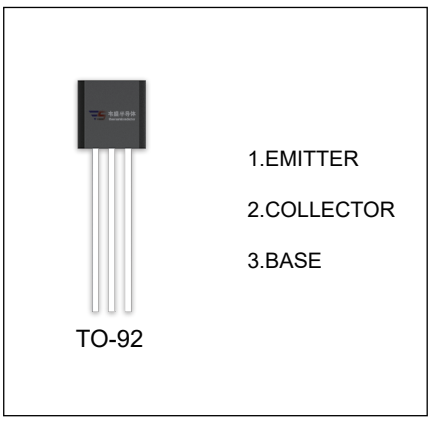
BC337/BC338 TRANSISTOR (NPN)



FEATURES

- Power dissipation

ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
BC337	TO-92	Bulk	1000pcs/Bag
BC337-TA	TO-92	Tape	2000pcs/Box
BC338	TO-92	Bulk	1000pcs/Bag
BC338-TA	TO-92	Tape	2000pcs/Box

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

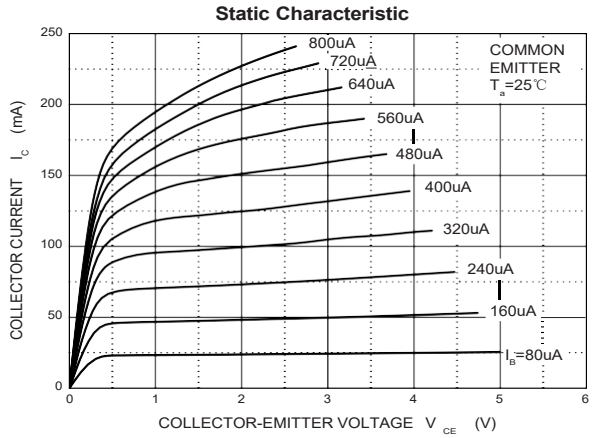
Symbol	Parameter		Value	Unit
V_{CBO}	Collector-Base Voltage	**BC337**	50	V
		BC338	30	
V_{CEO}	Collector-Emitter Voltage	**BC337**	45	V
		BC338	25	
V_{EBO}	Emitter-Base Voltage		5	V
I_C	Collector Current -Continuous		800	mA
P_D	Total Device Dissipation		625	mW
T_J,T_{stg}	Operation Junction and Storage Temperature Range		-55-150	℃

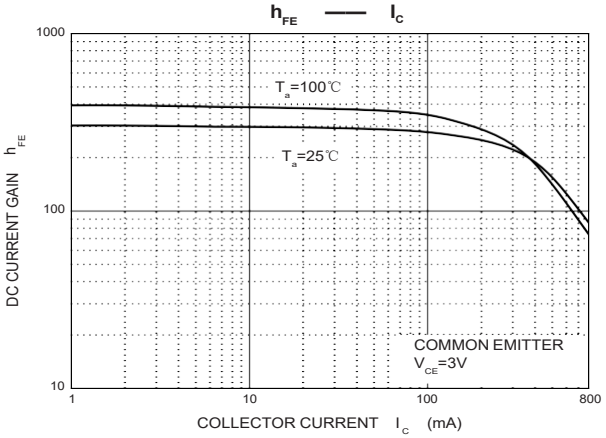
T_a=25℃ unless otherwise specified

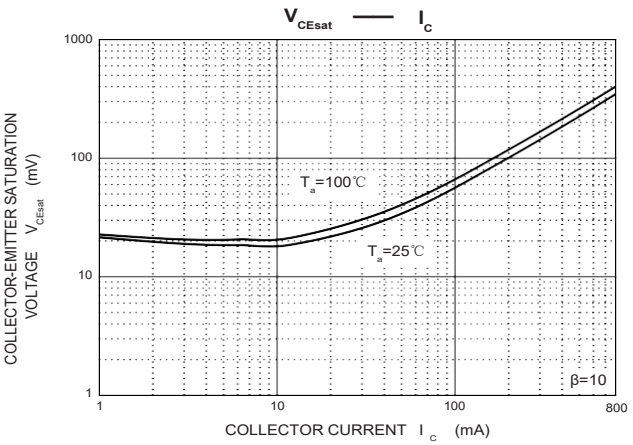
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V_{CBO}	I_C= 100uA, I_E=0				
BC337			50			V
BC338			30			V
Collector-emitter breakdown voltage		I_C= 10mA , I_B=0				
BC337	V_{CEO}		45			V
BC338			25			V
Emitter-base breakdown voltage	V_{EBO}	I_E= 10uA, I_C=0	5			V
Collector cut-off current BC337	I_{CBO}	V_{CB}= 45V, I_E=0			0.1	uA
BC338		V_{CB}= 25V, I_E=0			0.1	
Collector cut-off current BC337	I_{CEO}	V_{CE}= 40V, I_B=0			0.2	uA
BC338		V_{CE}= 20V, I_B=0			0.2	
Emitter cut-off current	I_{EBO}	V_{EB}= 4 V, I_C=0			0.1	uA
BC337/BC338	$h_{FE(1)}$	V_{CE}=1V, I_C= 100mA	100		630	
BC337-16/BC338-16			100		250	
BC337-25/BC338-25			160		400	
BC337-40/BC338-40			250		630	
DC current gain	$h_{FE(2)}$	V_{CE}=1V, I_C= 300mA	60			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=500mA, I_B= 50mA			0.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C= 500mA, I_B=50mA			1.2	V
Base-emitter voltage	V_{BE}	V_{CE}=1V, I_C= 300mA			1.2	V
Transition frequency	f_T	V_{CE}= 5V, I_C= 10mA f = 100MHz	210			MHz
Collector Output Capacitance	Cob	V_{CB}=10V,I_E=0 f=1MHZ		15		pF

