B772M TRANSISTOR (PNP)

FEATURES

- Low Speed Switching

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

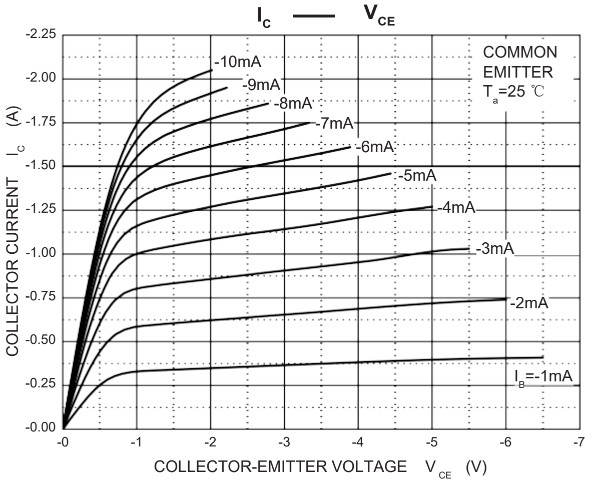
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-40	V
V_{CEO}	Collector-Emitter Voltage	-30	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current -Continuous	-3	A
P_C	Collector Power Dissipation	1.25	W
$R_{\Theta JA}$	Thermal Resistance, junction to Ambient	100	℃/W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55-150	℃

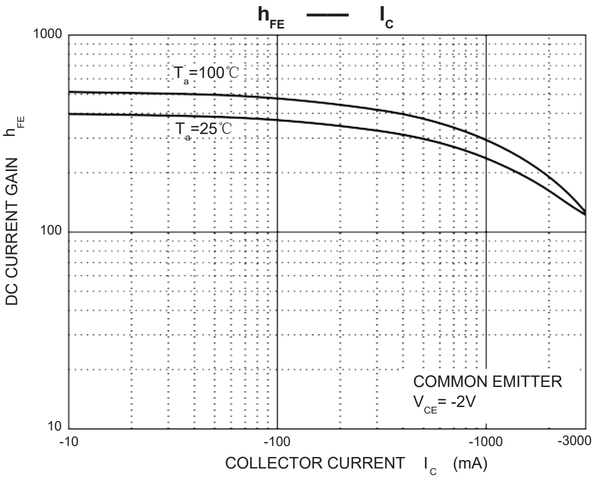
ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

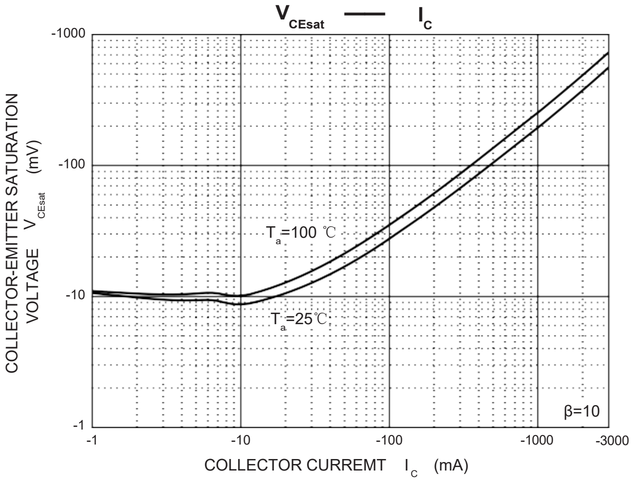
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-100μA ,I_E=0	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C= -10mA , I_B=0	-30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E= -100μA,I_C=0	-6			V
Collector cut-off current	I_{CBO}	V_{CB}= -40V, I_E=0			-1	μA
Collector cut-off current	I_{CEO}	V_{CE}=-30V, I_B=0			-10	μA
Emitter cut-off current	I_{EBO}	V_{EB}=-6V, I_C=0			-1	μA
DC current gain	h_{FE}	V_{CE}= -2V, I_C= -1A	60		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-2A, I_B= -0.2A			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=-2A, I_B= -0.2A			-1.5	V
Transition frequency	f_T	V_{CE}= -5V, I_C=-0.1A f =10MHz	50	80		MHz

