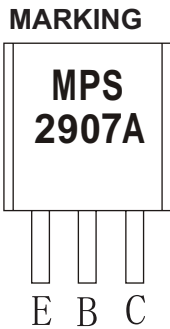
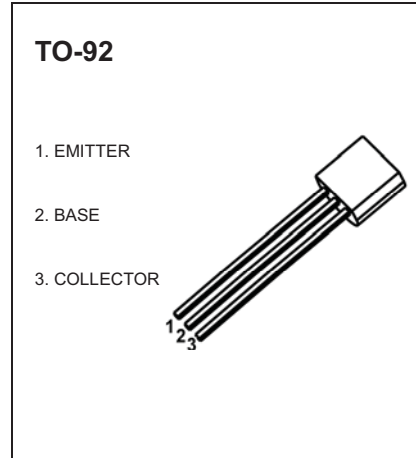


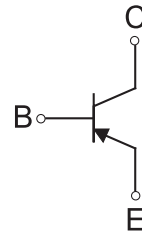
## MPS2907A TRANSISTOR (PNP)

### FEATURES

- Complementary NPN Type available (MPS2222A)



### Equivalent Circuit



### MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ 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	$^{\circ}\text{C} / \text{W}$
$T_j$	Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-55~+150	$^{\circ}\text{C}$

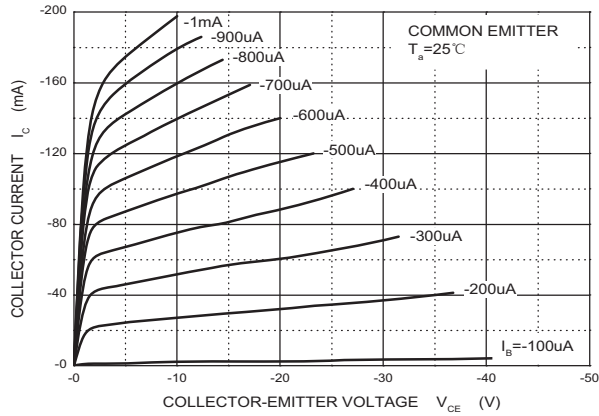
$T_a=25\text{ }^\circ\text{C}$  unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-10\mu\text{A}, I_E=0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-10\text{mA}, I_B=0$	-60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-10\mu\text{A}, I_C=0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-50\text{V}, I_E=0$			-10	nA
Collector cut-off current	$I_{CEX}$	$V_{CE}=-30\text{V}, V_{EB(off)}=-0.5\text{V}$			-50	nA
Emitter cut-off current	$I_{EBO}$	$V_{EB}=-3\text{V}, I_C=0$			-10	nA
DC current gain	$h_{FE(1)}$	$V_{CE}=-10\text{V}, I_C=-0.1\text{mA}$	78			
	$h_{FE(2)}$	$V_{CE}=-10\text{V}, I_C=-150\text{mA}$	100		300	
	$h_{FE(3)}$	$V_{CE}=-10\text{V}, I_C=-500\text{mA}$	52			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-150\text{mA}, I_B=-15\text{mA}$			-0.4	V
	$V_{CE(sat)}$	$I_C=-500\text{mA}, I_B=-50\text{mA}$			-0.67	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-150\text{mA}, I_B=-15\text{mA}$			-1	V
	$V_{BE(sat)}$	$I_C=-500\text{mA}, I_B=-50\text{mA}$			-1.2	V
Transition frequency	$f_T$	$V_{CE}=-20\text{V}, I_C=-50\text{mA}, f=100\text{MHz}$	200			MHz
Delay time	$t_d$	$V_{CC}=-30\text{V}, I_C=-150\text{mA},$			10	ns
Rise time	$t_r$	$I_{B1}=-I_{B2}=-15\text{mA}$			25	ns
Storage time	$t_S$	$V_{CC}=-6\text{V}, I_C=-150\text{mA},$			225	ns
Fall time	$t_f$	$I_{B1}=-I_{B2}=-15\text{mA}$			60	ns

