



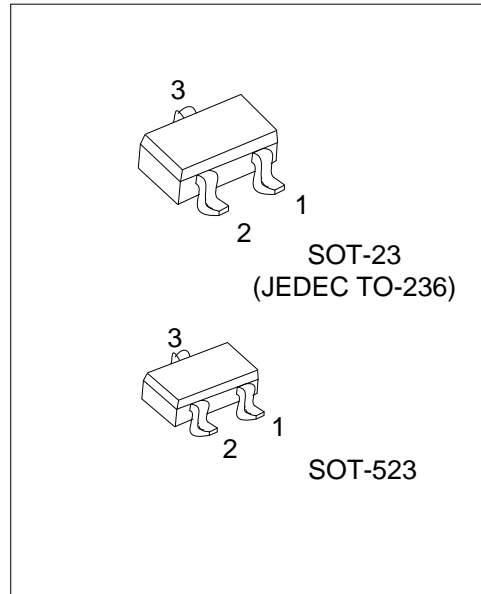
MMBT9018

NPN SILICON TRANSISTOR

AM/FM AMPLIFIER, LOCAL
OSCILLATOR OF FM/VHF
TUNER

FEATURES

- * High Current Gain Bandwidth Product
 $f_T = 1.1\text{GHz}$ (Typ)



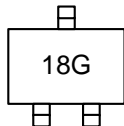
ORDERING INFORMATION

Ordering Number	Package	Pin Assignment			Packing
		1	2	3	
MMBT9018G-x-AE3-R	SOT-23	E	B	C	Tape Reel
MMBT9018G-x-AN3-R	SOT-523	E	B	C	Tape Reel

Note: Pin Assignment: E: Emitter B: Base C: Collector

<p>MMBT9018G-x-AE3-R</p> <p>(1) Packing Type (2) Package Type (3) Rank (4) Green Package</p>	<p>(1) R: Tape Reel (2) AE3: SOT-23, AN3: SOT-523 (3) x: refer to Classification of h_{FE} (4) G: Halogen Free and Lead Free</p>
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MARKING



MMBT9018

NPN SILICON TRANSISTOR

■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CBO}	30	V
Collector-Emitter Voltage		V_{CEO}	15	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current		I_C	50	mA
Collector Power Dissipation	SOT-23	P_C	225	mW
	SOT-523		150	mW
Junction Temperature		T_J	+150	$^\circ\text{C}$
Storage Temperature		T_{STG}	-55 ~ +150	$^\circ\text{C}$

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

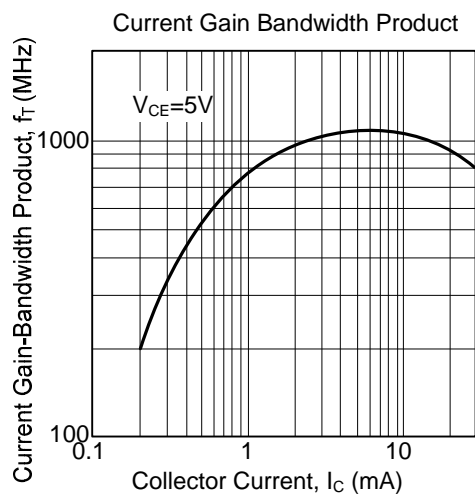
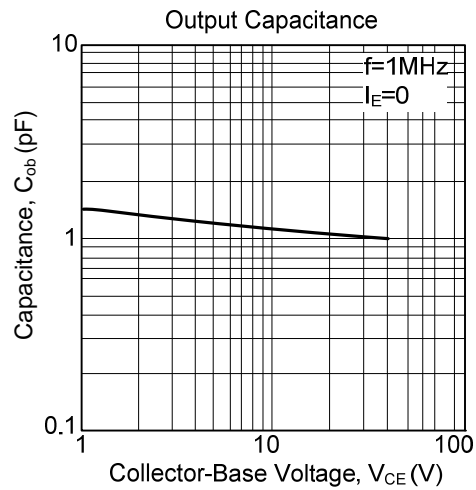
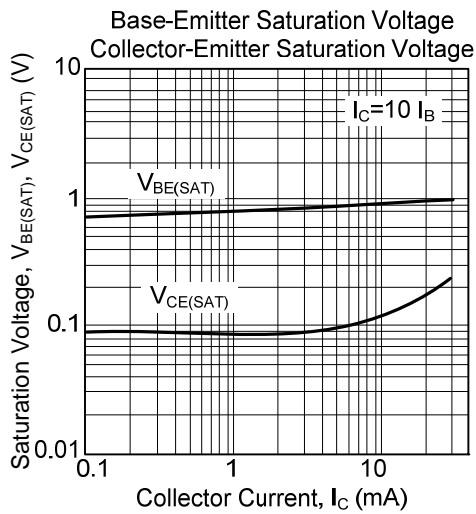
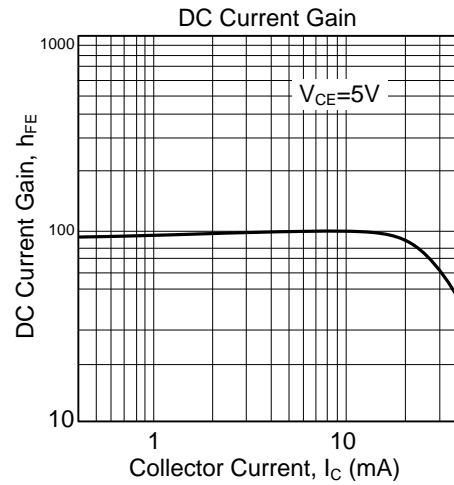
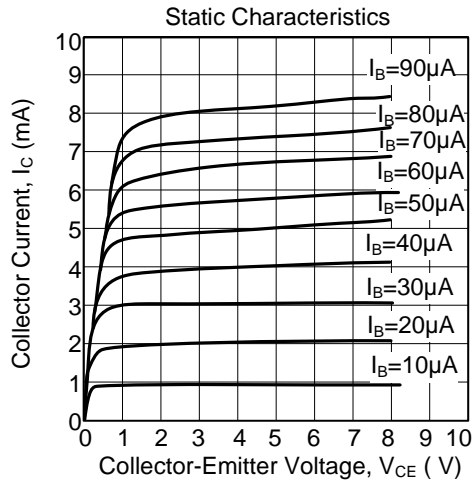
■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=100\mu\text{A}$, $I_E=0$	30			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=1\text{mA}$, $I_B=0$	15			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E=100\mu\text{A}$, $I_C=0$	5			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=12\text{V}$, $I_E=0$			50	nA
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=10\text{mA}$, $I_B=1\text{mA}$			0.5	V
DC Current Gain	h_{FE}	$V_{CE}=5\text{V}$, $I_C=1\text{mA}$	28	100	198	
Current Gain Bandwidth Product	f_T	$V_{CE}=5\text{V}$, $I_C=5\text{mA}$	700	1100		MHz
Output Capacitance	C_{OB}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$		1.3	1.7	pF

■ CLASSIFICATION of h_{FE}

RANK	D	E	F	G	H	I	J
RANGE	28-45	39-60	54-80	72-108	97-146	132-198	180-265

TYPICAL CHARACTERISTICS



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