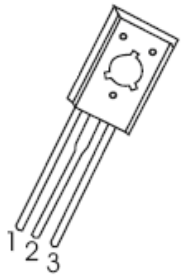
2SD669AL TRANSISTOR (NPN)

FEATURES

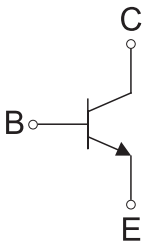
- Low Frequency Power Amplifier

TO – 126



1. EMITTER
2. COLLECTOR
3. BASE

Equivalent Circuit



MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	200	V
V_{CEO}	Collector-Emitter Voltage	170	V
V_{EBO}	Emitter-Base Voltage	6.5	V
I_C	Collector Current	1	A
P_C	Collector Power Dissipation	1	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	125	℃/W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	℃

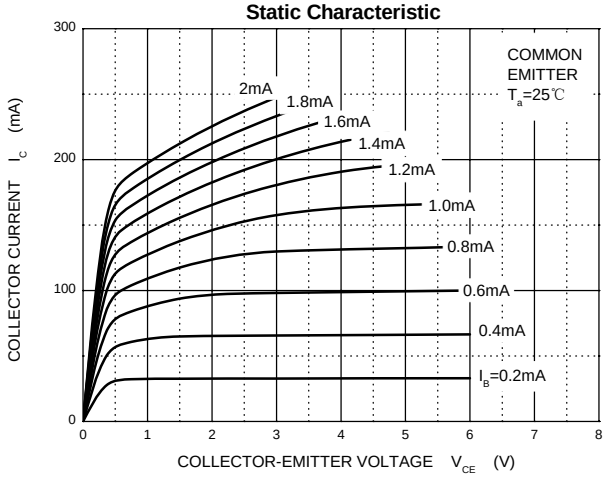
T_a=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA,I_E=0	200			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA,I_B=0	170			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E= 100μA,I_C=0	6.5			V
Collector cut-off current	I_{CBO}	V_{CB}=195V,I_E=0			1	μA
Collector cut-off current	I_{CEO}	V_{CE}=165V,I_B=0			2	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V,I_C=0			0.1	μA
DC current gain	$h_{FE(1)}$	V_{CE}=5V, I_C=0.15A	100		320	
	$h_{FE(2)}$	V_{CE}=5V, I_C=500mA	33			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=0.5A,I_B=0.05A			0.9	V
Base-emitter voltage	V_{BE}	V_{CE}=5V, I_C=0.15A			1.4	V
Collector output capacitance	C_{ob}	V_{CB}=10V,I_E=0, f=1MHz		14		pF
Transition frequency	f_T	V_{CE}=5V,I_C=150mA		140		MHz

