SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

TEC9014

AUDIO FREQUENCY GENERAL PURPOSE AMPLIFIER APPLICATIONS.
DRIVER STAGE AMPLIFIER APPLICATIONS.

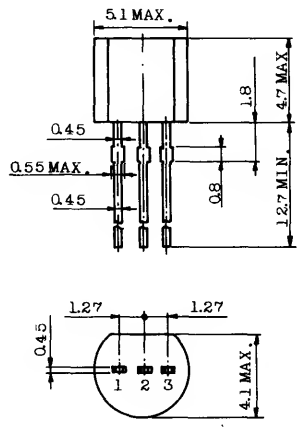
FEATURES:

. High Voltage and High Current
: V_{CEO}=50V(Min.), I_C=150mA(Max.)

. Low Noise : NF=0.9dB(Typ.) at f=1kHz

. Complementary to TEC9015

Unit in mm



1. EMITTER
2. BASE
3. COLLECTOR

JEDEC	TO-92
EIAJ	SC-43
TOSHIBA	2-5F1F

Weight : 0.21g

MAXIMUM RATINGS (Ta=25°C)

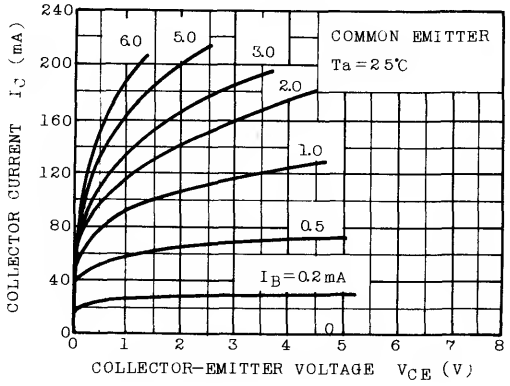
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	150	mA
Base Current Range	I_B	50	mA
Collector Power Dissipation	P_C	625	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

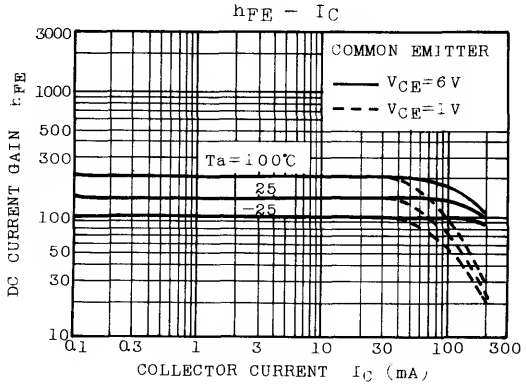
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB}=50V, I_E=0	-	-	50	nA
Emitter Cut-off Current	I_{EBO}	V_{EB}=5V, I_C=0	-	-	50	nA
DC Current Gain	h_{FE} (Note)	V_{CE}=5V, I_C=1mA	60	-	1000	-
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=1mA, I_B=0	50	-	-	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=100mA, I_B=10mA	-	0.1	0.25	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=100mA, I_B=10mA	-	-	1.0	V
Transition Frequency	f_T	V_{CE}=5V, I_E=10mA	150	-	-	MHz
Collector Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz	-	2.0	3.5	pF
Base-Emitter Voltage	V_{BE}	V_{CE}=5V, I_C=2mA	0.58	0.63	0.70	V
Noise Figure	NF	V_{CE}=5V, I_C=0.2mA, R_g=2kΩ, f=1kHz	-	0.9	10	dB

