6 Lake Street, Lawrence, MA 01841
1-800-446-1158 / (978) 620-2600 / Fax: (978) 689-0803
Website: http: //www.microsemi.com

TECHNICAL DATA SHEET

NPN SILICON SWITCHING TRANSISTOR

Qualified per MIL-PRF-19500/301

DEVICES

2N918 2N918UB

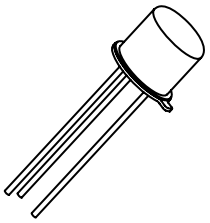
LEVELS

JAN
JANTX
JANTXV

ABSOLUTE MAXIMUM RATINGS (T_C = +25°C unless otherwise noted)

Parameters / Test Conditions	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	15	Vdc
Collector-Base Voltage	V_{CBO}	30	Vdc
Emitter-Base Voltage	V_{EBO}	3.0	Vdc
Collector Current	I_C	50	mAdc
Total Power Dissipation @ T_A = +25°C (1)	P_T	200	mW
Operating & Storage Junction Temperature Range	T_{op} & T_{stg}	-65 to +200	°C

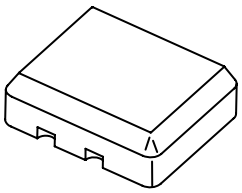
1) Derate linearly 1.14mW/°C above T_A > 25°C



TO-72
2N918

ELECTRICAL CHARACTERISTICS ***(T_A = +25°C, unless otherwise noted)***

Parameters / Test Conditions	Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage I_C = 3mAdc	$V_{(BR)CEO}$	15		Vdc
Collector-Base Cutoff Current V_{CB} = 30Vdc V_{CB} = 25Vdc	I_{CBO}		1.0 10	µAdc ηAdc
Emitter-Base Cutoff Current V_{EB} = 3.0Vdc V_{EB} = 2.5Vdc	I_{EBO}		10 10	µAdc ηAdc
Forward-Current Transfer Ratio I_C = 0.5mAdc, V_{CE} = 10Vdc I_C = 3.0mAdc, V_{CE} = 10Vdc I_C = 10mAdc, V_{CE} = 10Vdc	h_{FE}	 10 20 20	 200	
Collector-Emitter Saturation Voltage I_C = 10mAdc, I_B = 1.0mAdc	$V_{CE(sat)}$		0.4	Vdc
Base-Emitter Voltage I_C = 10mAdc, I_B = 1.0mAdc	$V_{BE(sat)}$		1.0	Vdc



3 PIN
2N918UB

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DYNAMIC CHARACTERISTICS

Parameters / Test Conditions	**Symbol**	**Min.**	**Max.**	**Unit**
Magnitude of Small-Signal Short-Circuit Forward Current Transfer Ratio I_C = 4mAdc, V_{CE} = 10Vdc, f = 100MHz	$\|h_{fe}\|$	6.0	18	
Output Capacitance V_{CB} = 0Vdc, I_E = 0, 100kHz ≤ f ≤ 1.0MHz V_{CB} = 10Vdc, I_E = 0, 100kHz ≤ f ≤ 1.0MHz	C_{obo1} C_{obo2}		3.0 1.7	pF
Input Capacitance V_{EB} = 0.5Vdc, I_C = 0, 100kHz ≤ f ≤ 1.0MHz	C_{ibo}		1.7	pF
Noise Figure (1) V_{CE} = 6V, I_C = 1.0mA, f = 60MHz g_s = 2.5mmho	NF		6.0	dB
Small-Signal Power Gain (1) V_{CB} = 12V, I_C = 6.0mA, f = 200MHz	G_{pe}	15		dB
Collector-Base Time Constant (1) V_{CB} = 10V, I_E = -4.0mA, f = 79.8MHz	$R_{b'CC}$		25	ps
Oscillator Power Output (1) V_{CB} = 1.5V, I_C = 8.0mA, f ≥ 500MHz	P_o	30		mW
Collector Efficiency V_{CB} = 15V, I_C = 8.0mA, f > 500MHz	n	25		%

NOTES:

(1) For more detail see MIL-PRF-19500/301