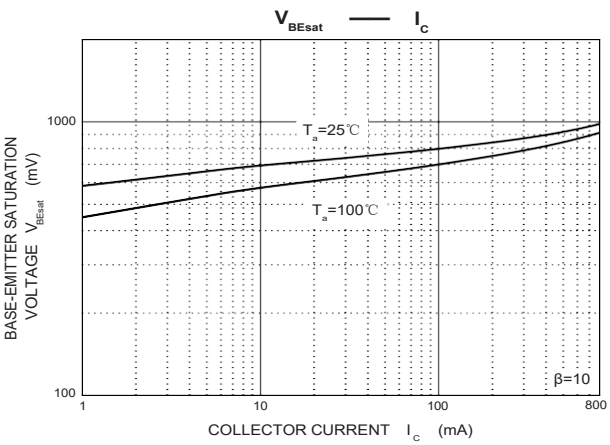
CLASSIFICATION OF $h_{FE(1)}$

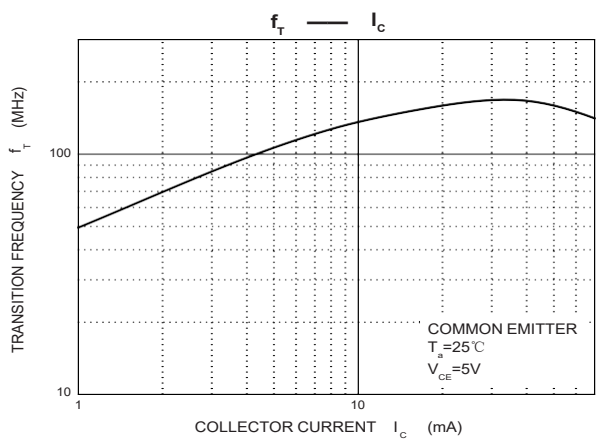
	BC337-16/BC338-16	BC337-25/BC338-25	BC337-40/BC338-40
RANK	A	B	C
RANGE	100-250	160-400	250-630

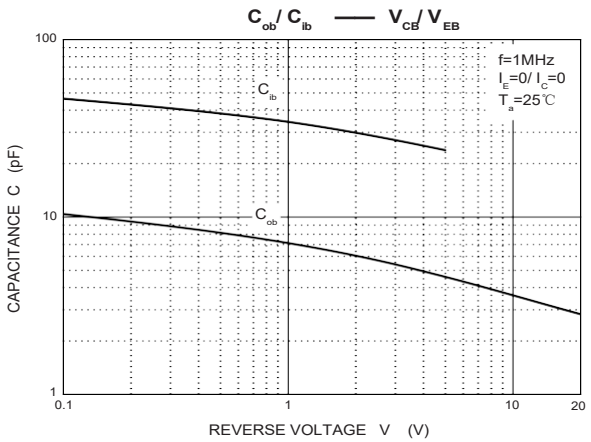

Static Characteristic
COLLECTOR CURRENT I_C (mA)
COLLECTOR-EMITTER VOLTAGE V_{CE} (V)
800uA
720uA
640uA
560uA
480uA
400uA
320uA
240uA
160uA
I_B=80uA
COMMON EMITTER
T_a=25℃

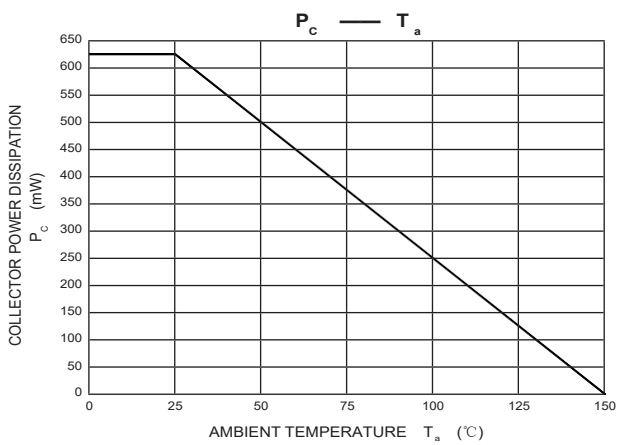

h_{FE} —— I_C
DC CURRENT GAIN h_{FE}
COLLECTOR CURRENT I_C (mA)
T_a=100℃
T_a=25℃
COMMON EMITTER
V_{CE}=3V


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


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


f_T —— I_C
TRANSITION FREQUENCY f_T (MHz)
COLLECTOR CURRENT I_C (mA)
COMMON EMITTER
T_a=25℃
V_{CE}=5V


C_{ob}/ C_{ib} —— V_{CB}/ V_{EB}
CAPACITANCE C (pF)
REVERSE VOLTAGE V (V)
f=1MHz
I_E=0/ I_C=0
T_a=25℃
C_{ib}
C_{ob}


P_C —— T_a
COLLECTOR POWER DISSIPATION P_C (mW)
AMBIENT TEMPERATURE T_a (℃)