2SA554 TRANSISTOR (PNP)

1.BASE
2.COLLECTOR
3.EMITTER

SOT-89

FEATURES

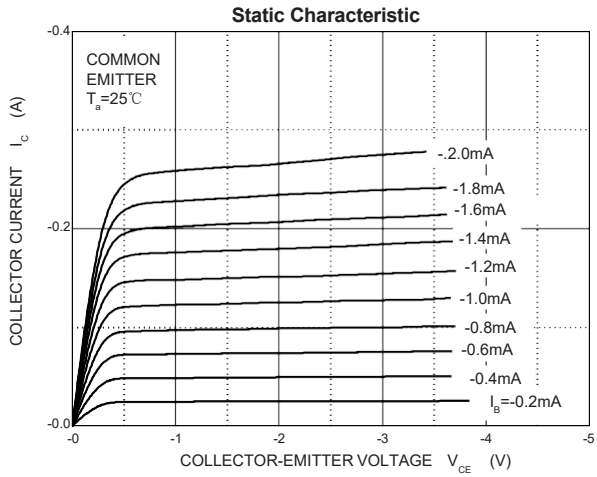
- Low Saturation Voltage
- High Speed Switching

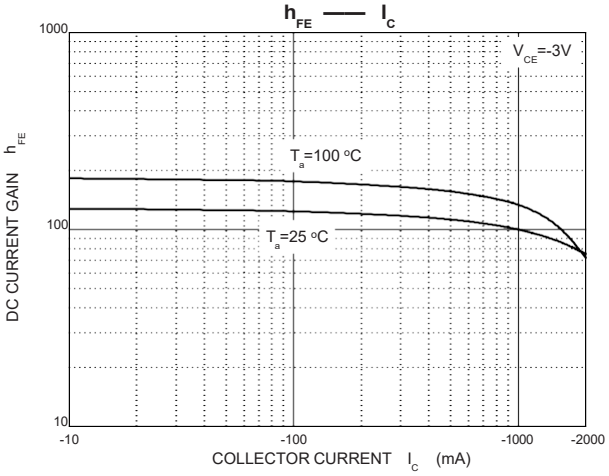
MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

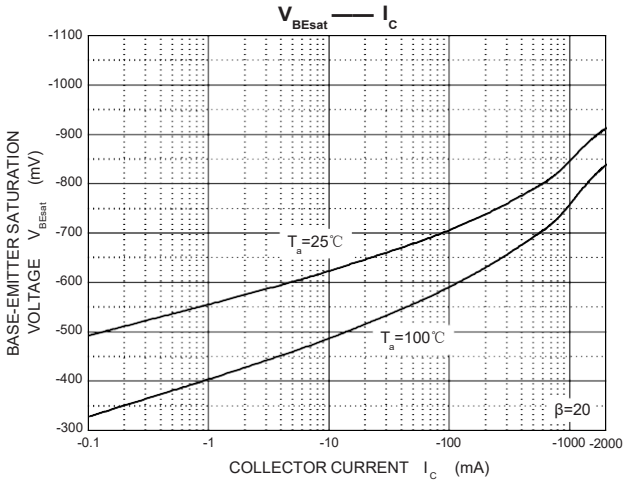
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-100	V
V_{CEO}	Collector-Emitter Voltage	-100	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current	-2	A
P_C	Collector Power Dissipation	500	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	250	℃/W
T_J,T_{STG}	Operation Junction and Storage Temperature Range	-55~+150	℃

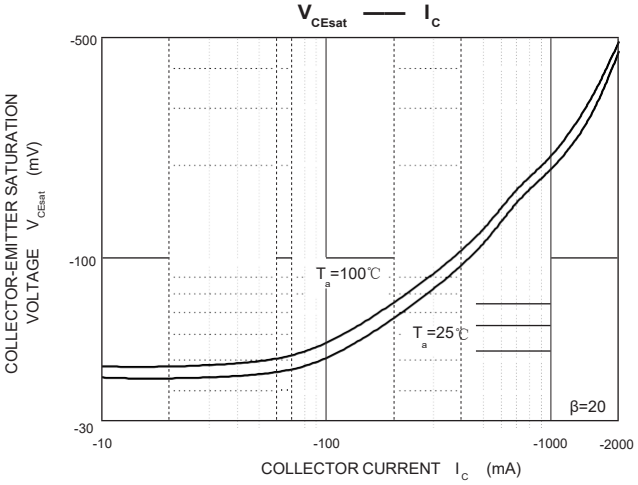
ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