Note : h_{FE} Classification A : 60~150, B : 100~300, C : 200~600 D : 400~1000

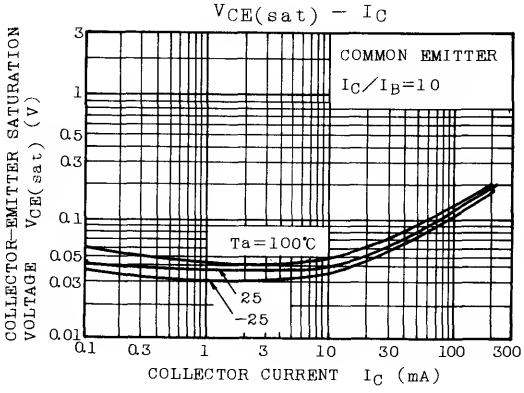
$I_C - V_{CE}$



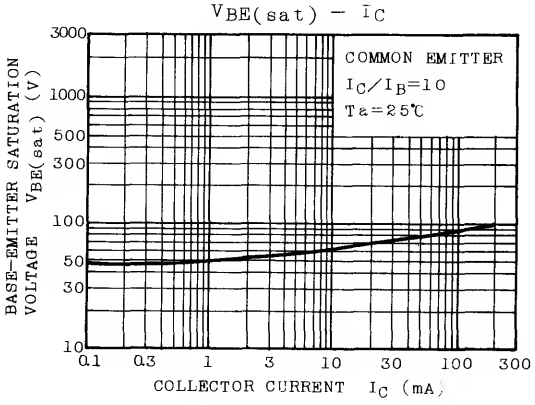
$h_{FE} - I_C$



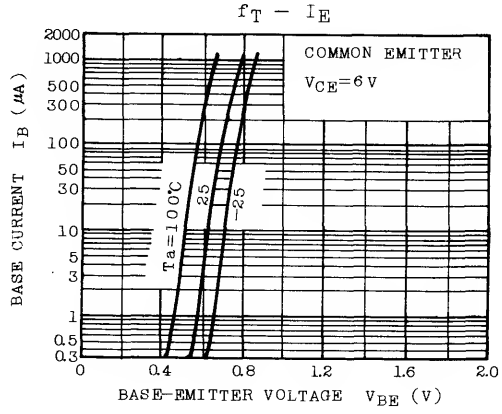
$V_{CE(sat)} - I_C$



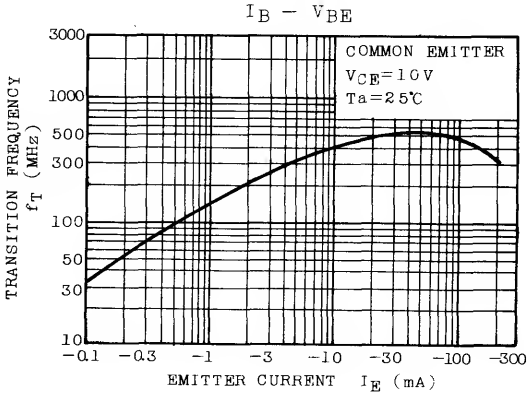
$V_{BE(sat)} - I_C$



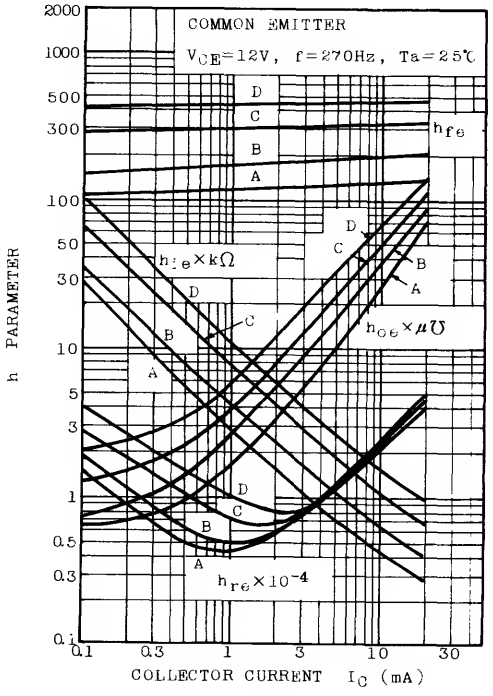
$f_T - I_E$



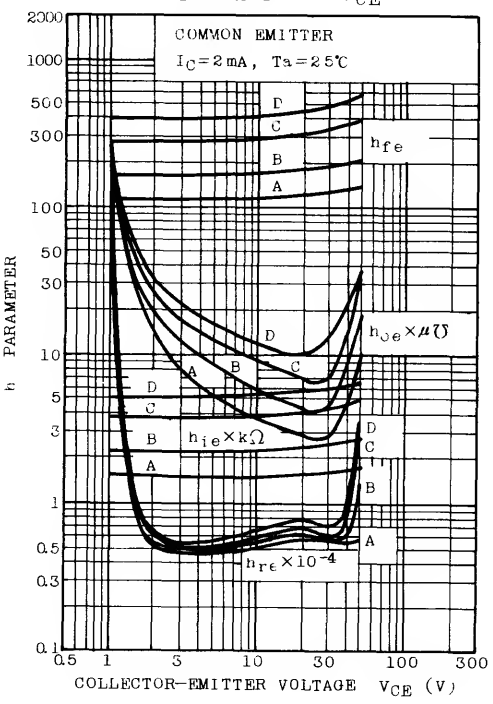
$I_B - V_{BE}$



h PARAMETER – I_C



h PARAMETER – V_{CE}



P_C – Ta