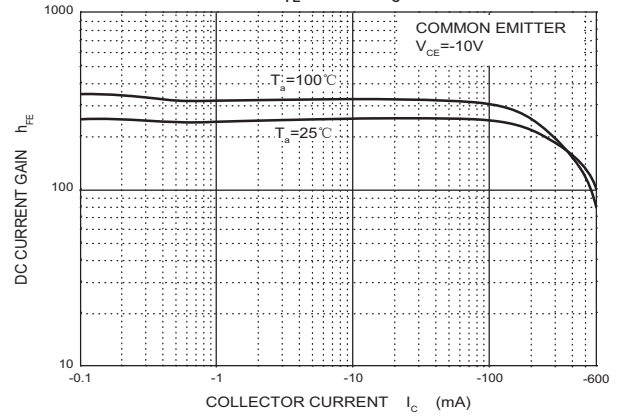
### CLASSIFICATION OF $h_{FE(2)}$

Rank	L	H
Range	100-200	200-300

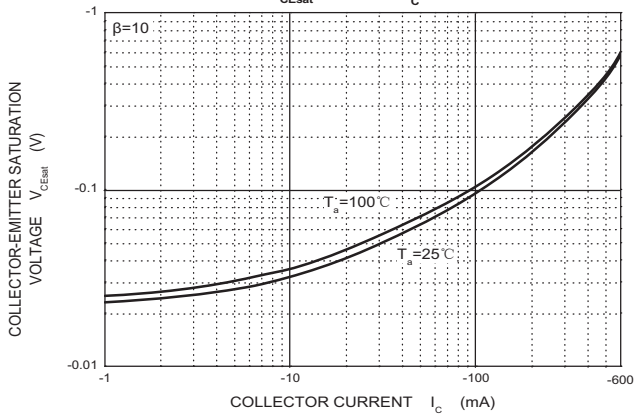
**Static Characteristic**



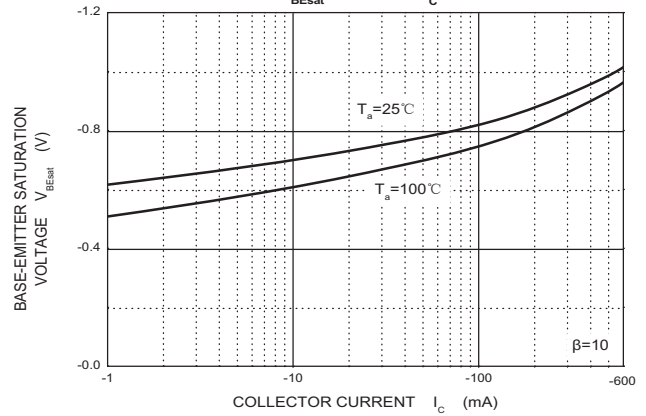
$h_{FE} - I_c$



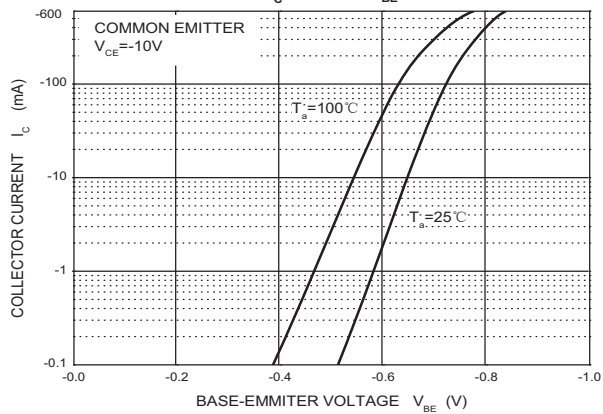
$V_{CEsat} - I_c$



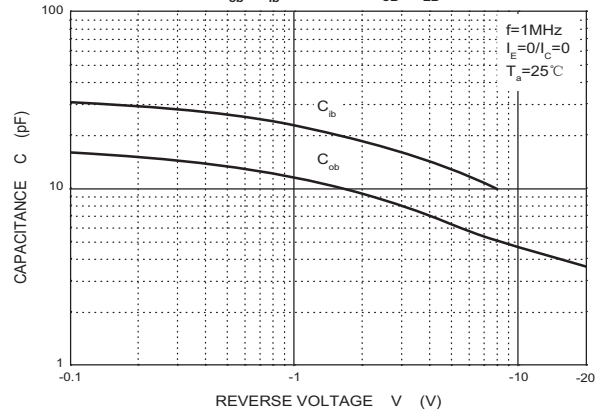
$V_{BEsat} - I_c$



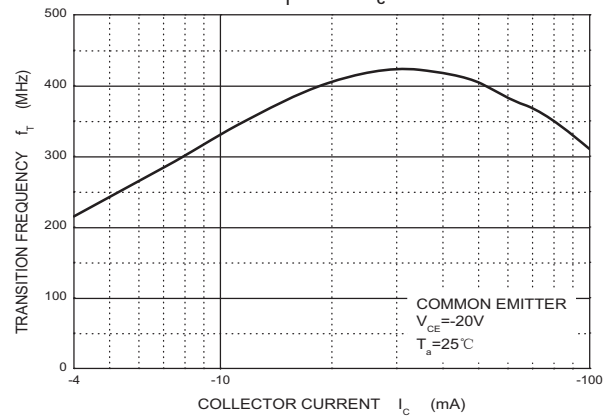
$I_c - V_{BE}$



$C_{ob}/C_{ib} - V_{CE}/V_{EB}$



$f_T - I_c$



$P_c - T_a$