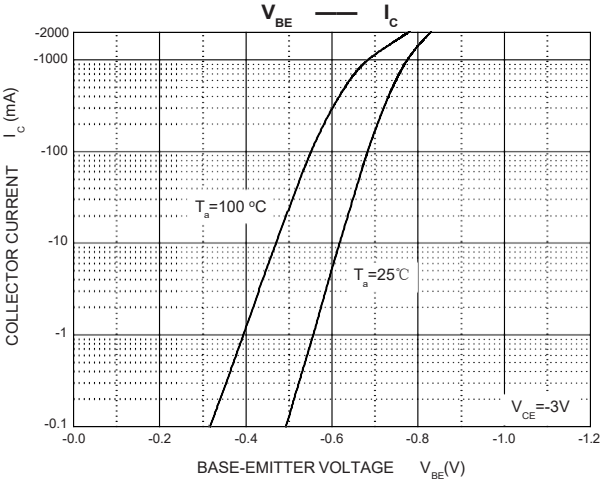
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= -0.1mA,I_E=0	-100			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=-1mA,I_B=0	-100			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-0.1mA,I_C=0	-6			V
Collector cut-off current	I_{CBO}	V_{CB}=-100V,I_E=0			-1	uA
Emitter cut-off current	I_{EBO}	V_{EB}=-4V,I_C=0			-1	uA
DC current gain	h_{FE}	V_{CE}=-3V, I_C=-100mA	120		270	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-0.5A,I_B=-25mA			-0.2	V
		I_C=-1A,I_B=-50mA			-0.3	V
Collector output capacitance	C_{ob}	V_{CB}=-10V,I_E=0, f=1MHz		32		pF
Transition frequency	f_T	V_{CE}=-5V,I_C= -0.1A	30			MHz

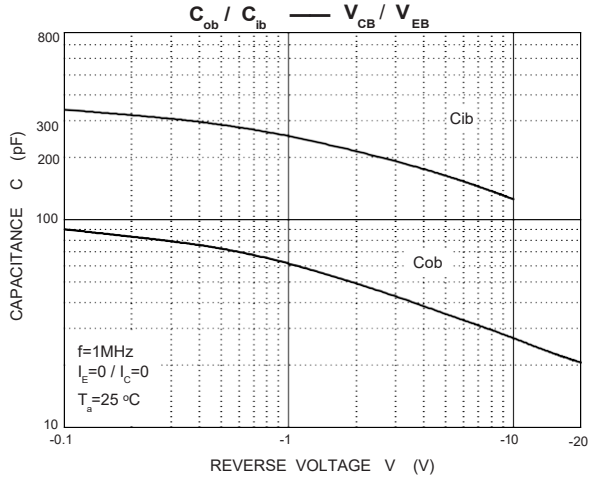

Static Characteristic
COMMON
EMITTER
Ta=25℃
-2.0mA
-1.8mA
-1.6mA
-1.4mA
-1.2mA
-1.0mA
-0.8mA
-0.6mA
-0.4mA
IB=-0.2mA
COLLECTOR CURRENT IC (A)
COLLECTOR-EMITTER VOLTAGE VCE (V)

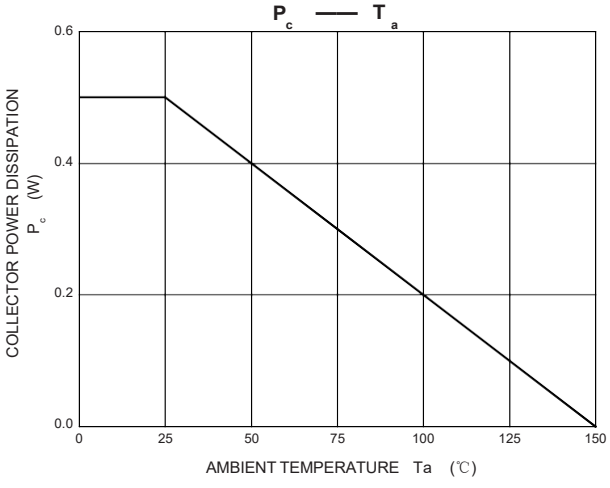

hFE — IC
VCE=-3V
Ta=100 °C
Ta=25 °C
DC CURRENT GAIN hFE
COLLECTOR CURRENT IC (mA)


VBEsat — IC
Ta=25℃
Ta=100℃
β=20
BASE-EMITTER SATURATION VOLTAGE VBEsat (mV)
COLLECTOR CURRENT IC (mA)


VCEsat — IC
Ta=100℃
Ta=25℃
β=20
COLLECTOR-EMITTER SATURATION VOLTAGE VCEsat (mV)
COLLECTOR CURRENT IC (mA)


VBE — IC
Ta=100 °C
Ta=25℃
VCE=-3V
COLLECTOR CURRENT IC (mA)
BASE-EMITTER VOLTAGE VBE(V)


Cob / Cib — VCB / VEB
Cib
Cob
f=1MHz
IE=0 / IC=0
Ta=25 °C
CAPACITANCE C (pF)
REVERSE VOLTAGE V (V)


Pc — Ta
COLLECTOR POWER DISSIPATION Pc (W)
AMBIENT TEMPERATURE Ta (℃)