



WBFBP-03B Plastic-Encapsulate Transistors

TV9018NND03 TRANSISTOR

DESCRIPTION

NPN Epitaxial Silicon Transistor

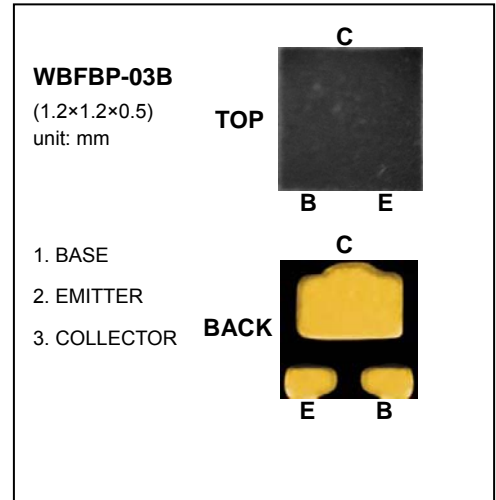
FEATURES

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

APPLICATION

AM/FM Amplifier, Local Oscillator of FM/VHF Tuner
For portable equipment:(i.e. Mobile phone,MP3, MD,CD-ROM, DVD-ROM,Note book PC, etc.)

MARKING: J8



MAXIMUM RATINGS $T_A=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	15	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	50	mA
P_C	Collector Dissipation	150	mW
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55-150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ\text{C}$ unless otherwise specified)

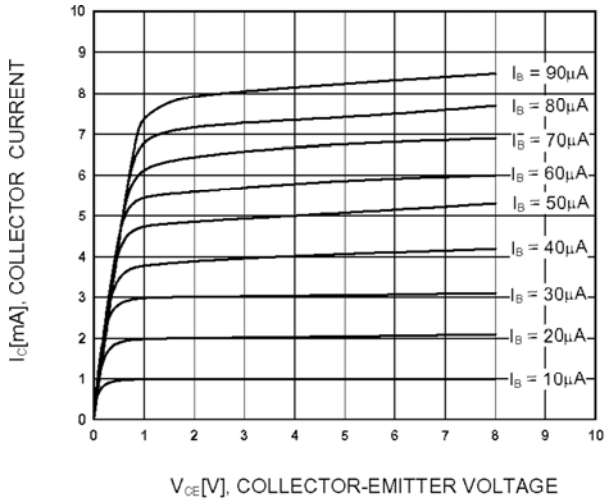
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	15			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=12\text{V}, I_E=0$			0.05	μA
Collector cut-off current	I_{CEO}	$V_{CE}=12\text{V}, I_B=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=3\text{V}, I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=5\text{V}, I_C=1\text{mA}$	70		190	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			1.4	V
Transition frequency	f_T	$V_{CE}=5\text{V}, I_C=5\text{mA}$ $f=400\text{MHz}$	600	1100		MHz
Collector output capacitance	C_{obo}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$			2	pF

CLASSIFICATION OF h_{FE}

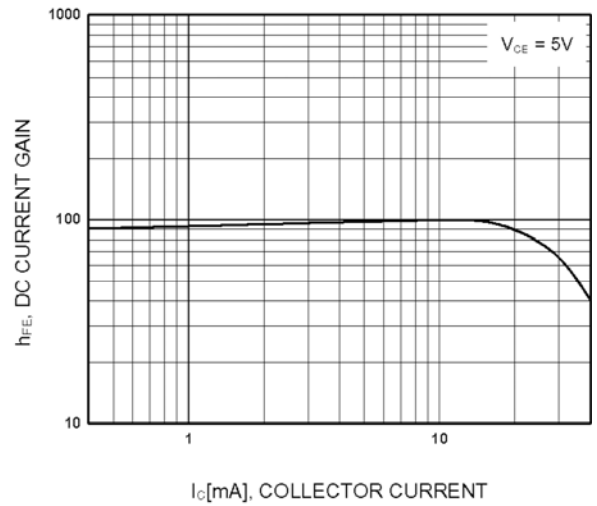
Rank	L	H
Range	70-105	105-190

Typical Characteristics

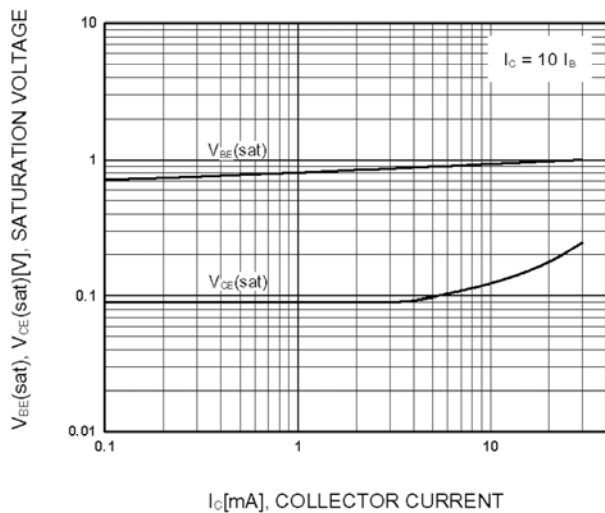
TV9018NND03



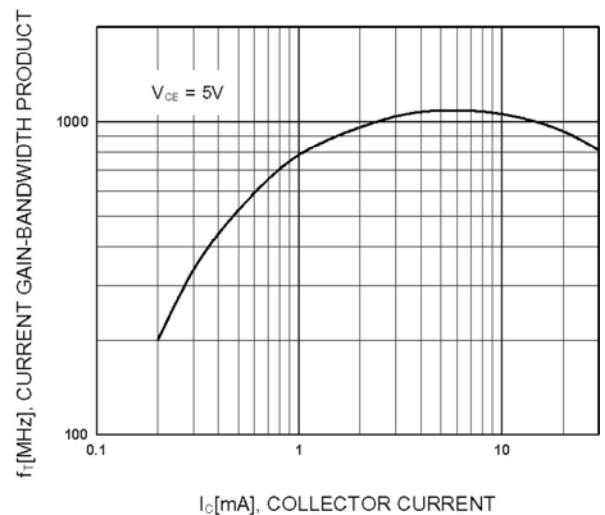
Static Characteristic



DC Current Gain



**Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage**



Current Gain Bandwidth Product