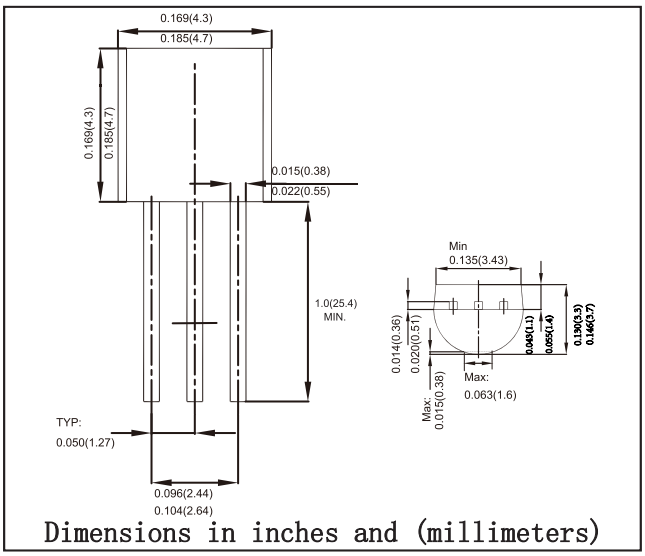
TO-92 Plastic-Encapsulate Transistors

FEATURES

- Complementary NPN Type available (MPS2222A)
- TRANSISTOR (PNP)

MECHANICAL DATA

- Case style:TO-92 molded plastic
- Mounting position:any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-600	mA
P_D	Collector Power Dissipation	625	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	200	℃ /W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~+150	℃

ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
MPS2907A	TO-92	Bulk	1000pcs/Bag
MPS2907A-TA	TO-92	Tape	2000pcs/Box

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-10μA,I_E=0	-60			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}=-50V,I_E=0			-10	n A
Collector cut-off current	I_{CEX}	V_{CE}=-30V,$V_{EB(off)}$=-0.5V			-50	nA
Emitter cut-off current	I_{EBO}	V_{EB}=-3V,I_C=0			-10	nA
DC current gain	$h_{FE(1)}$	V_{CE}=-10V,I_C=-0.1mA	78			
	$h_{FE(2)}$	V_{CE}=-10V,I_C=-150mA	100		300	
	$h_{FE(3)}$	V_{CE}=-10V,I_C=-500mA	52			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-150mA,I_B=-15mA			-0.4	V
	$V_{CE(sat)}$	I_C=-500mA,I_B=-50mA			-0.67	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=-150mA,I_B=-15mA			-1	V
	$V_{BE(sat)}$	I_C=-500mA,I_B=-50mA			-1.2	V
Transition frequency	f_T	V_{CE}=-20V,I_C=-50mA,f=100MHz	200			MHz
Delay time	t_d	V_{CC}=-30V,Ic=-150mA,			10	ns
Rise time	t_r	I_{B1}=-I_{B2}=-15mA			25	ns
Storage time	t_S	V_{CC}=-6V,Ic=-150mA,			225	ns
Fall time	t_f	I_{B1}=-I_{B2}=-15mA			60	ns

