

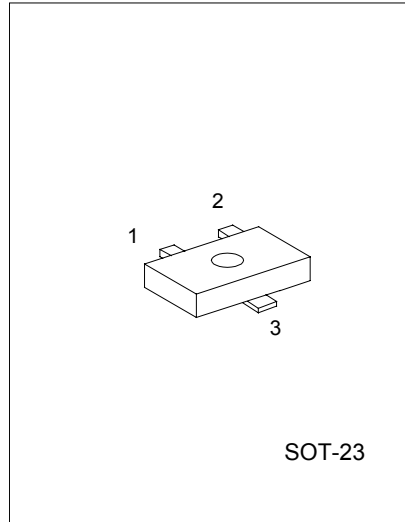
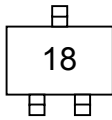
UTCMMBT9018 NPN EPITAXIAL PLANAR TRANSISTOR

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

FEATURES

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

MARKING



SOT-23

1:EMITTER 2:BASE 3:COLLECTOR

ABSOLUTE MAXIMUM RATINGS (Ta=25°C, unless otherwise noted)

PARAMETER	SYMBOL	VALUE	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	P_C	225	mW
Storage Temperature	T_{STG}	-55 ~ +150	°C
Junction Temperature	T_j	150	°C

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
RANGE	28-45	39-60	54-80	72-108	97-146	132-198

UTC UNISONIC TECHNOLOGIES CO. LTD

1

QW-R206-032,A

UTCMMBT9018 NPN EPITAXIAL PLANAR TRANSISTOR

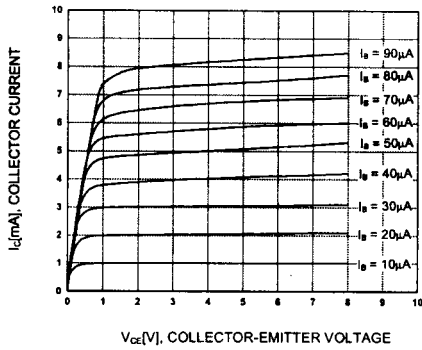


Figure 1. Static Characteristic

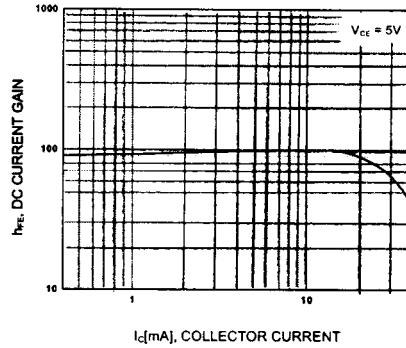


Figure 2. DC current Gain

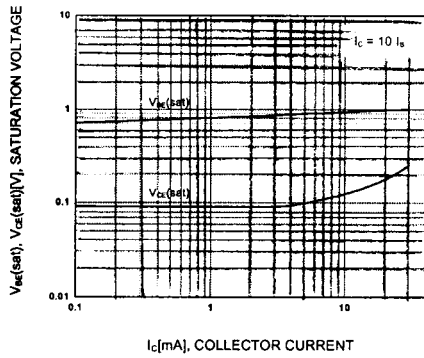


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

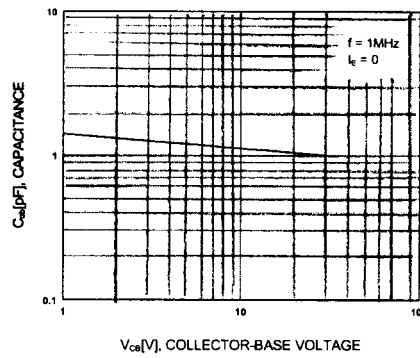


Figure 4. Output Capacitance

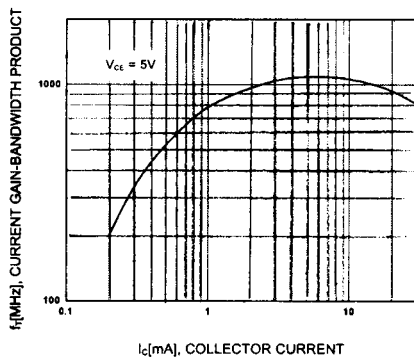


Figure 5. Current Gain Bandwidth Product

UTCMMBT9018 NPN EPITAXIAL PLANAR TRANSISTOR

UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.