

SEMICONDUCTOR TECHNICAL DATA

KTC2804

EPITAXIAL PLANAR NPN TRANSISTOR

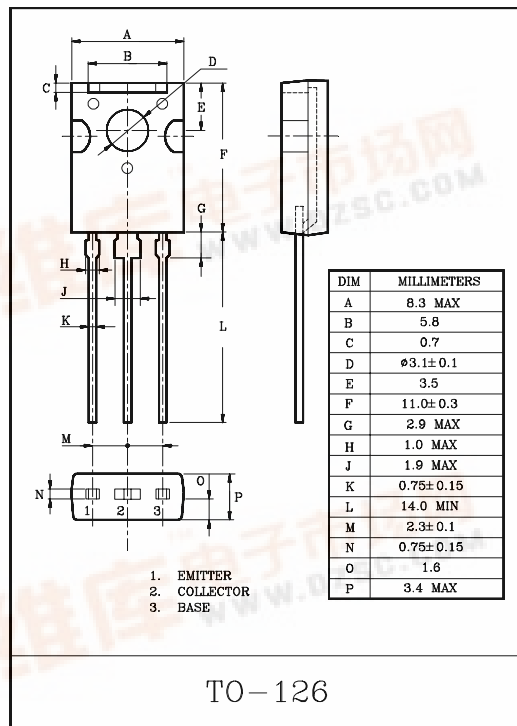
AUDIO AMPLIFIER, VOLTAGE REGULATOR
DC-DC CONVERTER, RELAY DRIVER

FEATURES

- Low Saturation Voltage.
: $V_{CE(sat)} \leq 0.8V$ ($I_C=2A, I_B=0.2A$)
- Excellent h_{FE} Linearity and high h_{FE} .
: $h_{FE}: 70 \sim 240$ ($V_{CE}=2V, I_C=0.5A$)

MAXIMUM RATINGS ($T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	DC	I_C	3 A
Emitter Current		I_E	3 A
Collector Power Dissipation	$T_a=25^\circ C$	P_C	1.5 W
	$T_c=25^\circ C$	P_C	10 W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$



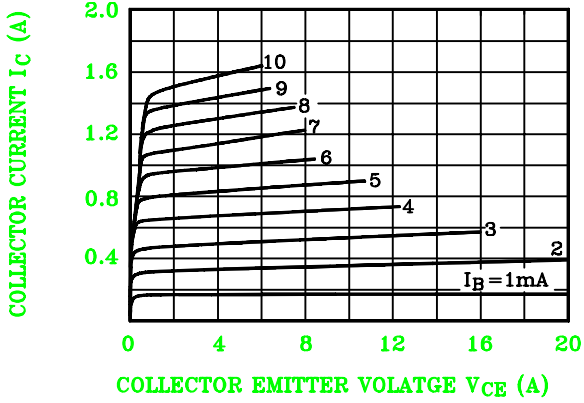
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=20V, I_E=0$	-	-	1.0	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5V, I_C=0$	-	-	1.0	μA
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE}=2.0V, I_C=0.5A$	70	-	240	
	$h_{FE(2)}$	$V_{CE}=2.0V, I_C=2.5A$	25	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2.0A, I_B=0.2A$	-	0.3	0.8	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=2V, I_B=0.5A$	-	0.75	1.0	V
Gain Bandwidth Product	f_T	$V_{CE}=2V, I_C=0.5A$	-	100	-	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$	-	35	-	pF

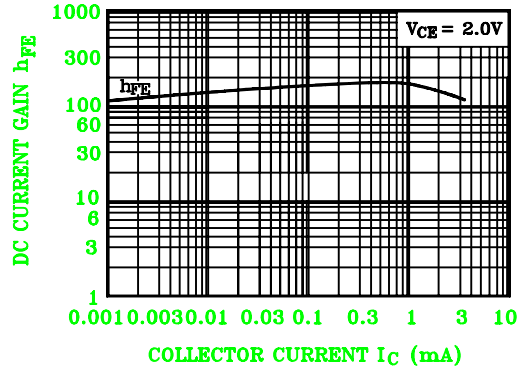
Note : $h_{FE(1)}$ Classification O:70~140 , Y:120~240

