

NPN SILICON HIGH POWER TRANSISTOR

Qualified per MIL-PRF-19500/262

Devices

2N1722

2N1724

Qualified Level

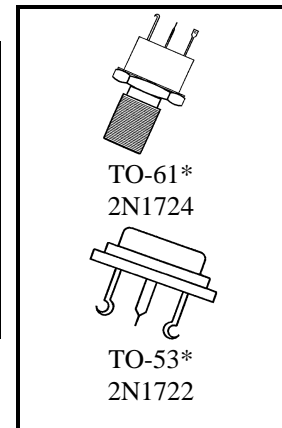
JAN
JANTX

MAXIMUM RATINGS

Ratings		Symbol	Value	Units
Collector-Emitter Voltage		V_{CEO}	80	Vdc
Collector-Base Voltage		V_{CBO}	175	Vdc
Emitter-Base Voltage		V_{EBO}	10	Vdc
Collector Current		I_C	5.0	Adc
Total Power Dissipation	@ $T_A = +25^{\circ}\text{C}^{(1)}$	P_T	3.0	W
	@ $T_C = +100^{\circ}\text{C}^{(2)}$		50	W
Temperature Range:	Operating	T_{OP}	175	$^{\circ}\text{C}$
	Storage Junction	T_{stg}	-65 to +200	

1) Derate linearly 20 mW/ $^{\circ}\text{C}$ for T_A between $+25^{\circ}\text{C}$ and $+175^{\circ}\text{C}$

2) Derate linearly 666 mW/ $^{\circ}\text{C}$ for T_C between $+100^{\circ}\text{C}$ and $+175^{\circ}\text{C}$



*See Appendix A for
Package Outline

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min.	Max.	Unit
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OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage $I_C = 200 \text{ mAdc}$	$V_{(BR)CEO}$	80		Vdc
Emitter-Base Breakdown Voltage $I_E = 10 \text{ mAdc}$	$V_{(BR)EBO}$	10		Vdc
Collector-Emitter Cutoff Current $V_{CE} = 60 \text{ Vdc}$	I_{CES}		300	μAdc
Collector-Base Cutoff Current $V_{CB} = 175 \text{ Vdc}$	I_{CBO}		5.0	mAdc
Emitter-Base Cutoff Current $V_{EB} = 7.0 \text{ Vdc}$	I_{EBO}		400	μAdc

2N1722, 2N1724 JAN SERIES

ELECTRICAL CHARACTERISTICS (con't)

Characteristics	Symbol	Min.	Max.	Unit
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ON CHARACTERISTICS

Forward-Current Transfer Ratio $I_C = 2.0 \text{ Adc}, V_{CE} = 15 \text{ Vdc}$ $I_C = 5.0 \text{ Adc}, V_{CE} = 15 \text{ Vdc}$ $I_C = 100 \text{ mAdc}, V_{CE} = 15 \text{ Vdc}$	h_{FE}	30 15 30	120	
Collector-Emitter Saturation Voltage $I_C = 2.0 \text{ Adc}, I_B = 200 \text{ mAdc}$	$V_{CE(sat)}$		0.6	Vdc
Base-Emitter Saturation Voltage $I_C = 2.0 \text{ Adc}, I_B = 200 \text{ mVdc}$	$V_{BE(sat)}$		1.2	Vdc

DYNAMIC CHARACTERISTICS

Magnitude of Common Emitter Small-Signal Short-Circuit Forward Current Transfer Ratio $I_C = 500 \text{ mAdc}, V_{CE} = 15 \text{ Vdc}; f = 10 \text{ MHz}$	$ h_{fe} $	1.0	5.0	
Output Capacitance $V_{CB} = 15 \text{ Vdc}, I_E = 0, 100 \text{ kHz} \leq f \leq 1.0 \text{ MHz}$	C_{obo}		550	pF