2SD882 TRANSISTOR (NPN)

TO-220C

1.BASE
2.COLLECTOR
3.EMITTER

FEATURES

- Power Dissipation

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

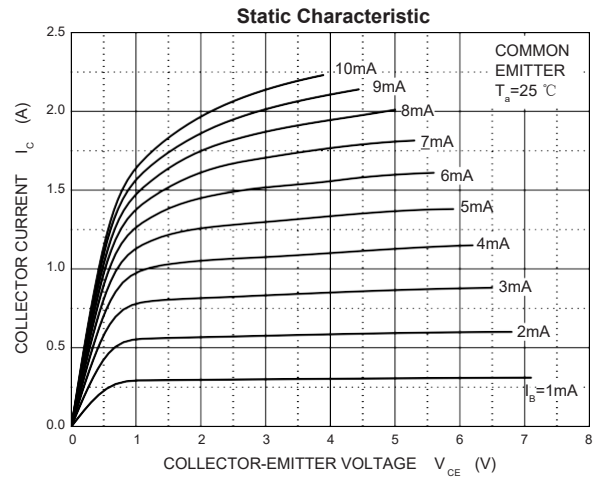
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	3	A
P_C	Collector Power Dissipation	2	W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55-150	℃

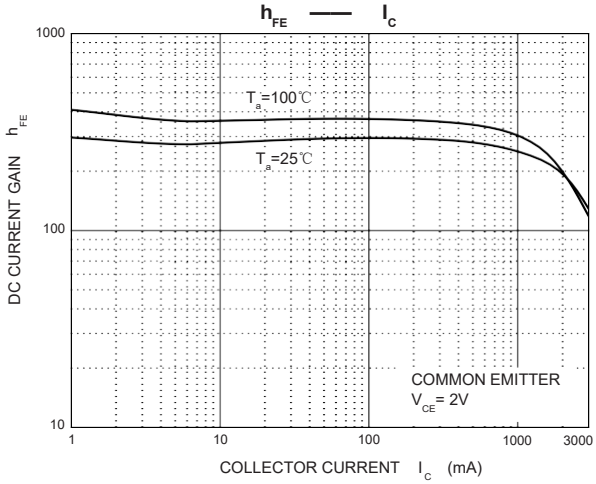
ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

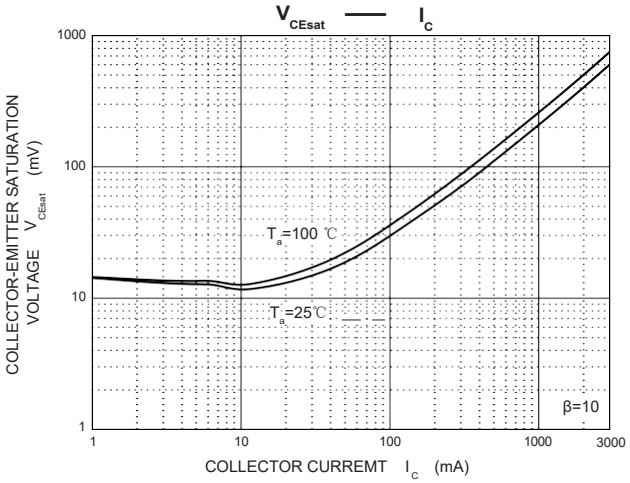
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V(BR)_{CBO}$	I_C = 100μA, I_E=0	40			V
Collector-emitter breakdown voltage	$V(BR)_{CEO}$	I_C = 10mA, I_B=0	30			V
Emitter-base breakdown voltage	$V(BR)_{EBO}$	I_E= 100μA, I_C=0	6			V
Collector cut-off current	I_{CBO}	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}= 6 V, I_C=0			1	μA
DC current gain	h_{FE}	V_{CE}= 2 V, I_C= 1A	60		400	
Collector-emitter saturation voltage	$V_{CE\ (sat)}$	I_C= 2A, I_B= 0.2 A			0.5	V
Base-emitter saturation voltage	$V_{BE\ (sat)}$	I_C= 2A, I_B= 0.2 A			1.5	V
Transition frequency	f_T	V_{CE}= 5V, I_C=0.1A f =10MHz		90		MHz