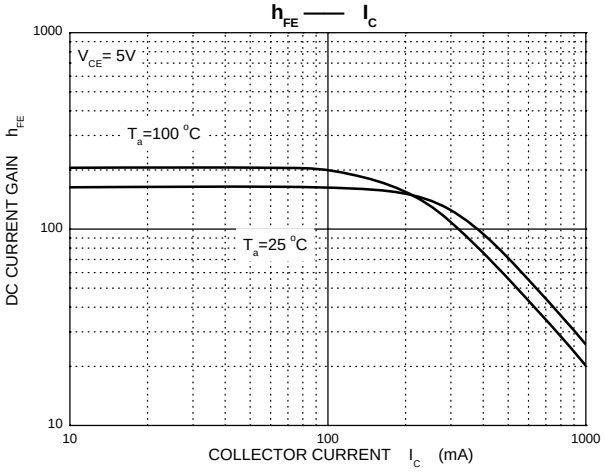
CLASSIFICATION of $h_{FE(1)}$

RANK	C	D
RANGE	100-200	160-320

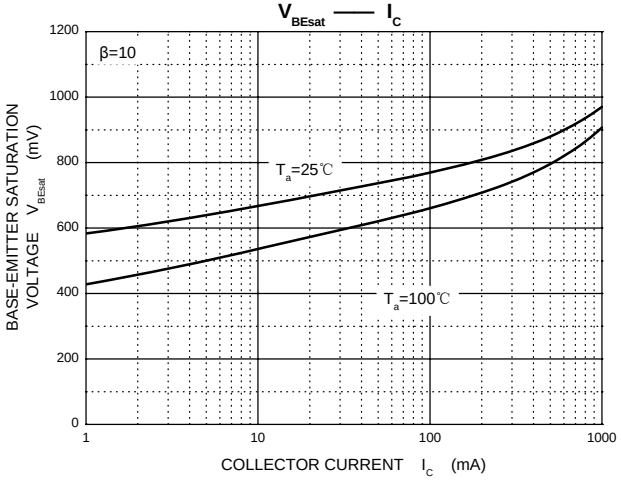
Static Characteristic



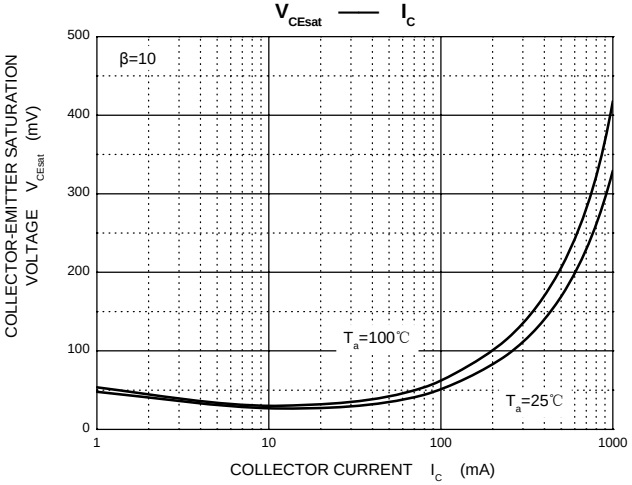
h_{FE} —— I_C



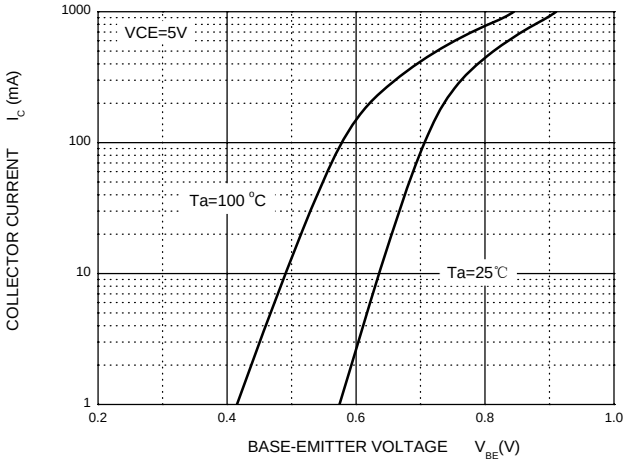
V_{BEsat} —— I_C



