D882 TRANSISTOR（NPN）

1.BASE
2.COLLECTOR
3.EMITTER

SOT-223

FEATURES

- Power Dissipation:1.5W
- Low Collector-emitter Saturation Voltage

MAXIMUM RATINGS(T_a=25℃ unless otherwise noted)

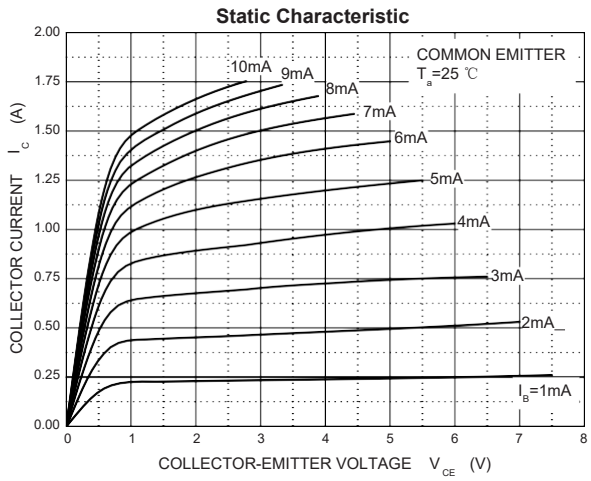
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	3	A
P_C	Collector Dissipation	1.25	W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	℃

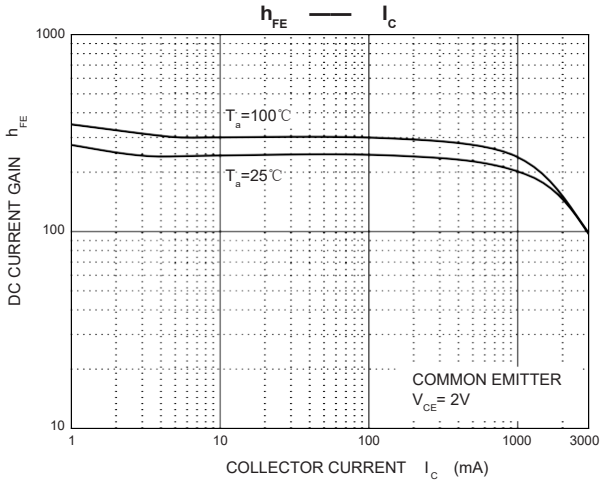
ELECTRICAL CHARACTERISTICS（Ta=25℃ unless otherwise specified）

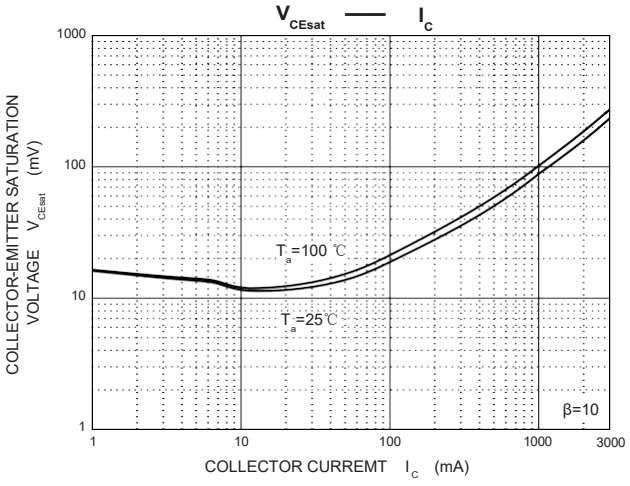
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	Ic=100μA, I_E=0	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C= 10 mA, I_B=0	30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E= 100 μA, I_C=0	6			V
Collector cut-off current	I_{CBO}	V_{CB}= 40 V, I_E=0			1	μA
Collector cut-off current	I_{CEO}	V_{CE}=30 V, I_B=0			10	μA
Emitter cut-off current	I_{EBO}	V_{EB}=6V, I_C=0			1	μA
DC current gain	$h_{FE(1)}$	V_{CE}= 2V, I_C= 1A	60		400	
	$h_{FE(2)}$	V_{CE}=2V, I_C= 100mA	32			
Collector-emitter saturation voltage	V_{CE}(sat)	I_C=2A, I_B= 0.2A			0.5	V
Base-emitter saturation voltage	V_{BE}(sat)	I_C=2A, I_B= 0.2A			1.5	V
Transition frequency	f_T	V_{CE}= 5V, I_C=0.1A f = 10MHz	50			MHz