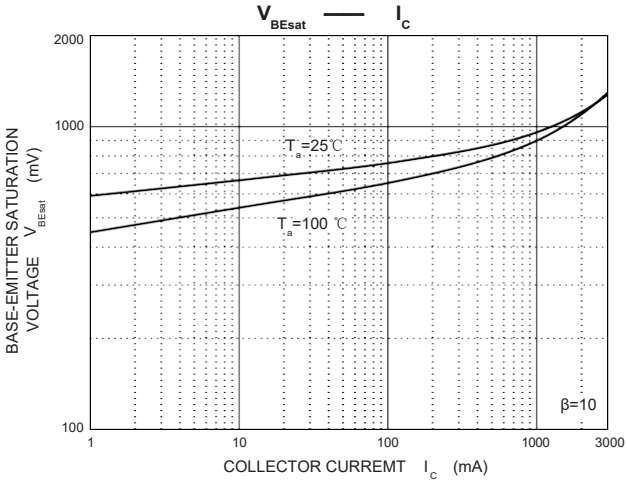
CLASSIFICATION OF h_{FE}

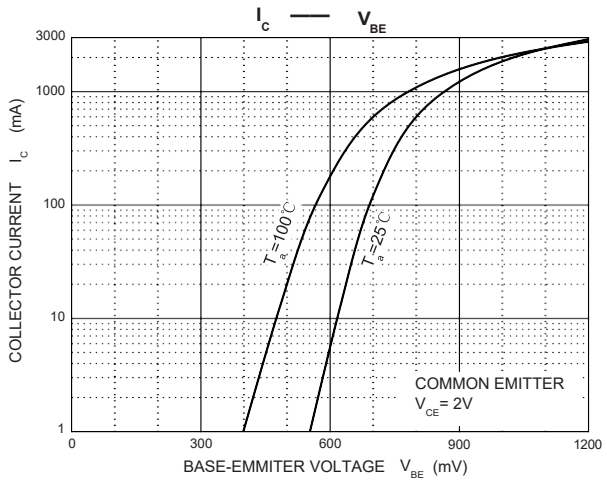
Rank	R	O	Y	GR
Range	60-120	100-200	160-320	200-400

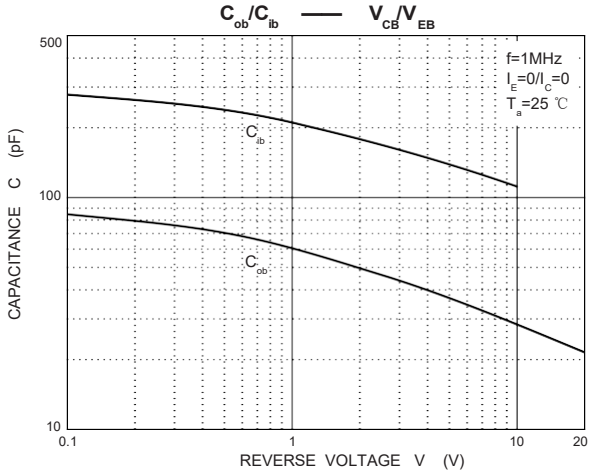

Static Characteristic
COMMON EMITTER
Ta=25 ℃
10mA
9mA
8mA
7mA
6mA
5mA
4mA
3mA
2mA
IB=1mA
COLLECTOR CURRENT IC (A)
COLLECTOR-EMITTER VOLTAGE VCE (V)

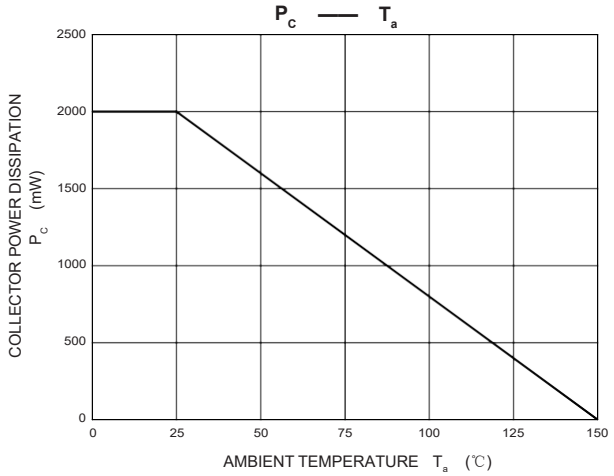

hFE — IC
Ta=100℃
Ta=25℃
COMMON EMITTER
VCE= 2V
DC CURRENT GAIN hFE
COLLECTOR CURRENT IC (mA)


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 (℃)