- JAN level (2N918J)
- JANTX level (2N918JX)
- JANTXV level (2N918JV)

2N918

Silicon NPN Transistor

Data Sheet

Description

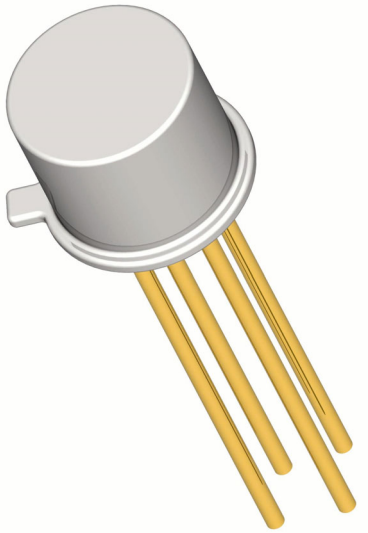
Semicoa Corporation offers:

- Screening and processing per MIL-PRF-19500 Appendix E
- JAN level (2N918J)
- JANTX level (2N918JX)
- JANTXV level (2N918JV)
- QCI to the applicable level
- 100% die visual inspection per MIL-STD-750 method 2072 for JANTXV
- Radiation testing (total dose) upon request

Please contact Semicoa for special configurations
www.***SEMICOA***.com or (714) 979-1900

Applications

- Ultra-high frequency transistor
- Low power
- NPN silicon transistor



Features

- Hermetically sealed TO-72 metal can
- Also available in chip configuration
- Chip geometry 0003
- Reference document: MIL-PRF-19500/301

Benefits

- Qualification Levels: JAN, JANTX, and JANTXV
- Radiation testing available

Absolute Maximum Ratings		T_C = 25°C unless otherwise specified	
Parameter	**Symbol**	**Rating**	**Unit**
Collector-Emitter Voltage	V_{CEO}	15	Volts
Collector-Base Voltage	V_{CBO}	30	Volts
Emitter-Base Voltage	V_{EBO}	3	Volts
Collector Current, Continuous	I_C	50	mA
Power Dissipation, T_A = 25°C Derate linearly above 25°C	P_T	200 1.14	mW mW/°C
Operating Junction Temperature Storage Temperature	T_J T_{STG}	-65 to +200	°C

Semicoa Corporation
333 McCormick Avenue, Costa Mesa, California 92626 714.979.1900, FAX 714.557.4541
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2N918

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Data Sheet

ELECTRICAL CHARACTERISTICS

characteristics specified at T_A = 25°C

Off Characteristics

Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 3 mA	15			Volts
Collector-Base Cutoff Current	I_{CBO1} I_{CBO2} I_{CBO3}	V_{CB} = 25 Volts V_{CB} = 30 Volts V_{CB} = 25 Volts, T_A = 150°C			10 1 1	nA µA µA
Emitter-Base Cutoff Current	I_{EBO1} I_{EBO2}	V_{EB} = 2.5 Volts V_{EB} = 3 Volts			10 10	nA µA

On Characteristics

Pulse Test: Pulse Width = 300 µs, Duty Cycle ≤ 2.0%

Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
DC Current Gain	h_{FE1} h_{FE2} h_{FE3} h_{FE4}	I_C = 0.5 mA, V_{CE} = 10 Volts I_C = 3 mA, V_{CE} = 1 Volts I_C = 10 mA, V_{CE} = 10 Volts I_C = 3 mA, V_{CE} = 1 Volts T_A = -55°C	10 20 20 10		200	
Base-Emitter Saturation Voltage	V_{BEsat}	I_C = 10 mA, I_B = 1 mA			1.0	Volts
Collector-Emitter Saturation Voltage	V_{CEsat}	I_C = 10 mA, I_B = 1 mA			0.4	Volts

Dynamic Characteristics

Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Magnitude – Common Emitter, Short Circuit Forward Current Transfer Ratio	$\|h_{FE}\|$	V_{CE} = 10 Volts, I_C = 4 mA, f = 100 MHz	6		18	
Open Circuit Output Capacitance	C_{OBO}	V_{CB} = 10 Volts, I_E = 0 mA, 100 kHZ < f < 1 MHz			1.7	pF
Noise Figure	NF	V_{CE} = 6 Volts, I_C = 1 mA, f = 60 MHz, R_g = 2.5 MΩ			6	dB
Power Gain	G_{pe}	V_{CB} = 12 Volts, I_C = 6 mA, f = 200 MHz	15			dB
Collector Base time constant	$r_b'C_C$	V_{CB} = 10 Volts, I_E = -4 mA, f = 79.8 MHz			25	ps
Collector efficiency	η	V_{CB} = 15 Volts, I_C = 8 mA, f = 500 MHz	30			mW
Oscillator Power Output	P_O	V_{CB} = 15 Volts, I_C = 8 mA, f = 500 MHz			25	%

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