MPS751 TRANSISTOR (PNP)

TO-92

1.EMITTER
2.COLLECTOR
3.BASE

- **FEATURES**

  Switching and Amplifier Applications

ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
MPS751	TO-92	Bulk	1000pcs/Bag
MPS751-TA	TO-92	Tape	2000pcs/Box

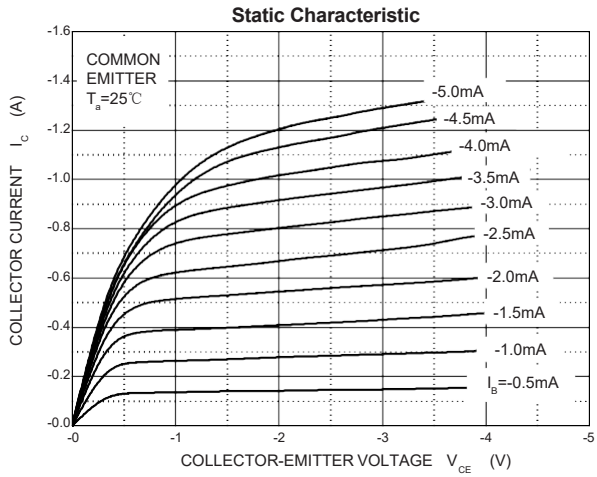
MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

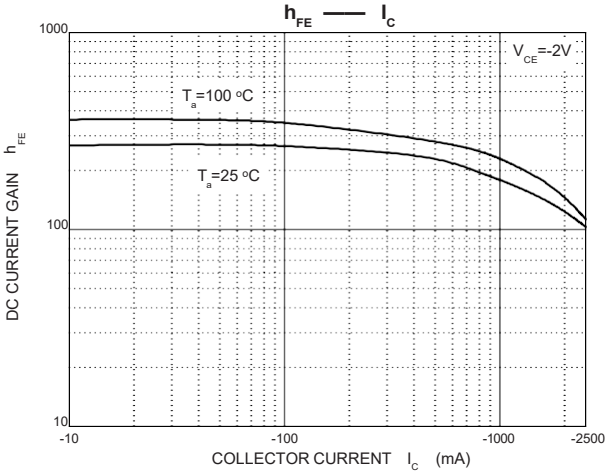
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-80	V
V_{CEO}	Collector-Emitter Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-2	A
P_C	Collector Dissipation	0.625	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	200	℃/W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55-150	℃

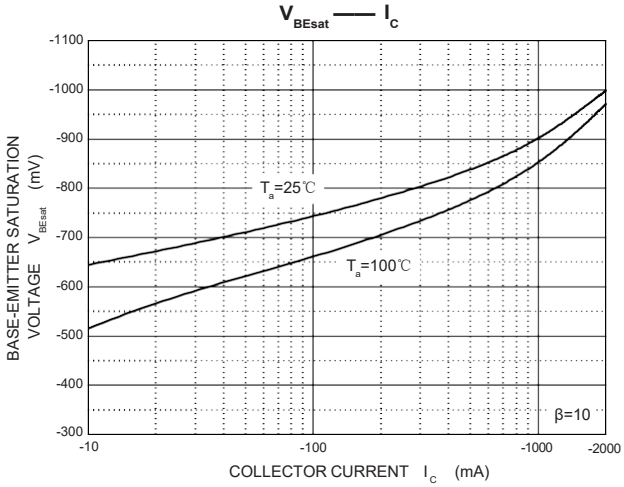
T_a=25℃ unless otherwise specified

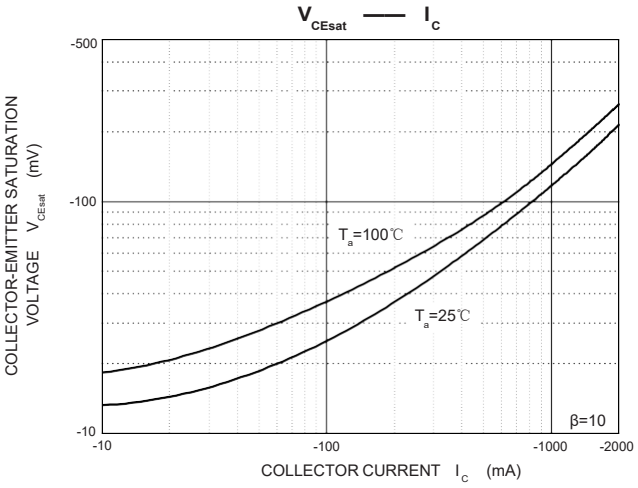
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-100μA,I_E=0	-80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$*	I_C=-10mA,I_B=0	-60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-10μA,I_C=0	-5			V
Collector cut-off current	I_{CBO}	V_{CB}=-80V,I_E=0			-0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=-4V,I_C=0			-0.1	μA
DC current gain	$h_{FE(1)}$*	V_{CE}=-2V,I_C=-50mA	75			
	$h_{FE(2)}$*	V_{CE}=-2V,I_C=-500mA	75			
	$h_{FE(3)}$*	V_{CE}=-2V,I_C=-1A	75			
	$h_{FE(4)}$*	V_{CE}=-2V,I_C=-2A	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$*	I_C=-2A,I_B=-200mA			-0.5	V
		I_C=-1A,I_B=-100mA			-0.3	
Base -emitter saturation voltage	$V_{BE(sat)}$*	I_C=-1A,I_B=-100mA			-1.2	V
Base -emitter on voltage	$V_{BE(on)}$*	V_{CE}=-2V,I_C=-1A			-1	V
Transition frequency	f_T	V_{CE}=-5V,I_C=-50mA,f=100MHz	75			MHz

