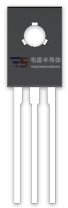
MJE13003 TRANSISTOR (NPN)



1.BASE
2.COLLECTOR
3.EMITTER

TO-126

FEATURES

- Power Switching Applications

ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
MJE13003	TO-126	Bulk	200pcs/Bag
MJE13003-TU	TO-126	Tube	60pcs/Tube

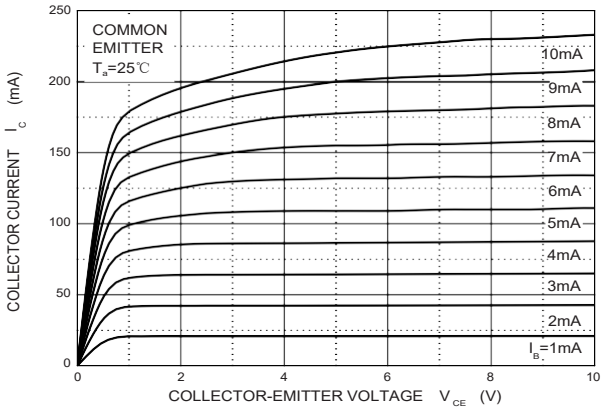
MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	600	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	1	A
P_C	Collector Power Dissipation	1.25	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	100	℃/W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	℃

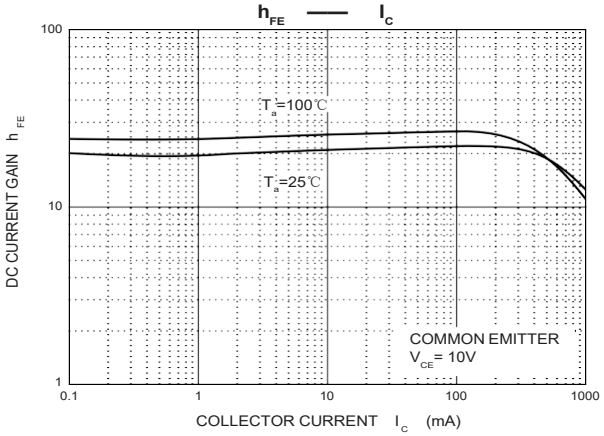
T_a=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= 0.1mA,I_E=0	600			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C= 1mA,I_B=0	400			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}=600V,I_E=0			100	uA
Collector cut-off current	I_{CEO}	V_{CE}=400V,I_B=0			100	uA
Emitter cut-off current	I_{EBO}	V_{EB}=7V,I_C=0			10	uA
DC current gain	$h_{FE(1)}$*	V_{CE}=10V, I_C=200mA	20		30	
	$h_{FE(2)}$	V_{CE}=10V, I_C=250μA	5			
Collector-emitter saturation voltage	$V_{CE(sat)1}$	I_C=200mA,I_B=40mA			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=200mA,I_B=40mA			1.1	V
Transition frequency	f_T	V_{CE}=10V, I_C=100mA,f=1MHz	5			MHz
Fall time	t_f	I_C=100mA			0.5	μs
Storage time	t_S*	I_C=100mA	2		4	

