2SA1225 TRANSISTOR (PNP)

1.BASE
2.COLLECTOR
3.EMITTER

TO-252

FEATURES

- High Transition Frequency
- Complementary to 2SC2983

APPLICATIONS

- Power Amplifier Applications
- Driver Stage Amplifier Applications

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-160	V
V_{CEO}	Collector-Emitter Voltage	-160	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-1.5	A
P_C	Collector Power Dissipation	1	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~150	℃

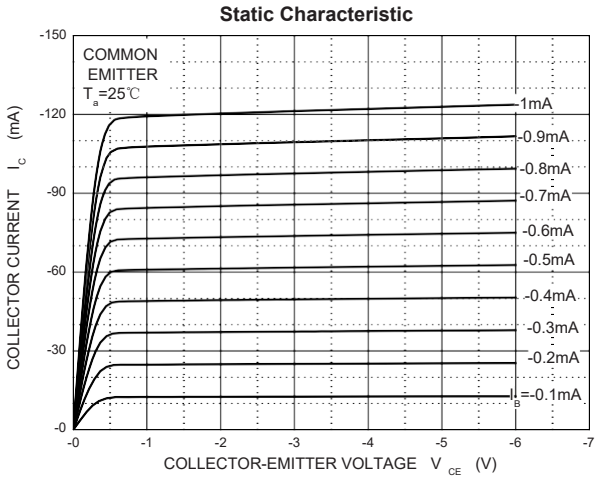
ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

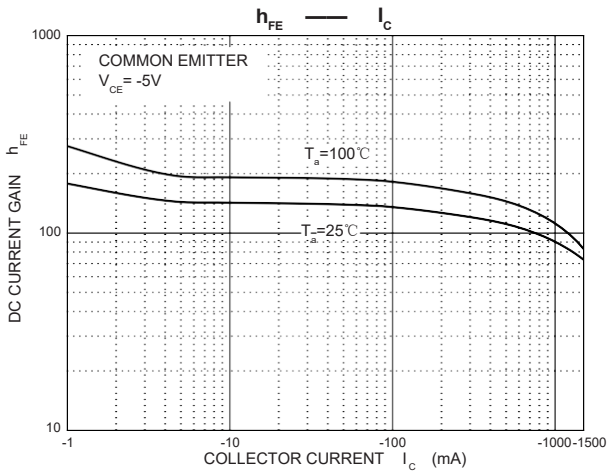
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-1mA ,I_E=0	-160			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$*	I_C=-10mA, I_B=0	-160			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-1mA,I_C=0	-5			V
Collector cut-off current	I_{CBO}	V_{CB}=160V,I_E=0			-0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=-5V,I_C=0			-0.1	μA
DC current gain	h_{FE}	V_{CE}=-5V, I_C=-0.1A	70		240	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-0.5A,I_B=-50mA			-1.5	V
Base-emitter voltage	V_{BE}	V_{CE}=-5V, I_C=-0.5A			-1	V
Transition frequency	f_T	V_{CE}=-10V ,I_C=-100mA		100		MHz
Collector output capacitance	C_{ob}	V_{CB}=-10V ,I_E=0,f=1MHz		30		pF

