



WBFBP-03B Plastic-Encapsulate Transistors

TPC2715NND03 TRANSISTOR

DESCRIPTION

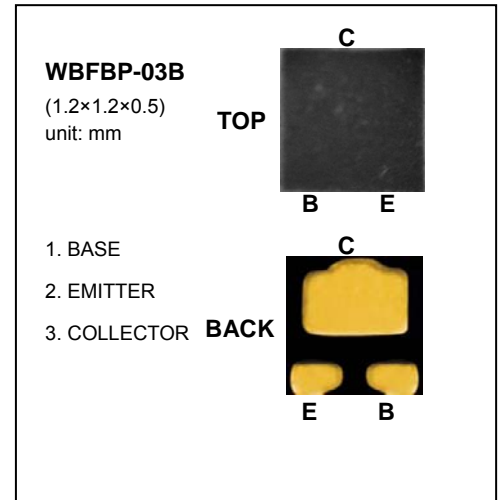
NPN Epitaxial planar Silicon Transistor

FEATURES

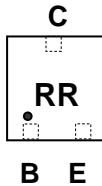
High power gain: $G_{pe}=27\text{dB}(f=10.7\text{MHz})$
 Recommended for FM IF, OSC Stage and AM CONV. IF Stage

APPLICATION

High Frequency amplifier
 For portable equipment: (i.e. Mobile phone, MP3, MD, CD-ROM, DVD-ROM, Note book PC, etc.)



MARKING: RR,RO,RY



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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	35	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	4	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	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	35			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	4			V
Collector cut-off current	I_{CBO}	$V_{CB}=35\text{V}, I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=12\text{V}, I_C=2\text{mA}$	40		240	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			1	V
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=1\text{mA}$	100		400	MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$			3.2	pF
Collector- Base time constant	$C_{c.rbb'}$	$V_{CE}=10\text{V}, I_C=1\text{mA}, f=30\text{MHz}$			50	ps
Power Gain	G_p	$V_{CE}=6\text{V}, I_C=1\text{mA}, f=10.7\text{MHz}$	27		33	dB

CLASSIFICATION OF h_{FE}

Rank	R	O	Y
Range	40-80	70-140	120-240
Marking	RR	RO	RY

Typical Characteristics

TPC2715NND03

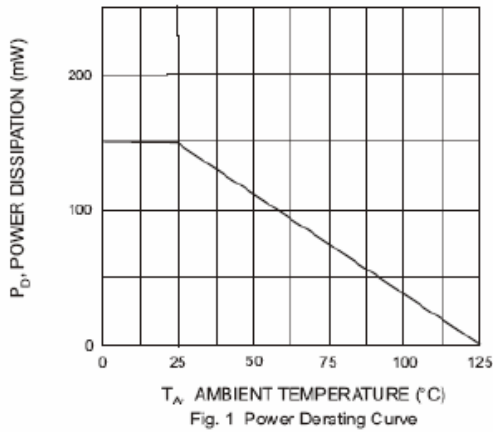
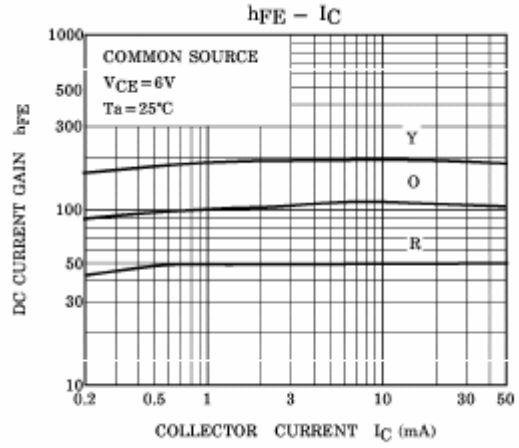
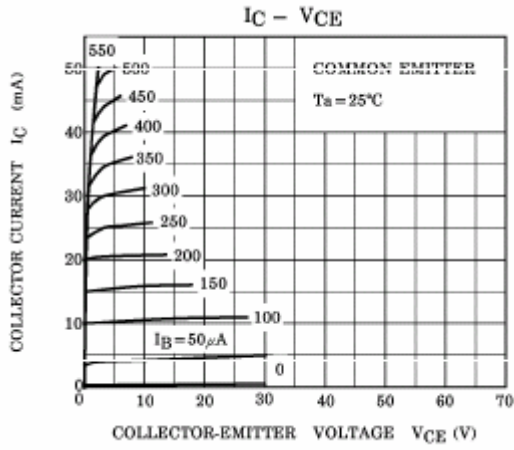


Fig. 1 Power Derating Curve