

MMST918 / PN918

1) High current gain-bandwidth product $f_T=600\text{MHz}$

Part No.	MMST918	PN918
Packaging type	SMT3	TO-92
Marking	RVX	—
Code	T146	T93
Basic ordering unit (pieces)	3000	3000

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CB0}	30	V
Collector-emitter voltage	V _{CE0}	15	V
Emitter-base voltage	V _{EB0}	3	V
Collector current	I _c	50	A
Collector power dissipation	MMST918	0.2	W
	PN918	0.310	W
Junction temperature	T _j	150	°C
Storage temperature	T _{st}	-55 to +150	°C

MMST918

Top view dimensions: 2.9±0.2, 1.9±0.2, 0.95±0.05, 1.4±0.2, 2.9±0.2, 0.4±0.1, 0.05. Pin numbers (1), (2), (3) are indicated. A note states: All terminals have same dimensions.

Side view dimensions: 1.1±0.2, 0.8±0.1, 0-0.1, 0.15±0.05, 0.05, 0.3.

ROHM : SMT3
EIAJ : SC-59

(1) Emitter
(2) Base
(3) Collector

PN918

Top view dimensions: 4.8±0.2, 3.6, 0.5±0.1, 2.5±0.3, 6. Pin numbers (1), (2), (3) are indicated.

Side view dimensions: 4.8±0.2, (12.7Min.), 3.7±0.2, 0.45±0.05, 2.3.

ROHM : TO-92
EIAJ : SC-43

(1) Emitter
(2) Base
(3) Collector

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	30	—	—	V	$I_C=1.0\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	15	—	—	V	$I_C=3.0mA$
Emitter-base breakdown voltage	BV_{EBO}	3.0	—	—	V	$I_E=10\mu A$
Collector cutoff current	I_{CB0}	—	—	0.01	μA	$V_{CB}=15V$
		—	—	1.0	μA	$V_{CB}=15V, I_E=0, T_a=150^{\circ}C$
DC current transfer ratio	h_{FE}	20	—	—	—	$I_C=3.0mA, V_{CE}=1.0V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	0.4	V	$I_C/I_E=10mA/1mA$
Base-emitter saturation voltage	$V_{BE(sat)}$	—	—	1.0	V	$I_C/I_E=10mA/1mA$
Transition frequency	f_T	600	—	—	MHz	$I_C=4.0mA, V_{CE}=10V, f=100MHz$
Output capacitance	C_{ob}	—	—	1.7	pF	$V_{CB}=10V, I_E=0, f=140kHz$
		—	—	3.0	pF	$V_{CB}=0, I_E=0, f=140kHz$
Emitter input capacitance	C_{ib}	—	—	2.0	pF	$V_{EB}=0.5V, I_C=0, f=140kHz$
Noise figure	NF	—	—	6.0	dB	$I_C=1.0mA, V_{CE}=6.0V, R_G=400\Omega, f=60MHz$
Power gain	G_{pe}	15	—	—	dB	$V_{CB}=12V, I_C=6.0mA, f=200MHz$
Output power	P_{out}	30	—	—	mW	$V_{CB}=15V, I_C=8.0mA, f=500MHz$
Collector efficiency	η	25	—	—	%	$V_{CB}=15V, I_C=8.0mA, f=500MHz$

Transistors

●Electrical characteristic curves

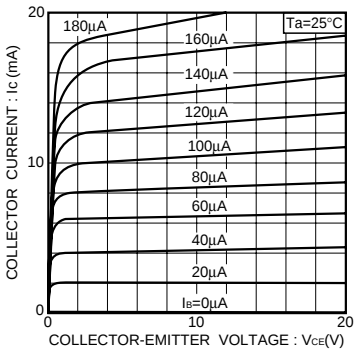


Fig.1 Typical output characteristics

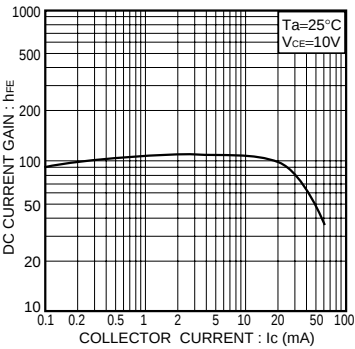


Fig.2 DC current gain vs. collector current

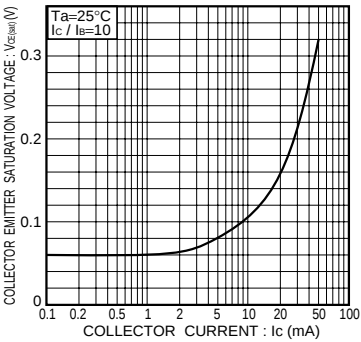


Fig.3 Collector-emitter saturation voltage vs. collector current

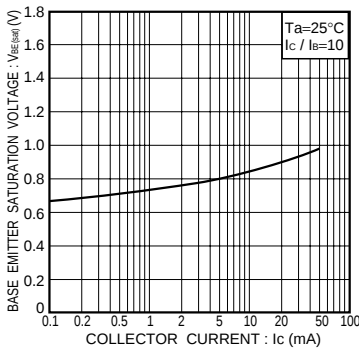


Fig.4 Base-emitter saturation voltage vs. collector current

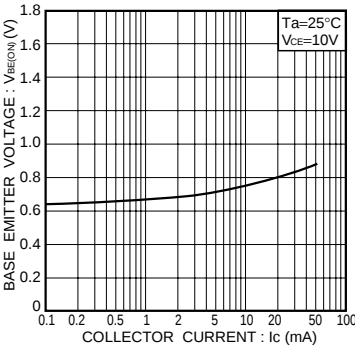


Fig.5 Base-emitter 'ON' voltage vs. collector current

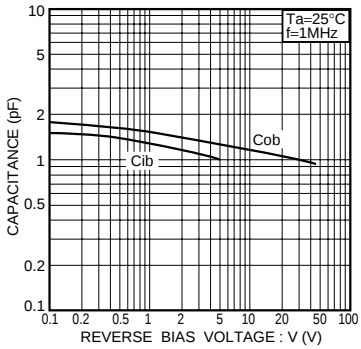


Fig.6 Capacitance vs. reverse bias voltage

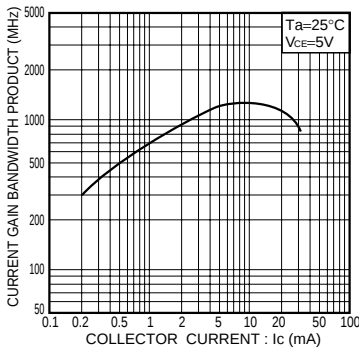


Fig.7 Current gain bandwidth product vs. collector current

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