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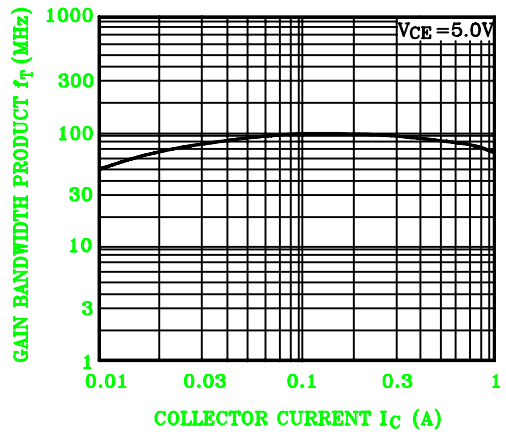
$I_C - V_{CE}$



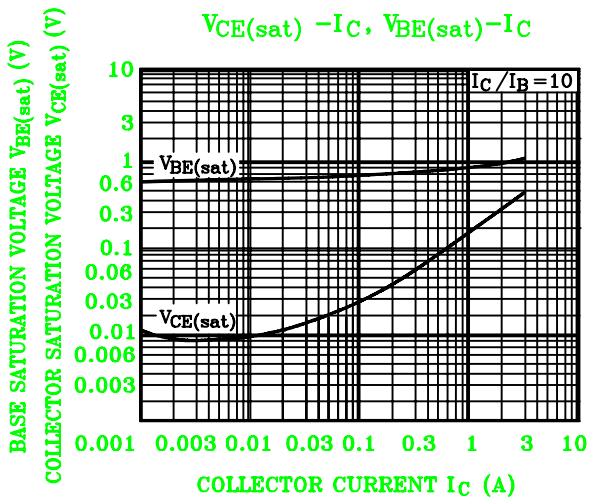
$h_{FE} - I_C$



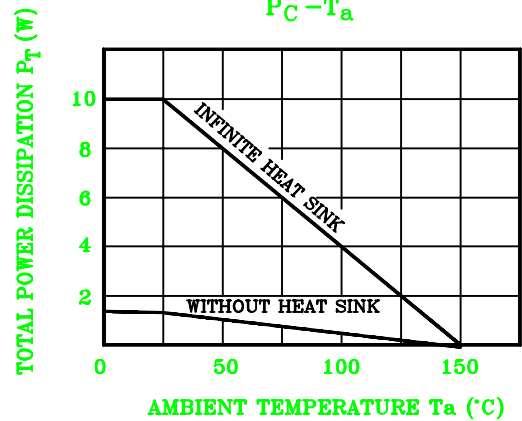
$f_T - I_C$



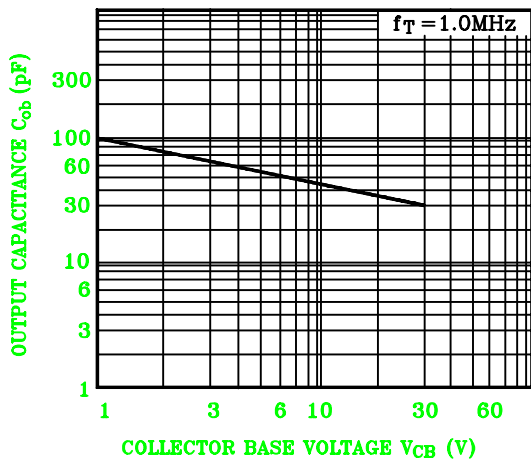
$V_{CE(sat)} - I_C, V_{BE(sat)} - I_C$



$P_C - T_a$



$C_{ob} - V_{CB}$



SAFE OPERATING AREA