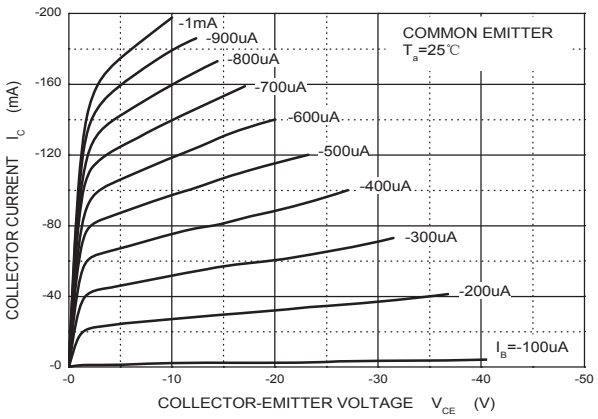
CLASSIFICATION OF $h_{FE(2)}$

Rank	L	H
Range	100-200	200-300

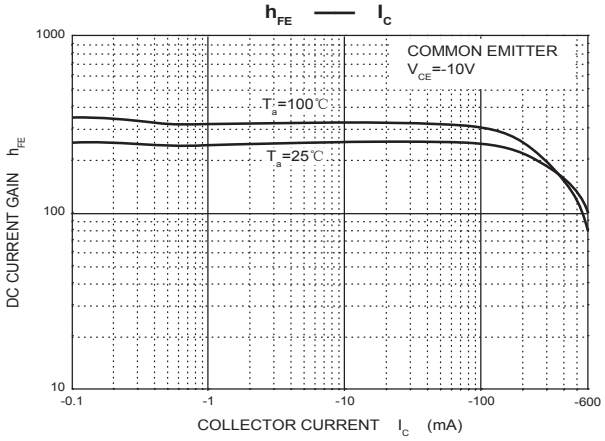
Marking	MPS2907

RATINGS AND CHARACTERISTIC CURVES

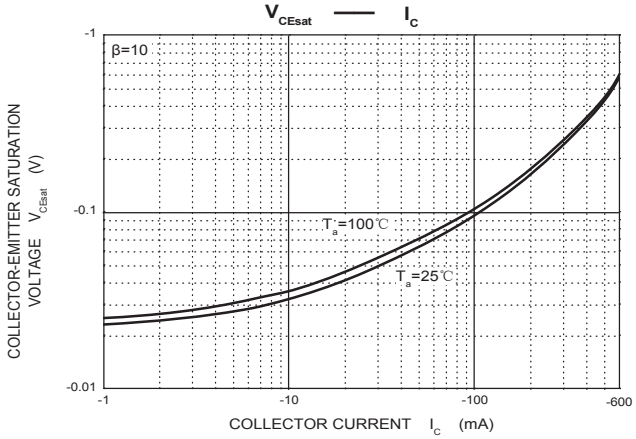
Static Characteristic



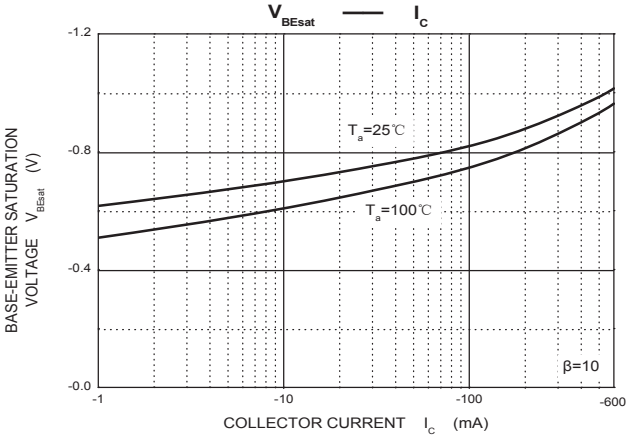
h_{FE} —— I_C



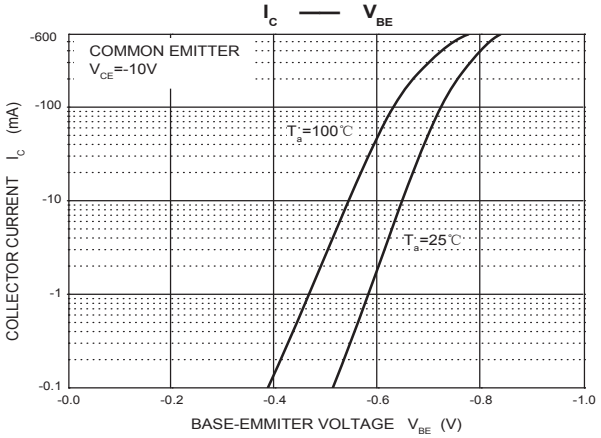
V_{CEsat} —— I_C



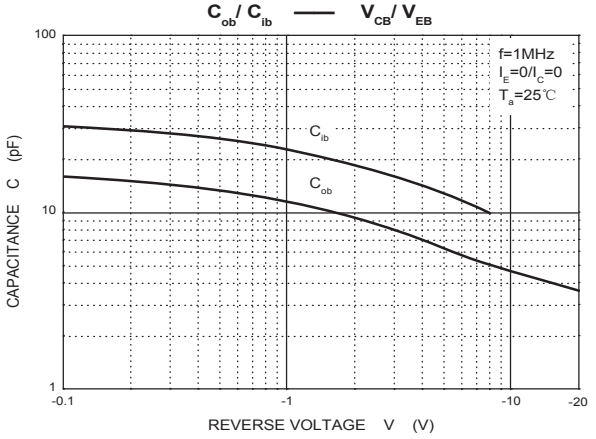
V_{BEsat} —— I_C



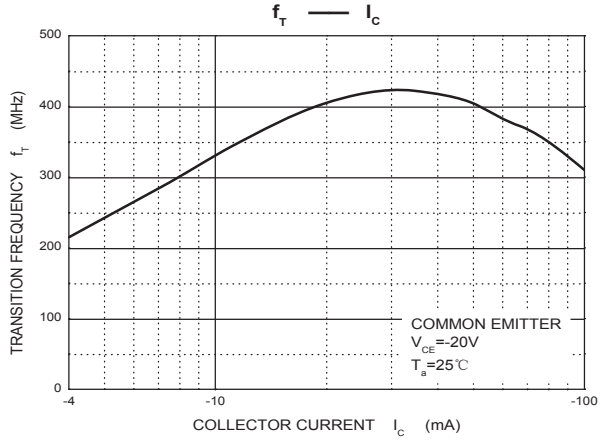
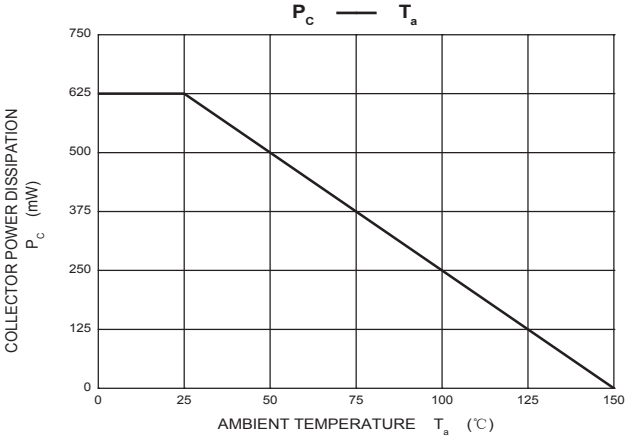
I_C —— V_{BE}



C_{ob} / C_{ib} —— V_{CB} / V_{EB}



f_T —— I_C



P_C —— T_a