



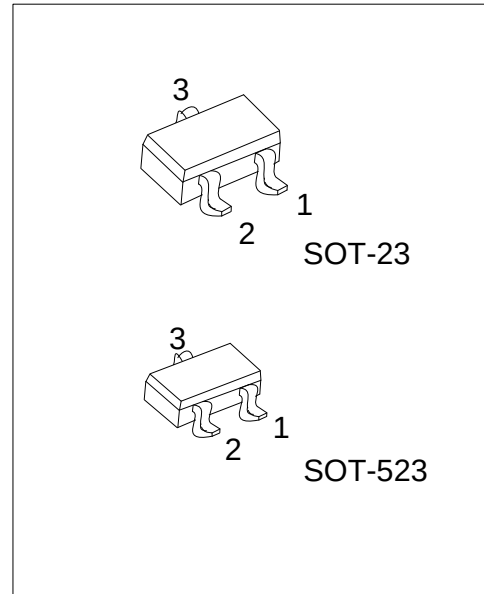
MMBT9018

NPN SILICON TRANSISTOR

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

■ FEATURES

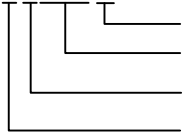
* High Current Gain Bandwidth Product
 $f_T=1.1\text{GHz}$ (Typ)



■ ORDERING INFORMATION

Ordering Number			Package	Pin Assignment			Packing
Normal	Lead Free Plating	Halogen Free		1	2	3	
MMBT9018-x-AE3-R	MMBT9018L-x-AE3-R	MMBT9018G-x-AE3-R	SOT-23	E	B	C	Tape Reel
MMBT9018-x-AN3-R	MMBT9018L-x-AN3-R	MMBT9018G-x-AN3-R	SOT-523	E	B	C	Tape Reel

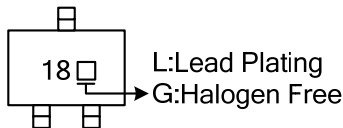
MMBT9018L-x-AE3-R



(1) Packing Type
(2) Package Type
(2) Package Type
(3) Lead Plating

(1) R: Tape Reel
(2) AE3: SOT-23, AN3: SOT-523
(3) x: refer to Classification of h_{FE}
(4) L: Lead Free Plating, Blank: Pb/Sn
G: Halogen Free

■ MARKING



L: Lead Plating
G: Halogen Free

■ **ABSOLUTE MAXIMUM RATINGS** (Ta=25°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	°C
Storage Temperature		T_{STG}	-55 ~ +150	°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.

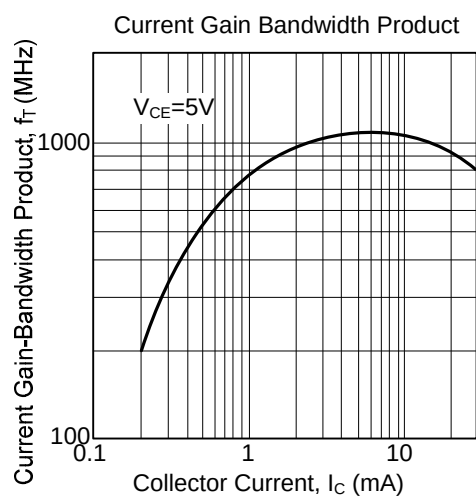
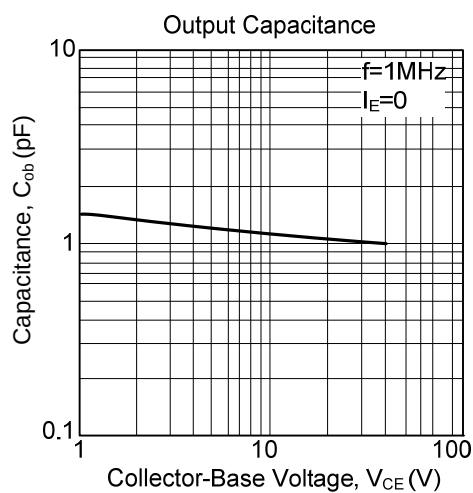
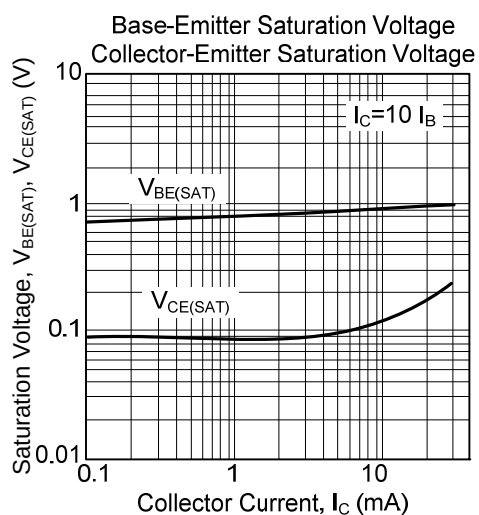
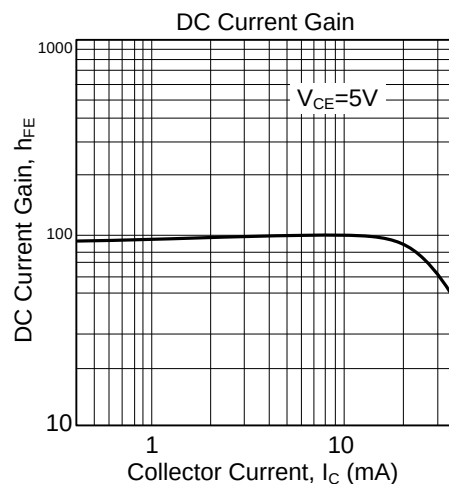
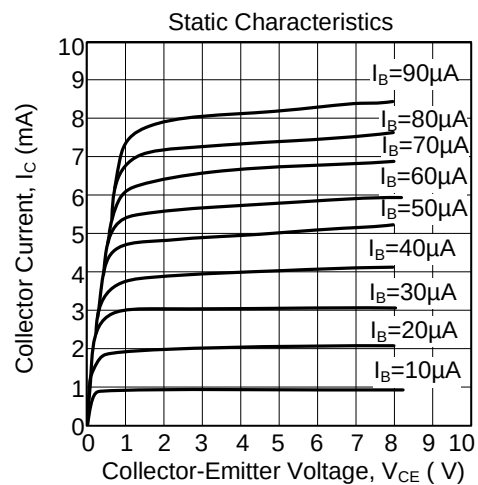
■ **ELECTRICAL CHARACTERISTICS** (Ta=25°C)

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