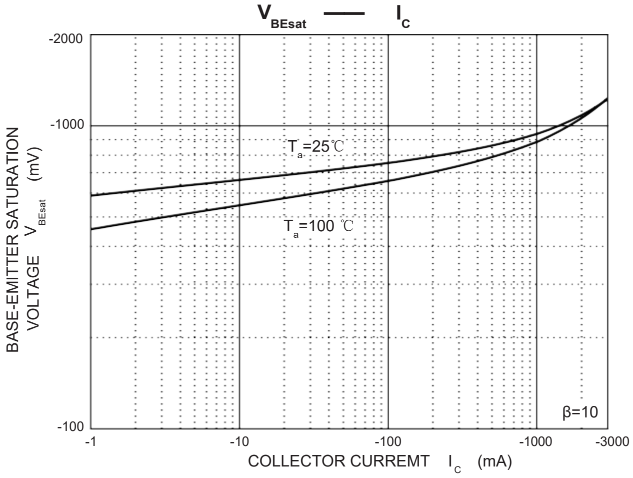
CLASSIFICATION OF h_{FE}

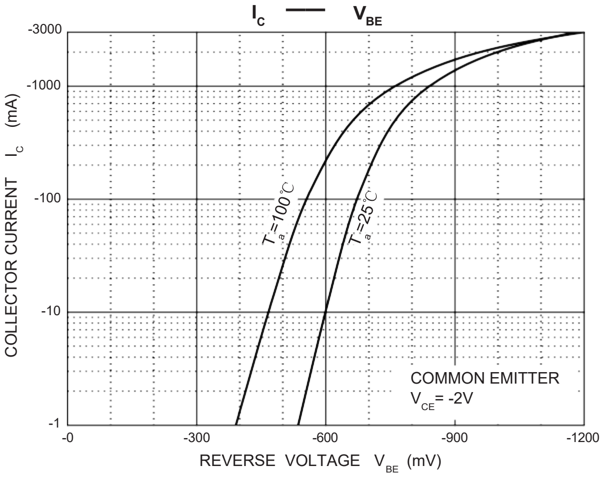
Rank	R	O	Y	GR
Range	60-120	100-200	160-320	200-400

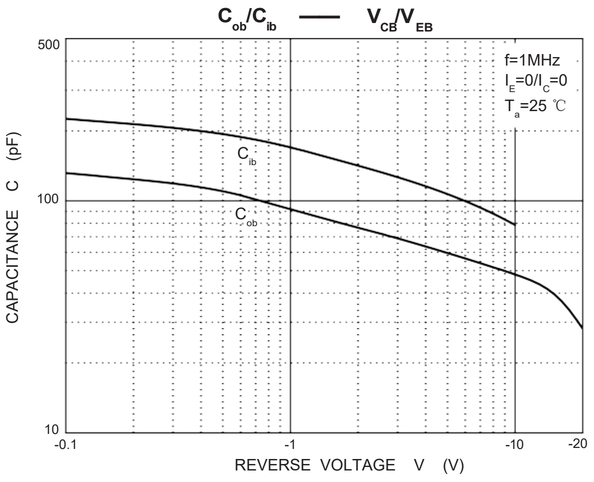

I_C — V_CE
COMMON EMITTER
T_a=25 ℃
-10mA
-9mA
-8mA
-7mA
-6mA
-5mA
-4mA
-3mA
-2mA
I_B=-1mA
-2.25
-2.00
-1.75
-1.50
-1.25
-1.00
-0.75
-0.50
-0.25
-0.00
-0
-1
-2
-3
-4
-5
-6
-7
COLLECTOR CURRENT I_C (A)
COLLECTOR-EMITTER VOLTAGE V_CE (V)

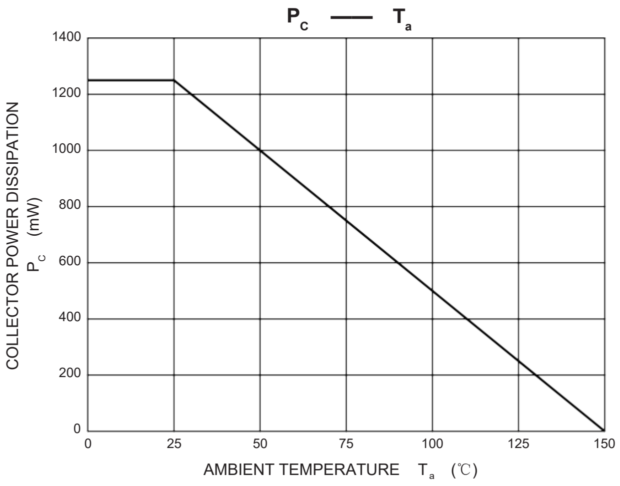

h_FE — I_C
T_a=100℃
T_a=25℃
COMMON EMITTER
V_CE= -2V
1000
100
10
-10
-100
-1000
-3000
DC CURRENT GAIN h_FE
COLLECTOR CURRENT I_C (mA)


V_CEsat — I_C
T_a=100 ℃
T_a=25℃
β=10
-1000
-100
-10
-1
-1
-10
-100
-1000
-3000
COLLECTOR-EMITTER SATURATION VOLTAGE V_CEsat (mV)
COLLECTOR CURREMT I_C (mA)


V_BEsat — I_C
T_a=25℃
T_a=100 ℃
β=10
-2000
-1000
-100
-1
-10
-100
-1000
-3000
BASE-EMITTER SATURATION VOLTAGE V_BEsat (mV)
COLLECTOR CURREMT I_C (mA)


I_C — V_BE
T_a=100℃
T_a=25℃
COMMON EMITTER
V_CE= -2V
-3000
-1000
-100
-10
-1
-0
-300
-600
-900
-1200
COLLECTOR CURRENT I_C (mA)
REVERSE VOLTAGE V_BE (mV)


C_ob/C_ib — V_CB/V_EB
f=1MHz
I_E=0/I_C=0
T_a=25 ℃
C_ib
C_ob
500
100
10
-0.1
-1
-10
-20
CAPACITANCE C (pF)
REVERSE VOLTAGE V (V)


P_C — T_a
1400
1200
1000
800
600
400
200
0
0
25
50
75
100
125
150
COLLECTOR POWER DISSIPATION P_C (mW)
AMBIENT TEMPERATURE T_a (℃)