



TECHNICAL DATA

NPN HIGH POWER SILICON TRANSISTOR

Qualified per MIL-PRF-19500/622

Devices

2N7368

Qualified Level

JAN
JANTX
JANTXV

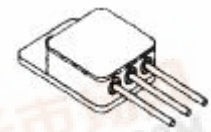
MAXIMUM RATINGS

Ratings	Symbol	Value	Units
Collector-Emitter Voltage	V_{CEO}	80	Vdc
Collector-Base Voltage	V_{CBO}	80	Vdc
Emitter-Base Voltage	V_{EBO}	7.0	Vdc
Base Current	I_B	4.0	Adc
Collector Current	I_C	10	Adc
Total Power Dissipation @ $T_C = 25^\circ\text{C}$ ⁽¹⁾	P_T	115	W
Operating & Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max.	Unit
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	1.5	$^\circ\text{C/W}$

1) Derate linearly 0.657 W/ $^\circ\text{C}$ for $T_C > 25^\circ\text{C}$



TO-254*

*See appendix A for package outline

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Characteristics	Symbol	Min.	Max.	Unit
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OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage $I_C = 0.2 \text{ Adc}$	$V_{CEO(sus)}$	80		Vdc
Collector-Emitter Cutoff Current $V_{CE} = 70 \text{ Vdc}$	I_{CES}		1.0	mAdc
Collector-Emitter Cutoff Current $V_{CE} = 80 \text{ Vdc}, V_{BE} = 1.5 \text{ Vdc}$	I_{CEX}		1.0	mAdc
Emitter-Base Cutoff Current $V_{EB} = 7.0 \text{ Vdc}$	I_{EBO}		1.0	mAdc

2N7368 JAN SERIES

ELECTRICAL CHARACTERISTICS (con't)

Characteristics	Symbol	Min.	Max.	Unit
ON CHARACTERISTICS ⁽²⁾				
Forward-Current Transfer Ratio I _C = 1.0 Adc, V _{CE} = 2.0 Vdc I _C = 3.0 Adc, V _{CE} = 2.0 Vdc	h _{FE}	50 30	175 140	
Collector-Emitter Saturation Voltage I _C = 5.0 Adc, I _B = 0.5 Adc	V _{CE(sat)}		1.0	Vdc
Base-Emitter Saturation Voltage I _C = 5.0 Adc, I _B = 0.5 Adc	V _{BE(sat)}		1.5	Vdc

DYNAMIC CHARACTERISTICS

Magnitude of Common Emitter Small-Signal Short-Circuit Forward Current Transfer Ratio I _C = 0.5 Adc, V _{CE} = 10 Vdc, f = 1.0 MHz	h _{fe}	4.0	20	
Output Capacitance V _{CB} = 10 Vdc, I _E = 0, 100 kHz ≤ f ≤ 1.0 MHz	C _{obo}		500	pF

SAFE OPERATING AREA

DC Tests

T_C = +25°C, 1 Cycle, t ≥ 1.0 s

Test 1

V_{CE} = 11.5 Vdc, I_C = 10 Adc

Test 2

V_{CE} = 45 Vdc, I_C = 2.5 Adc

Test 3

V_{CE} = 60 Vdc, I_C = 0.9 Adc

(2) Pulse Test: Pulse Width = 300μs, Duty Cycle ≤ 2.0%.