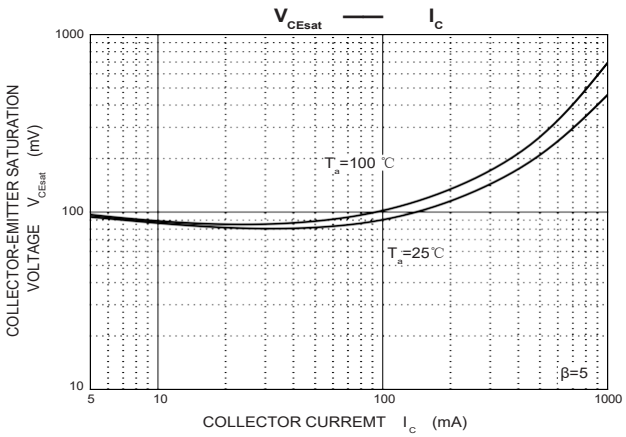
Static Characteristic



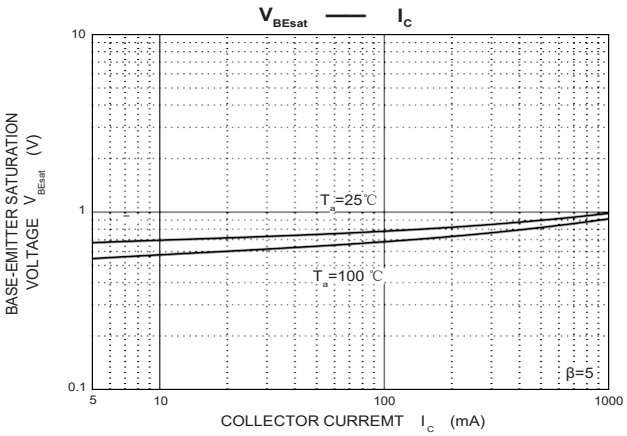
h_{FE} —— I_C



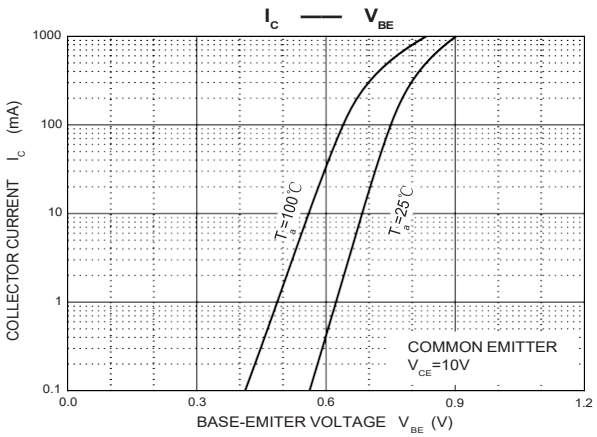
V_{CEsat} —— I_C



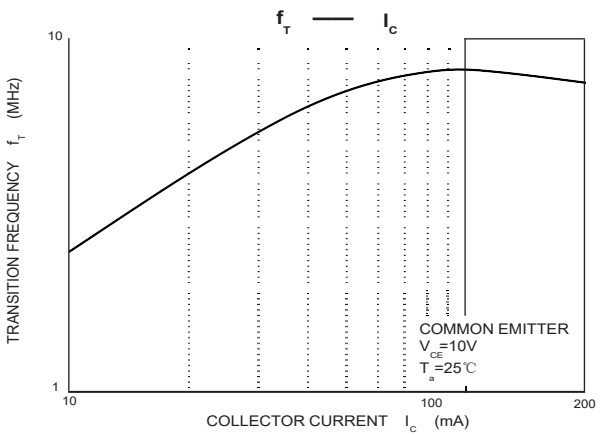
V_{BEsat} —— I_C



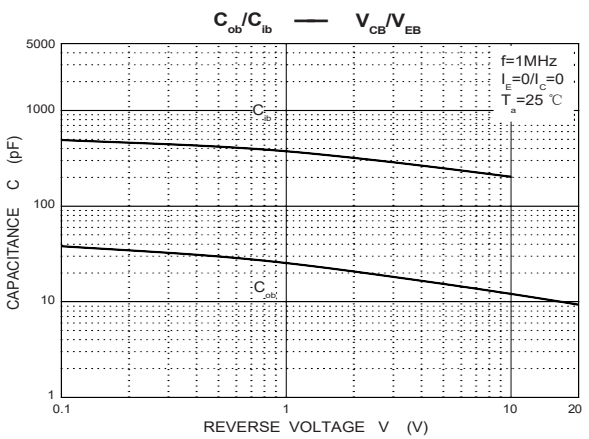
I_C —— V_{BE}



f_T —— I_C



C_{ob}/C_{ib} —— V_{CB}/V_{EB}



P_C —— T_a