$	V	--	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	I_{CEO}	mA	--	2
Emitter Cutoff Current	V_{BE} = 6 V; I_C = 0	I_{ESO}	mA	--	5
Forward Bias, Second Breakdown Collector Current	tp=1 sec, V_{CE} =100 Vdc	$I_{S/B}$	A	0.8	--
AC Forward Current Transfer Ratio	F = 1 KHz; V_{CE} = 10 Vdc, I_C = 0.4 A	h_{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	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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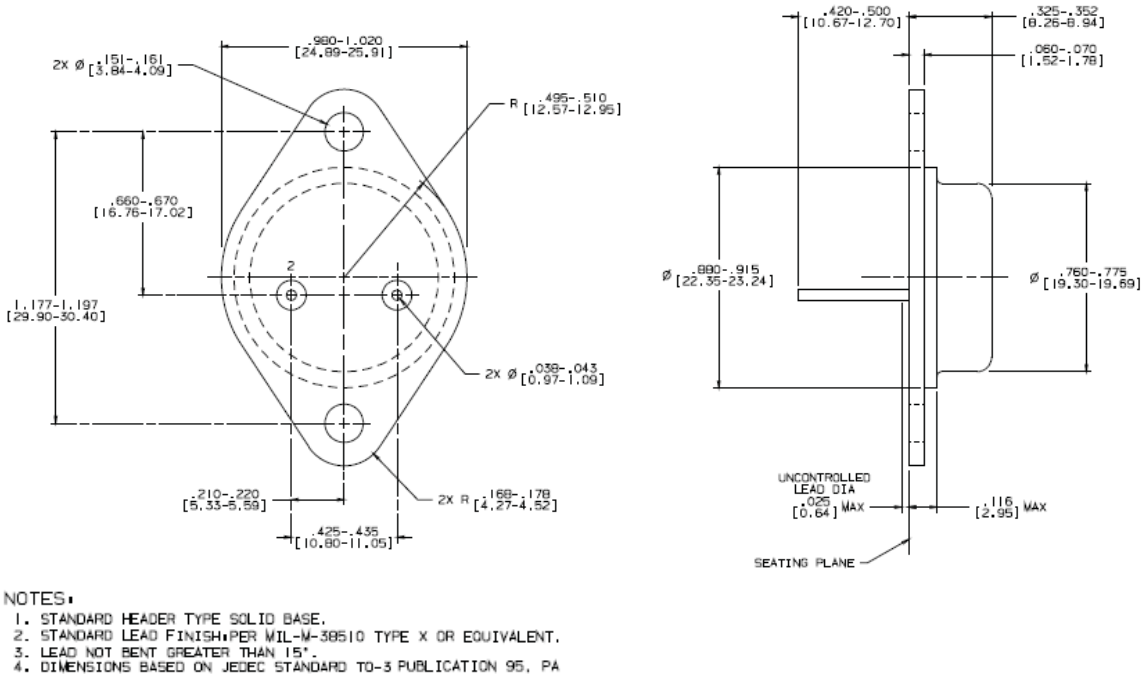
Absolute Maximum Ratings

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	I_C	5 Adc
Base Current	I_B	2 Adc
Collector Power Dissipation	P_C	100 W
Junction Temperature	T_J	+200°C
Operating & Storage Temperature Range	T_{OP}, T_{STG}	-65°C to +200°C

Outline Drawing



NOTES:
1. STANDARD HEADER TYPE SOLID BASE.
2. STANDARD LEAD FINISH, PER MIL-M-38510 TYPE X OR EQUIVALENT.
3. LEAD NOT BENT GREATER THAN 15°.
4. DIMENSIONS BASED ON JEDEC STANDARD TO-3 PUBLICATION 95, PA