UTC9018 NPN EPITAXIAL PLANAR TRANSISTOR

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

FEATURES

*High Current Gain Bandwidth Product
f_T=1.1GHz (Typ)

TO-92

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	Pc	400	mW
Storage Temperature	T_{STG}	-55 ~ +150	°C
Junction Temperature	Tj	150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=100uA, 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=100uA, Ic=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	fT	V_{CE}=5V, I_C=5mA	700	1100		MHz
Output Capacitance	Cob	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

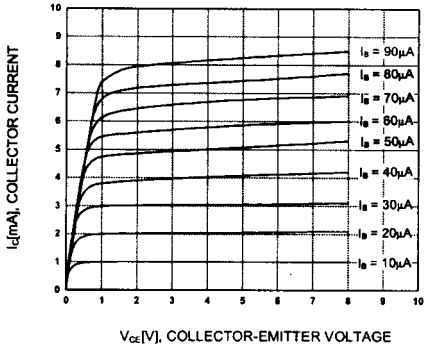

Figure 1. Static Characteristic

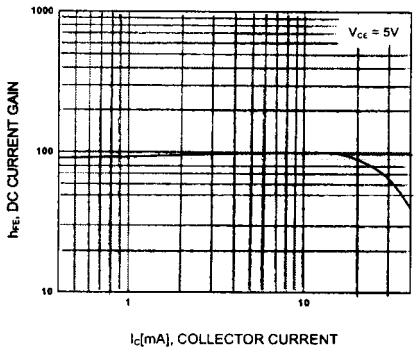

Figure 2. DC current Gain

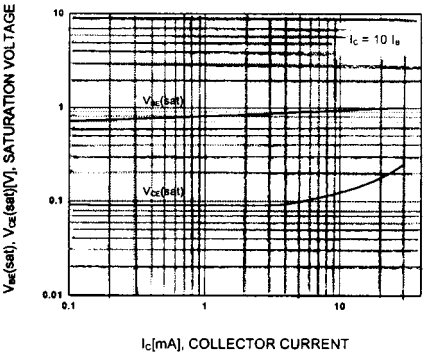

Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

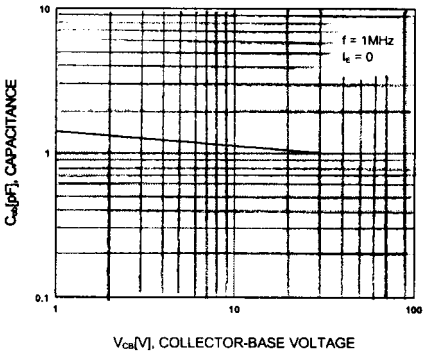

Figure 4. Output Capacitance

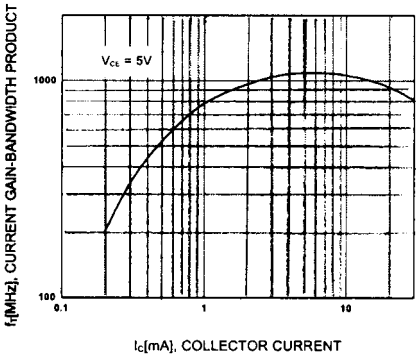

Figure 5. Current Gain Bandwidth Product