2SD2118 TRANSISTOR (NPN)

TO-252

FEATURES

- **Low $V_{CE(sat)}$.**
- **Excellent DC Current Gain Characteristics.**

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	5	A
P_C	Collector Power Dissipation	1	W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55-150	℃

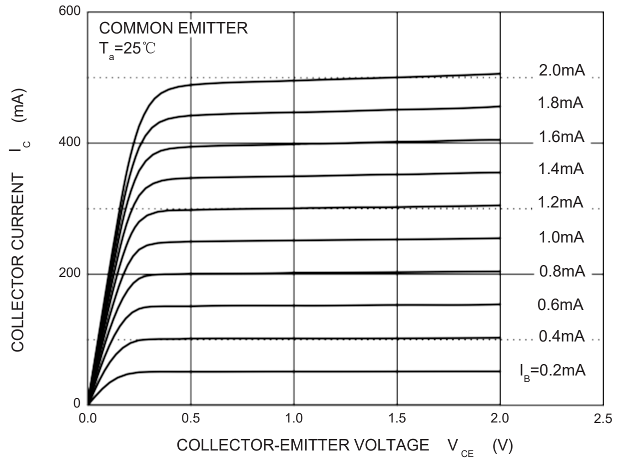
ELECTRICAL CHARA CTERISTICS (T_a= 25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=50μA,I_E=0	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C =1mA,I_B=0	20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=50μA,I_C=0	6			V
Collector cut-off current	I_{CBO}	V_{CB}=40V,I_E=0			0.5	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V,I_C=0			0.5	μA
DC current gain	h_{FE}	V_{CE}=2V,I_C=0.5A	120		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=4A,I_B=100mA			1	V
Transition frequency	f_T	V_{CE}=6V,I_C=50mA,f=100MHz		150		MHz
Collector output capacitance	C_{ob}	V_{CB}=20V,I_E=0,f=1MHz	30			pF

