2SD882RT

DATASHEET

Specification Revision History:

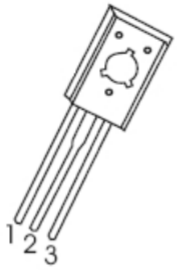
Version	Date	Description
V1.0	2020/08	New
V1.1	2021/05	Modify Ordering Information
V1.2	2023/02	Modify Ordering Information
V1.3	2025/05	Add application precautions and overall typesetting.

FEATURES

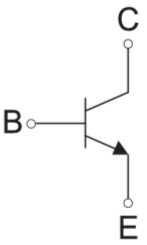
※ TRANSISTOR

※ Low Speed Switching

APPEARANCE & PINNING



1. EMITTER
2. COLLECTOR
3. BASE



TO-126

ORDERING INFORMATION

Product Model	Package Type	Packing	Packing Qty
2SD882RT	TO-126	BULK	200PCS/BAG

MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-30	V
V_{CEO}	Collector-Emitter Voltage	-30	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_c	Collector Current-Continuous	-1.5	A
P_C	Collector Power Dissipation	1.25	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	100	°C/W
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55-150	°C

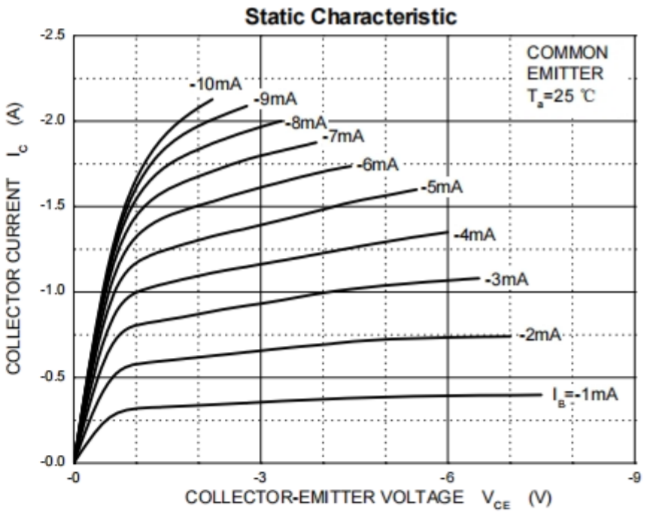
ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specified)

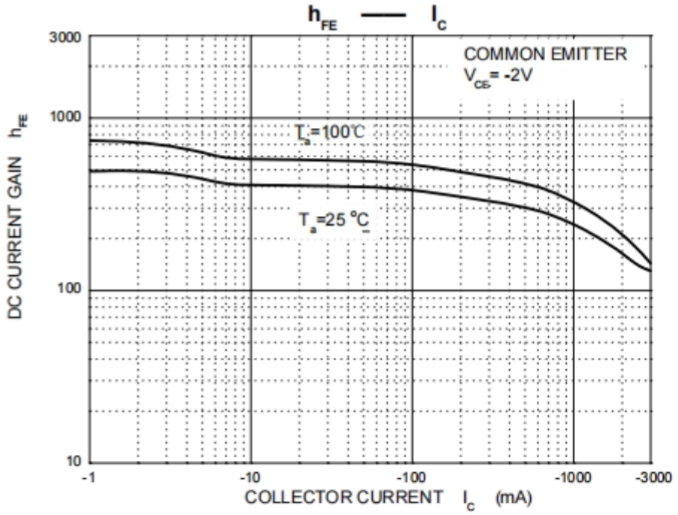
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-100μA ,I_E =0	-30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C= -10mA , I_B=0	-30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E= -100μA,I_C=0	-6			V
Collector cut-off current	I_{CBO}	V_{CB}= -30V, I_E=0			-1	μA
Collector cut-off current	I_{CEO}	V_{CE}=-30V, I_B=0			-10	μA
Emitter cut-off current	I_{EBO}	V_{EB}=-6V, I_C=0			-1	μA
DC current gain	h_{FE}	V_{CE}= -2V, I_C= -1A	60		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-1.5A,I_B = -0.2A			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=-1.5A,I_B = -0.2A			-1.5	V
Transition frequency	f_T	V_{CE}= -5V, I_C=-0.1A f=10MHz	50	80		MHz

