NPN High Frequency Transistor MMST918 / PN918

● Features

1) High current gain-bandwidth product ft=600MHz

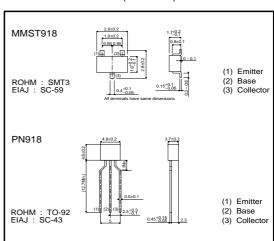
Package, marking, and packaging specifications

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

● Absolute maximum ratings (Ta = 25°C)

Parameter		Symbol	Limits	Unit
Collector-base voltage		Vсво	30	V
Collector-emitter voltage		VCEO	15	V
Emitter-base voltage		VEBO	3	V
Collector current		lc	50	Α
Collector power dissipation	MMST918	Pc	0.2	W
	PN918	PC	0.310	W
Junction temperature		Tj	150	°C
Storage temperature		Tstg	-55 to +150	°C

●External dimensions (Unit: mm)



●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions	
Collector-base breakdown voltage	ВУсво	30	-	-	V	Ic=1.0μA	
Collector-emitter breakdown voltage	BVceo	15	-	-	V	Ic=3.0mA	
Emitter-base breakdown voltage	ВУЕВО	3.0	-	-	V	IE=10μA	
Collector cutoff current	Ісво	-	-	0.01	μА	Vcb=15V	
		-	-	1.0	μА	Vcb=15V , IE=0 , Ta=150°C	
DC current transfer ratio	hre	20	-	-	-	Ic=3.0mA , VcE=1.0V	
Collector-emitter saturation voltage	VCE(sat)	-	-	0.4	V	Ic/lb=10mA/1mA	
Base-emitter saturation voltage	VBE(sat)	-	-	1.0	V	Ic/lb=10mA/1mA	
Transition frequency	fτ	600	-	-	MHz	Ic=4.0mA , VcE=10V, f=100MHz	
Output capacitance	Cob	-	-	1.7	pF	Vcb=10V , IE=0 , f=140kHz	
		-	-	3.0	pF	Vcb=0 , IE=0 , f=140kHz	
Emitter input capacitance	Cib	-	-	2.0	pF	VEB=0.5V , IC=0 , f=140kHz	
Noise figure	NF	-	-	6.0	dB	Ic=1.0mA , VcE=6.0V ,RG=400Ω , f=60MHz	
Power gain	Gpe	15	-	-	dB	VcB=12V , Ic=6.0mA , f=200MHz	
Output power	Pout	30	-	-	mW	Vcb=15V , Ic=8.0mA , f=500MHz	
Collector efficiency	η	25	-	-	%	Vcb=15V , Ic=8.0mA , f=500MHz	

•Electrical characteristic curves

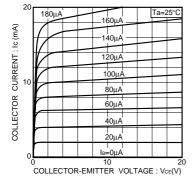


Fig.1 Typical output characteristics

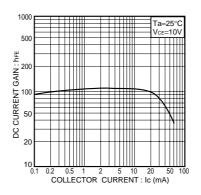


Fig.2 DC current gain vs. collector current

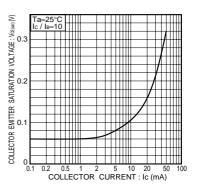


Fig.3 Collector-emitter saturation voltage vs. collector current

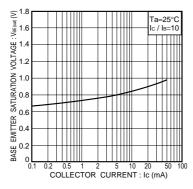


Fig.4 Base-emitter saturation voltage vs. collector current

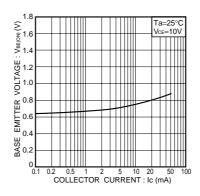


Fig.5 Base-emitter 'ON' voltage vs. collector current

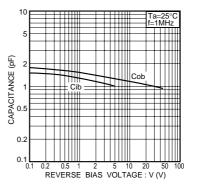


Fig.6 Capacitance vs. reverse bias voltage

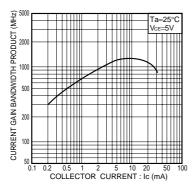


Fig.7 Current gain bandwidth product vs. collector current

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