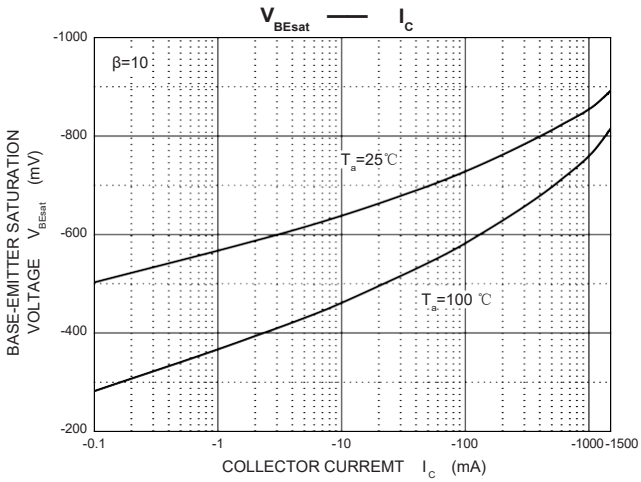
* Pulse test

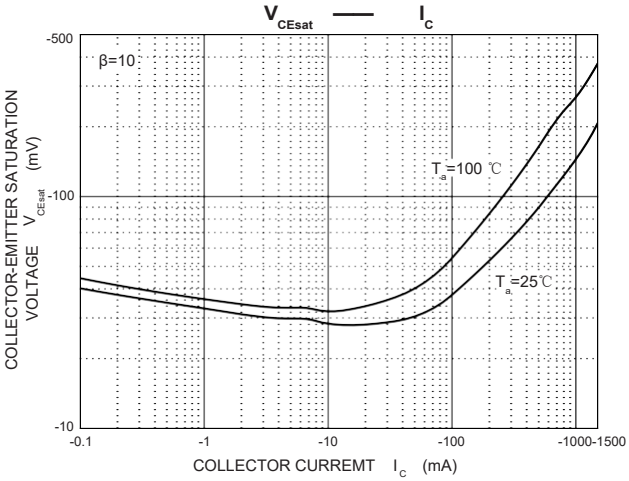
CLASSIFICATION OF h_{FE}

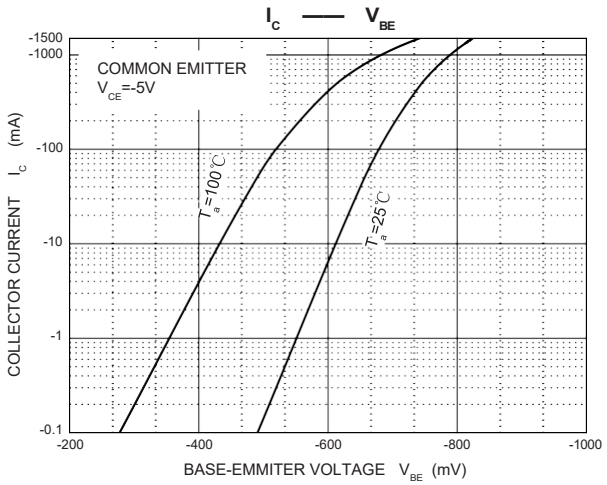
Rank	O	Y
Range	70-140	120-240

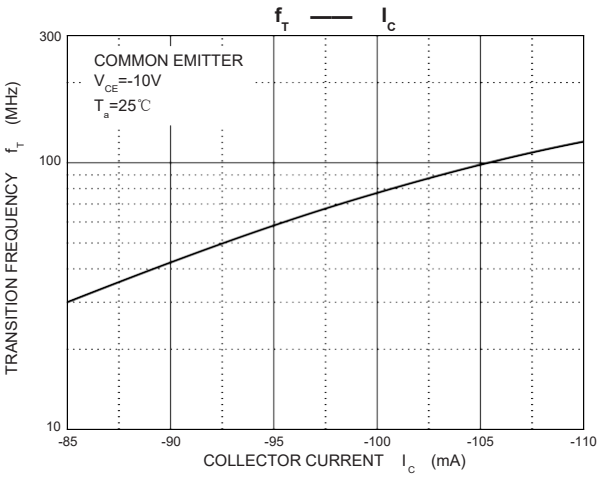

Static Characteristic
COMMON EMITTER
Ta=25℃
COLLECTOR CURRENT Ic (mA)
COLLECTOR-EMITTER VOLTAGE VCE (V)
-1mA
-0.9mA
-0.8mA
-0.7mA
-0.6mA
-0.5mA
-0.4mA
-0.3mA
-0.2mA
IB=-0.1mA

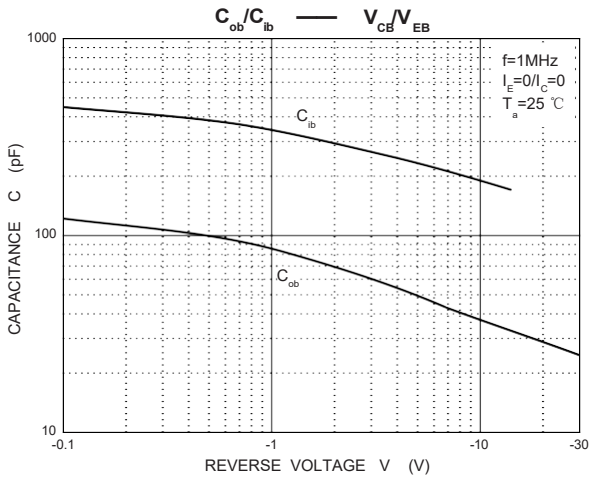

hFE — Ic
COMMON EMITTER
VCE= -5V
Ta=100℃
Ta=25℃
DC CURRENT GAIN hFE
COLLECTOR CURRENT Ic (mA)

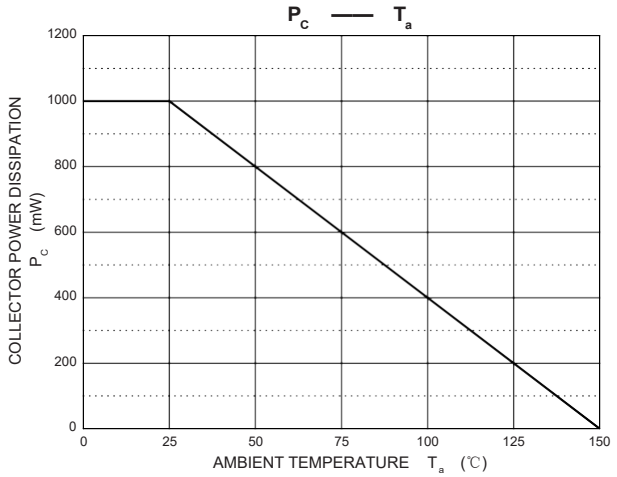

VBEsat — Ic
β=10
Ta=25℃
Ta=100 ℃
BASE-EMITTER SATURATION VOLTAGE VBEsat (mV)
COLLECTOR CURREMT Ic (mA)


VCEsat — Ic
β=10
Ta=100 ℃
Ta=25℃
COLLECTOR-EMITTER SATURATION VOLTAGE VCEsat (mV)
COLLECTOR CURREMT Ic (mA)


Ic — VBE
COMMON EMITTER
VCE=-5V
Ta=100℃
Ta=25℃
COLLECTOR CURRENT Ic (mA)
BASE-EMMITER VOLTAGE VBE (mV)


fT — Ic
COMMON EMITTER
VCE=-10V
Ta=25℃
TRANSITION FREQUENCY fT (MHz)
COLLECTOR CURRENT Ic (mA)


Cob/Cib — VCB/VEB
f=1MHz
IE=0/IC=0
Ta=25 ℃
Cib
Cob
CAPACITANCE C (pF)
REVERSE VOLTAGE V (V)


PC — Ta
COLLECTOR POWER DISSIPATION PC (mW)
AMBIENT TEMPERATURE Ta (℃)