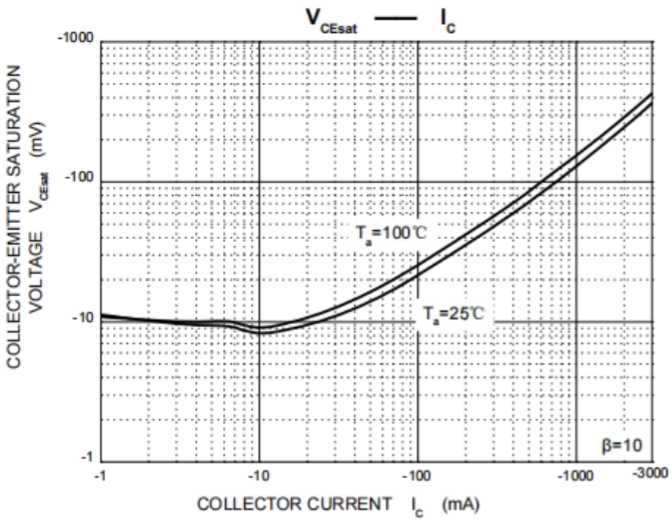
CLASSIFICATION OF hFE

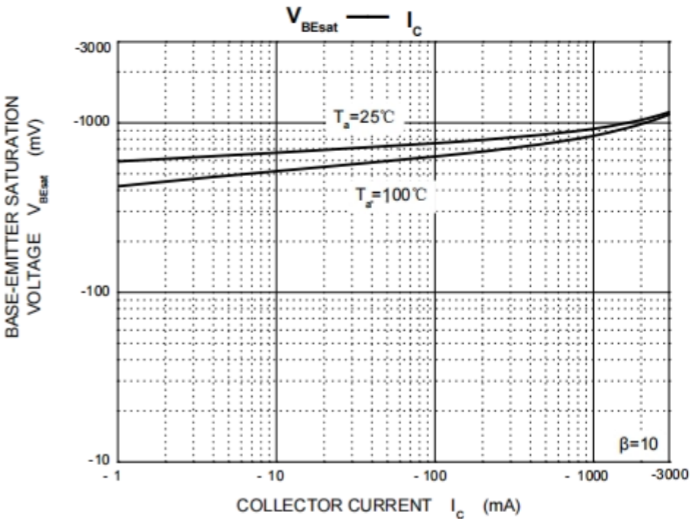
Rank	R	O	Y	GR
Range	60-120	100-200	160-320	200-400