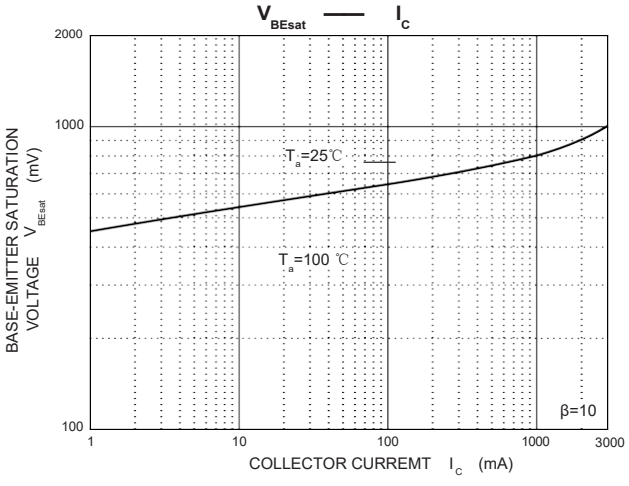
CLASSIFICATION OF $h_{FE(1)}$

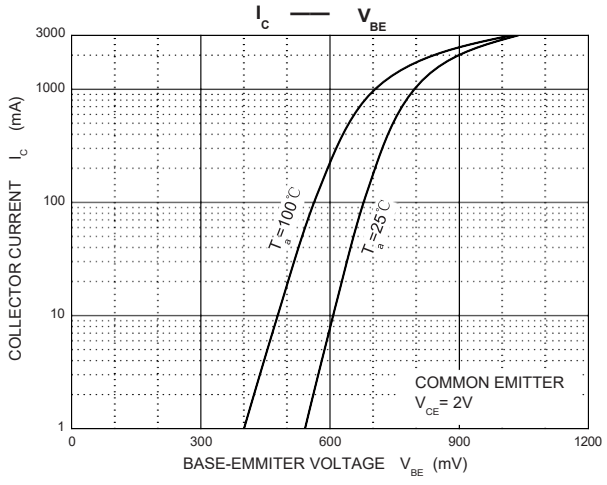
Rank	R	O	Y	GR
Range	60-120	100-200	160-320	200-400

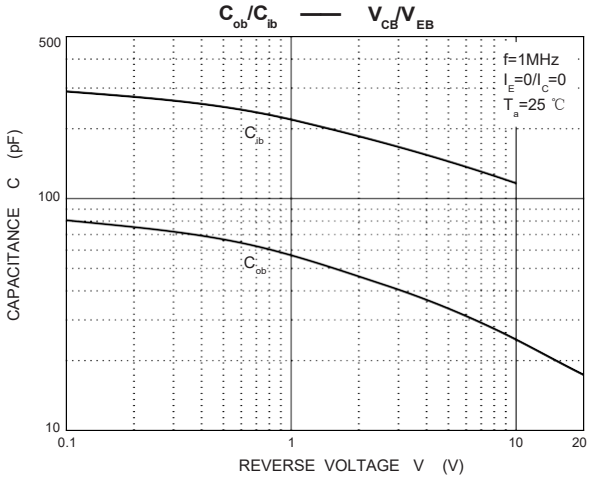

Static Characteristic
COMMON EMITTER
Ta=25 ℃
10mA
9mA
8mA
7mA
6mA
5mA
4mA
3mA
2mA
IB=1mA
COLLECTOR CURRENT IC (A)
COLLECTOR-EMITTER VOLTAGE VCE (V)

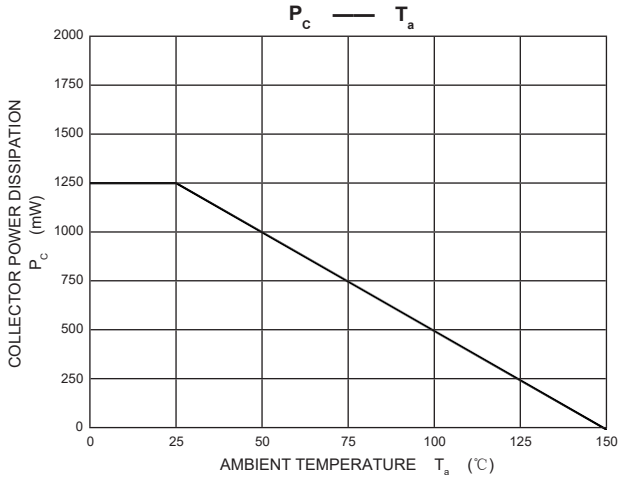

hFE —— IC
Ta=100℃
Ta=25℃
COMMON EMITTER
VCE= 2V
DC CURRENT GAIN hFE
COLLECTOR CURRENT IC (mA)


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


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


IC —— VBE
Ta=100℃
Ta=25℃
COMMON EMITTER
VCE= 2V
COLLECTOR CURRENT IC (mA)
BASE-EMMITER VOLTAGE VBE (mV)


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 (℃)