



NPN High Power Silicon Transistors

2N6249, 2N6250, 2N6251

Features

- Available in JAN, JANTX, and JANTXV per MIL-PRF-19500/371
- TO-3 (TO-204AA) Package



Maximum Ratings

Ratings	Symbol	2N6249	2N6250	2N6251	Units
Collector - Emitter Voltage	V_{CEO}	200	275	350	Vdc
Collector - Base Voltage	V_{CBO}	300	375	450	Vdc
Emitter - Base Voltage	V_{EBO}	6.0			Vdc
Collector Current	I_C	10			Adc
Base Current	I_B	5.0			Adc
Total Power Dissipation @ $T_A = +25\text{ }^\circ\text{C}$ (1) @ $T_A = +25\text{ }^\circ\text{C}$ (2)	P_T	6.0			W
		175			W
Operating & Storage Temperature Range	T_{OP}, T_{stg}	-65 to +200			$^\circ\text{C}$

Thermal Characteristics

Characteristics	Symbol	Maximum	Units
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	1.25	$^\circ\text{C}/\text{W}$

1) Derate linearly @ 34.2 mW/ $^\circ\text{C}$ for $T_A > +25\text{ }^\circ\text{C}$

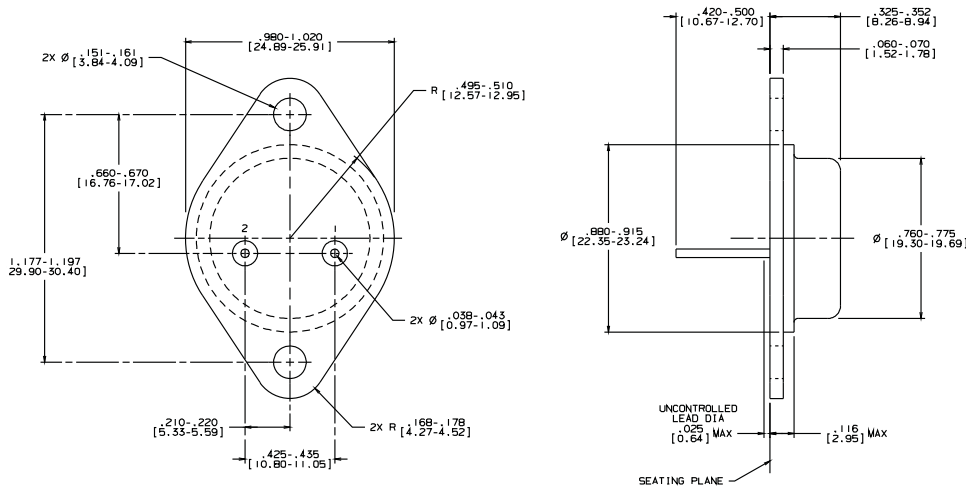
2) Derate linearly @ 1.0 mW/ $^\circ\text{C}$ for $T_C > +75\text{ }^\circ\text{C}$

Electrical Characteristics

OFF Characteristics	Symbol	Minimum	Maximum	Units	
Collector-Emitter Breakdown Voltage $I_C = 20\text{ mAdc}, L = 42\text{ mH}, f = 30\text{-}60\text{ GHz}$ (See Figure 10 of MIL-PRF-19500/510)	2N6249 2N6250 2N6251	$I_{(BR)CEO}$	---	200 275 350	Vdc
Collector-Emitter Breakdown Voltage $I_C = 200\text{ mAdc}, L = 14\text{ mH}, f = 30\text{-}60\text{ GHz}$ (See Figure 10 of MIL-PRF-19500/510)	2N6249 2N6250 2N6251	$I_{(BR)CER}$	---	225 300 375	Vdc
Emitter-Base Cutoff Current $V_{EB} = 6.0\text{ Vdc}$		I_{EBO}	---	100	μAdc
Collector-Emitter Cutoff Current $V_{CE} = 150\text{ Vdc}$ $V_{CE} = 225\text{ Vdc}$ $V_{CE} = 225\text{ Vdc}$	2N6249 2N6250 2N6251	I_{CEO}	---	1.0	mAdc
Collector-Emitter Cutoff Current $V_{CE} = 225\text{ Vdc}, V_{BE} = -1.5\text{ Vdc}$ $V_{CE} = 300\text{ Vdc}, V_{BE} = -1.5\text{ Vdc}$ $V_{CE} = 375\text{ Vdc}, V_{BE} = -1.5\text{ Vdc}$	2N6249 2N6250 2N6251	I_{CEX}	---	100	μAdc



Outline Drawing



- NOTES:
 1. STANDARD HEADER TYPE SOLID BASE.
 2. STANDARD LEAD FINISH PER MIL-M-58510 TYPE X OR EQUIVALENT.
 3. LEAD NOT BENT GREATER THAN 15°.
 4. DIMENSIONS BASED ON JEDEC STANDARD TO-3 PUBLICATION 95, PA

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Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.