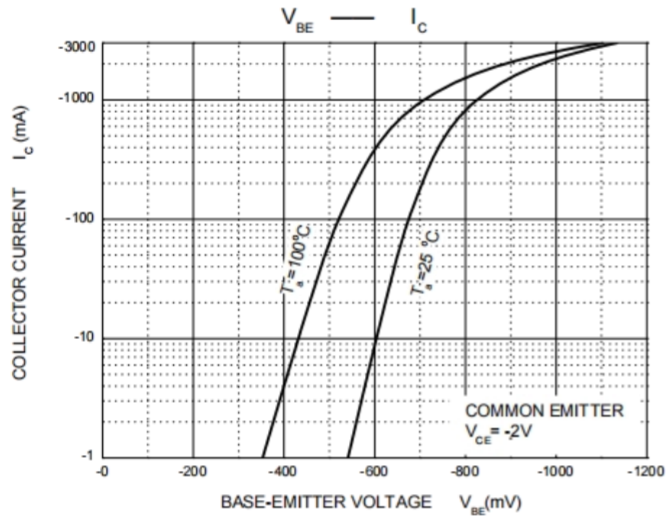
CLASSIFICATION OF hFE

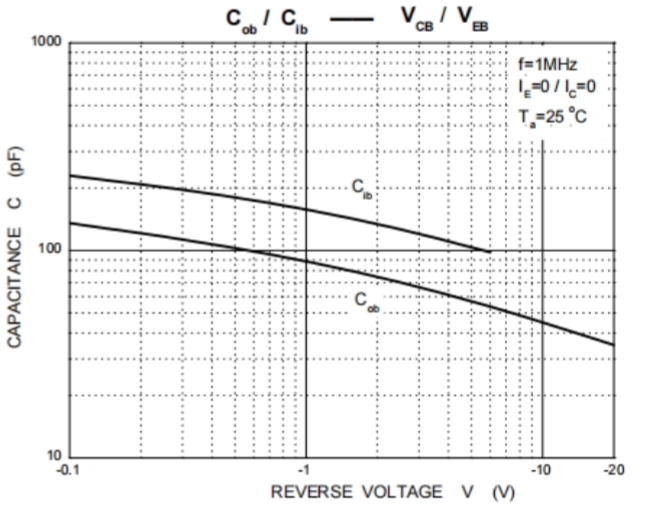


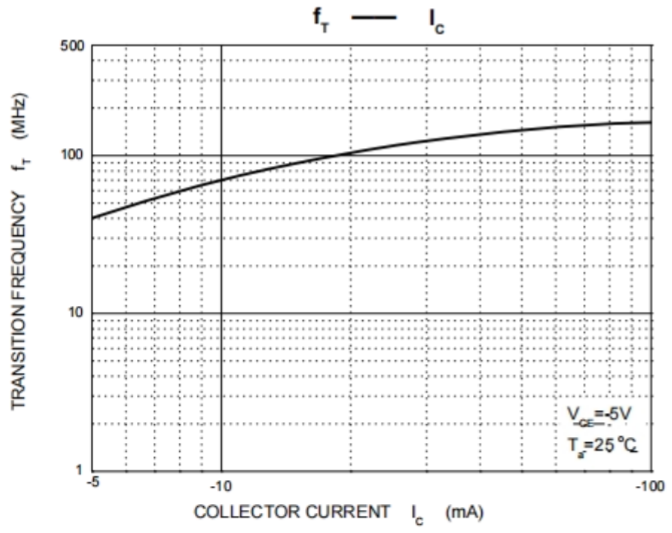


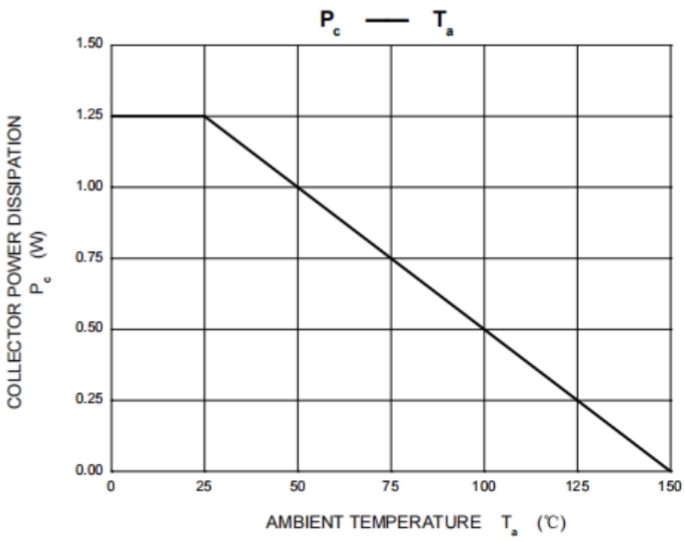

V_{CEsat} — I_C
COLLECTOR-EMITTER SATURATION VOLTAGE V_{CEsat} (mV)
-1000
-100
-10
-1
T_a=100℃
T_a=25℃
β=10
-1
-10
-100
-1000
-3000
COLLECTOR CURRENT I_C (mA)


V_{BEsat} — I_C
BASE-EMITTER SATURATION VOLTAGE V_{BEsat} (mV)
-3000
-1000
-100
-10
T_a=25℃
T_a=100℃
β=10
- 1
- 10
- 100
- 1000
-3000
COLLECTOR CURRENT I_C (mA)


V_{BE} — I_C
COLLECTOR CURRENT I_C (mA)
-3000
-1000
-100
-10
-1
T_a=100℃
T_a=25 ℃
COMMON EMITTER
V_{CE}= -2V
-0
-200
-400
-600
-800
-1000
-1200
BASE-EMITTER VOLTAGE V_{BE}(mV)


C_{ob} / C_{ib} — V_{CB} / V_{EB}
CAPACITANCE C (pF)
1000
100
10
f=1MHz
I_E=0 / I_C=0
T_a=25 °C
C_{ib}
C_{ob}
-0.1
-1
-10
-20
REVERSE VOLTAGE V (V)


f_T — I_C
TRANSITION FREQUENCY f_T (MHz)
500
100
10
1
V_{CE}=-5V
T_a=25 ℃
-5
-10
-100
COLLECTOR CURRENT I_C (mA)


P_c — T_a
COLLECTOR POWER DISSIPATION P_c (W)
1.50
1.25
1.00
0.75
0.50
0.25
0.00
0
25
50
75
100
125
150
AMBIENT TEMPERATURE T_a (℃)

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