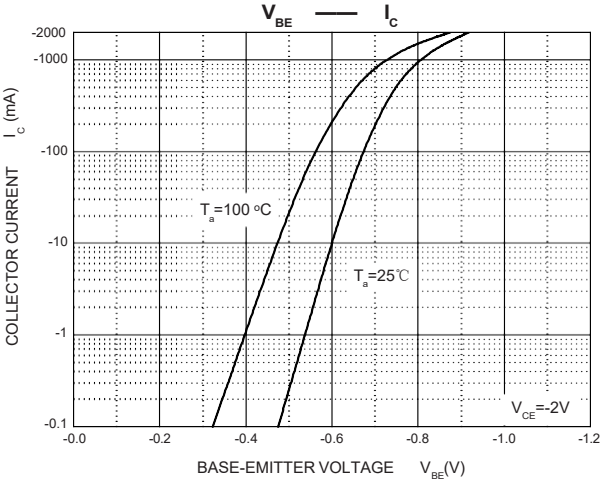
* Pulse Test: Pulse Width<= 300us, Duty Cycle = 2.0%.

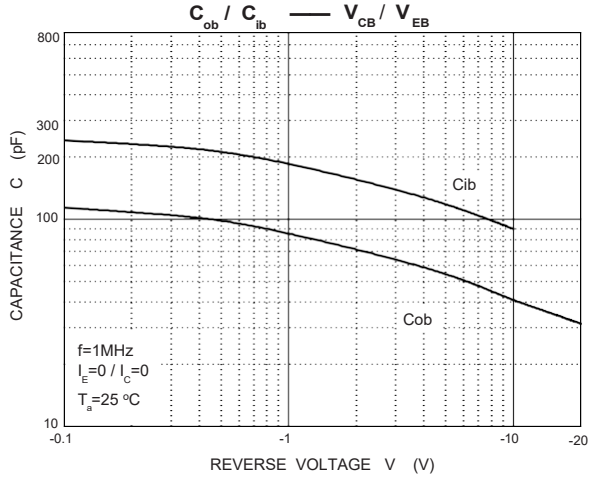

Static Characteristic
COMMON EMITTER
Ta=25℃
-5.0mA
-4.5mA
-4.0mA
-3.5mA
-3.0mA
-2.5mA
-2.0mA
-1.5mA
-1.0mA
IB=-0.5mA
COLLECTOR CURRENT IC (A)
COLLECTOR-EMITTER VOLTAGE VCE (V)

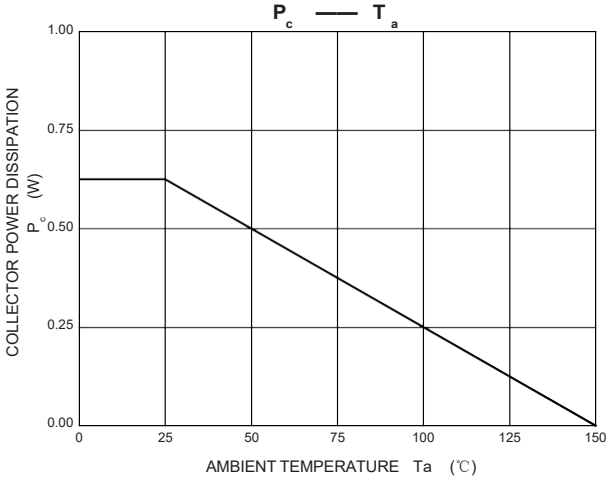

hFE — IC
VCE=-2V
Ta=100 °C
Ta=25 °C
DC CURRENT GAIN hFE
COLLECTOR CURRENT IC (mA)


VBEsat — IC
Ta=25℃
Ta=100℃
β=10
BASE-EMITTER SATURATION VOLTAGE VBEsat (mV)
COLLECTOR CURRENT IC (mA)


VCEsat — IC
Ta=100℃
Ta=25℃
β=10
COLLECTOR-EMITTER SATURATION VOLTAGE VCEsat (mV)
COLLECTOR CURRENT IC (mA)


VBE — IC
Ta=100 °C
Ta=25℃
VCE=-2V
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 (℃)