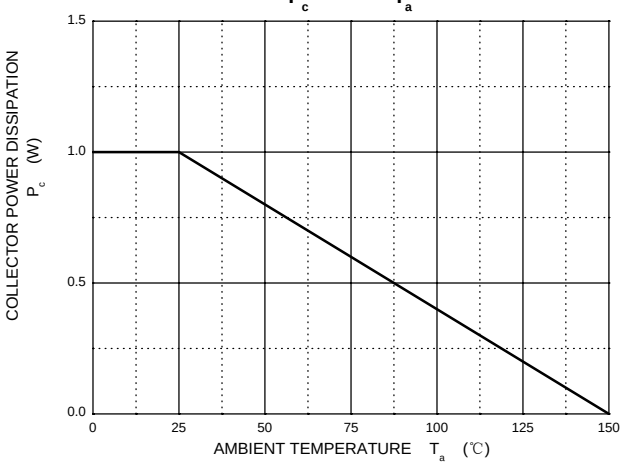
V_{CEsat} —— I_C

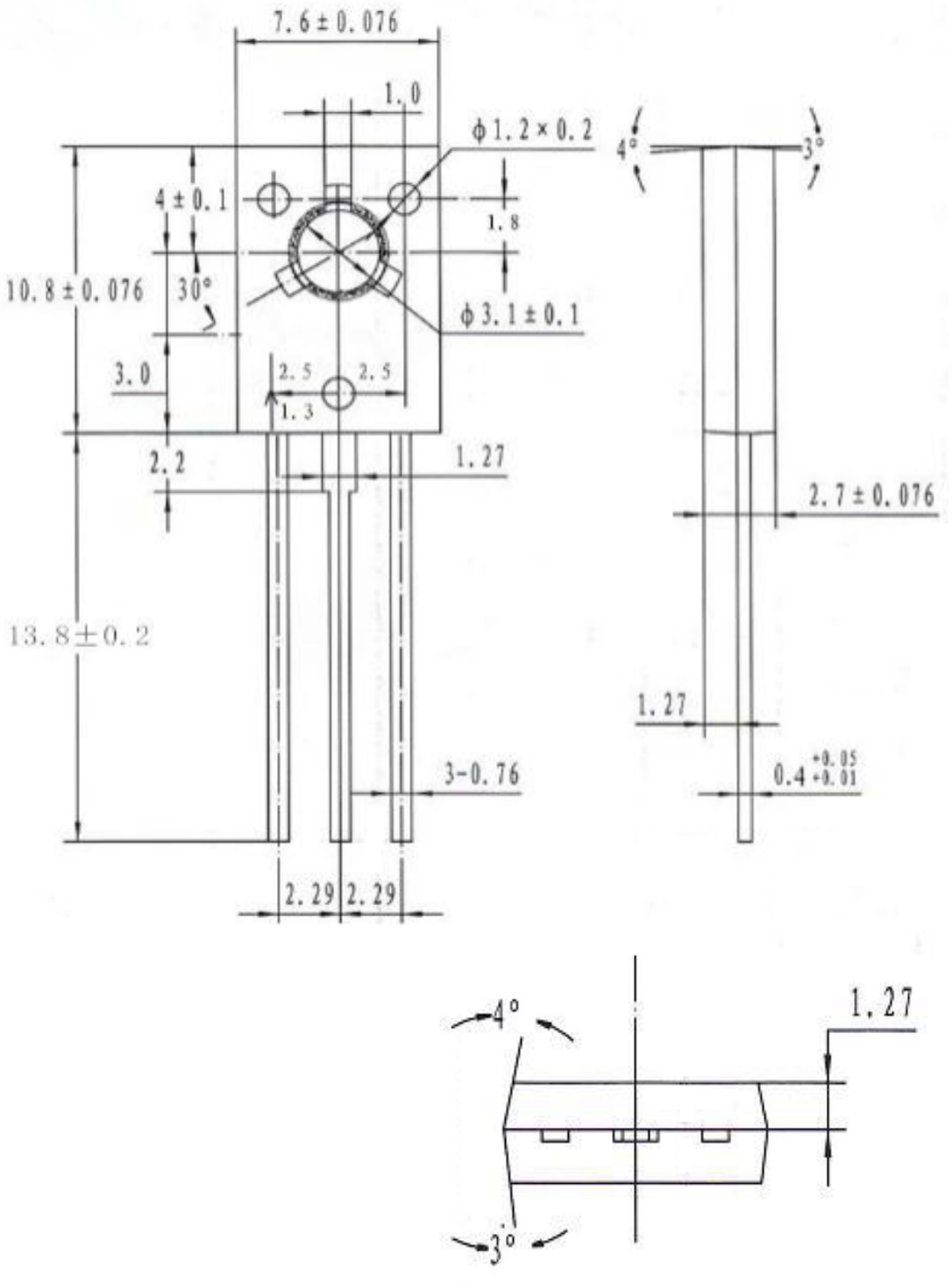


I_C —— V_{BE}



P_c —— T_a




7.6±0.076
1.0
φ1.2×0.2
4°
3°
4±0.1
1.8
10.8±0.076
30°
φ3.1±0.1
3.0
2.5
2.5
1.3
2.2
1.27
2.7±0.076
13.8±0.2
1.27
3-0.76
0.4 +0.05 +0.01
2.29
2.29
4°
1.27
3°