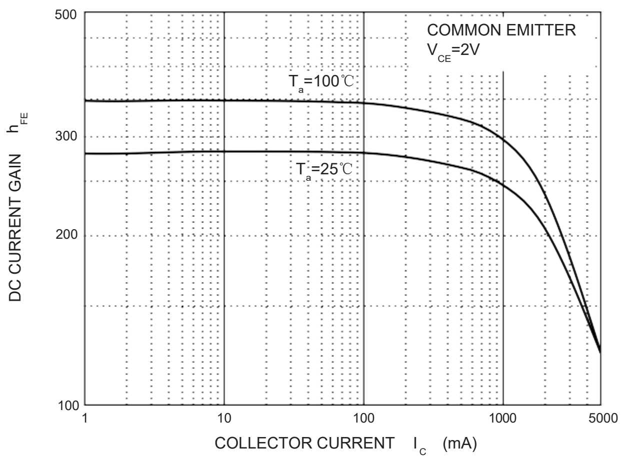
CLASSIFIC ATION OF h_{FE}

Rank	Q	R
Range	120-270	180- 390

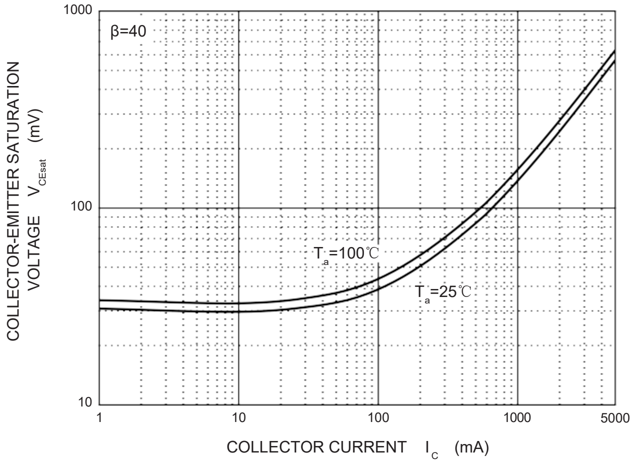
Static Characteristic



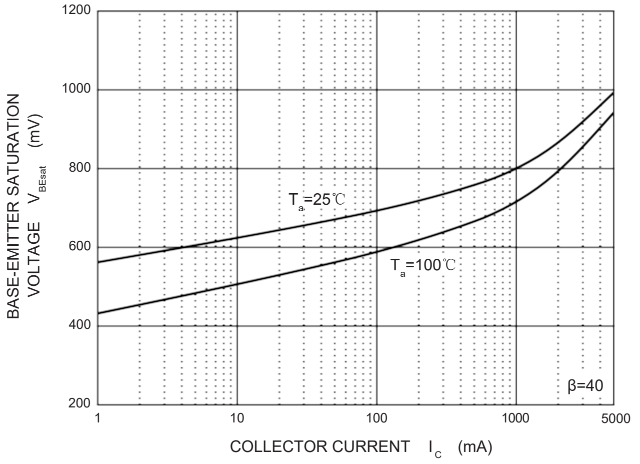
h_{FE} — I_C



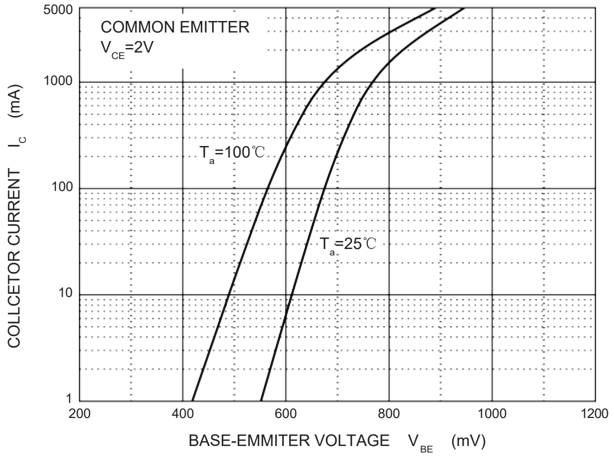
V_{CEsat} — I_C



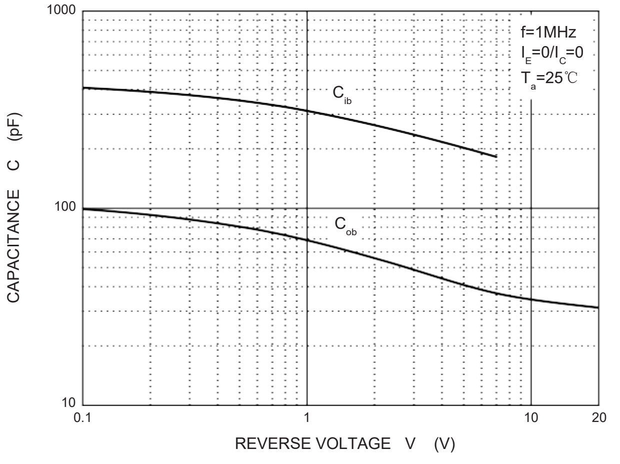
V_{BEsat} — I_C



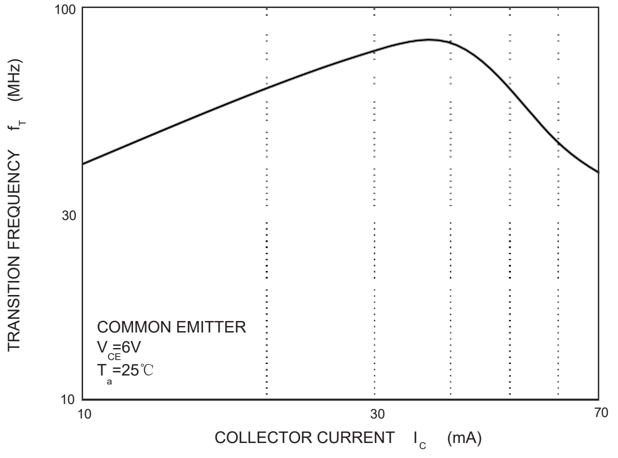
I_C — V_{BE}



C_{ob}/ C_{ib} — V_{CB}/ V_{EB}



f_T — I_C



P_C — T_a