

TO-92 Plastic-Encapsulate Transistors

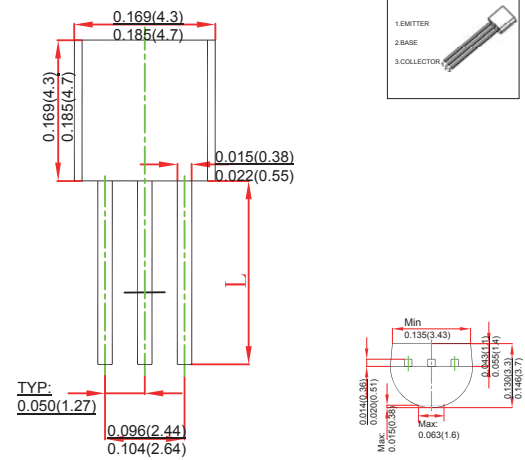
FEATURES

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

MECHANICAL DATA

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

TO-92



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	°C /W
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55 ~+150	°C

ORDERING INFORMATION

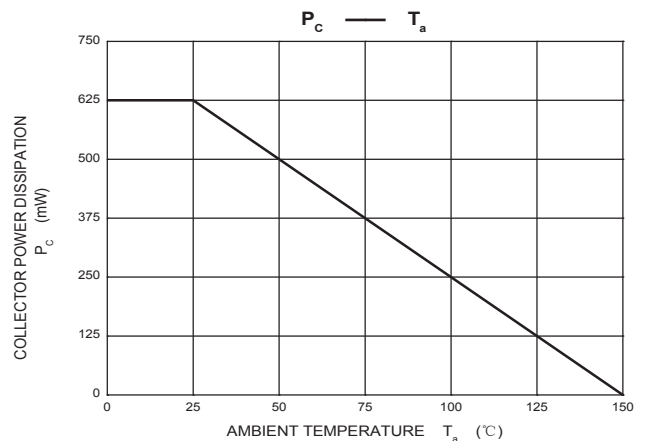
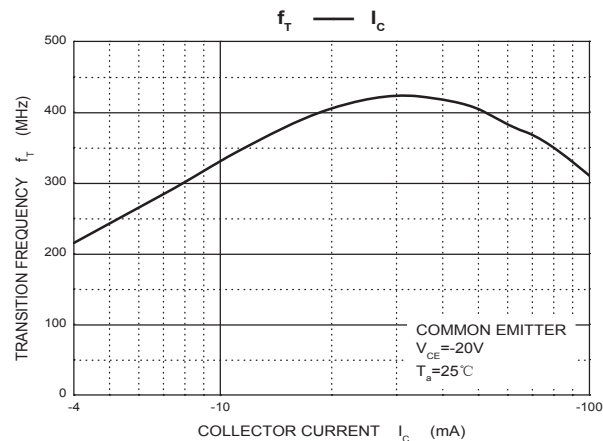
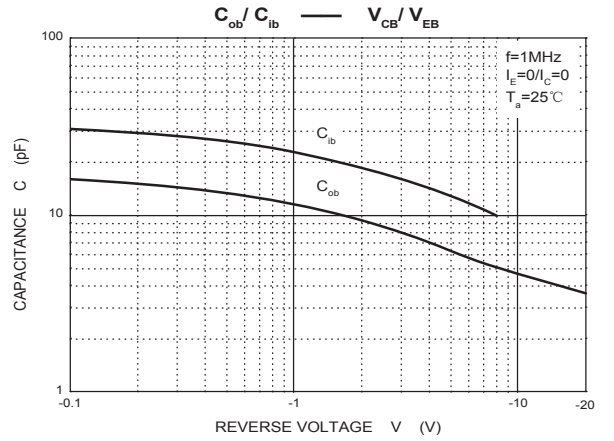
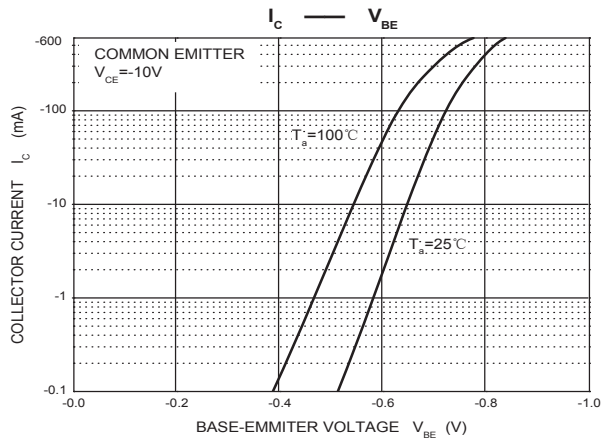
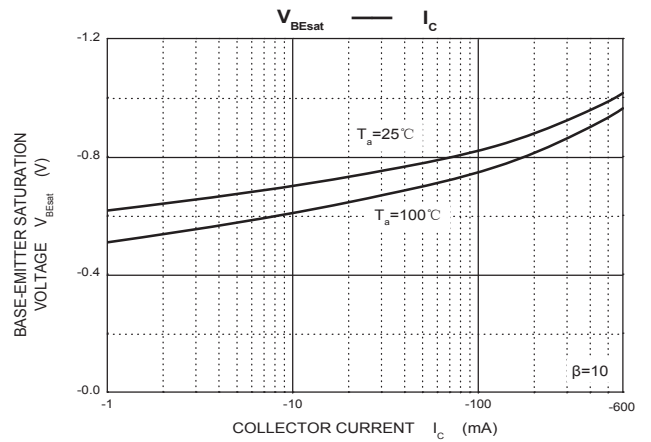
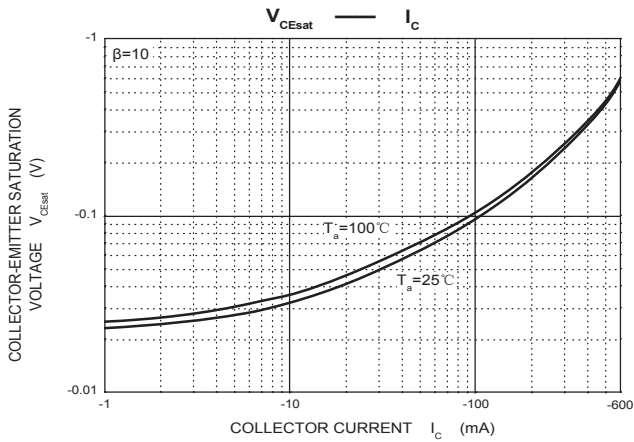
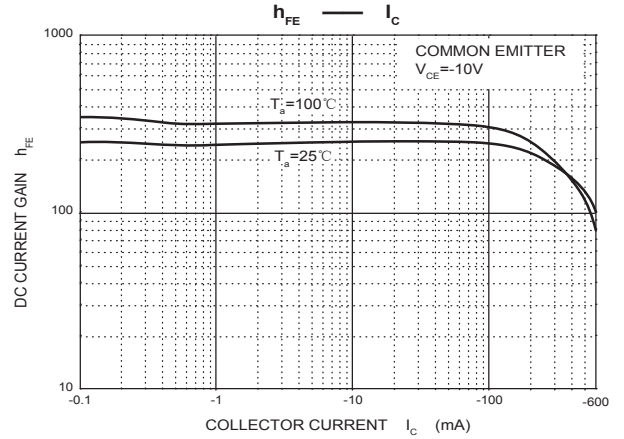
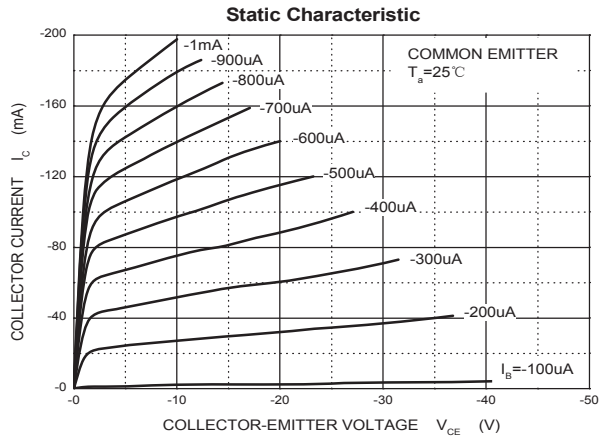
Part Number	Package	Packing Method	Pack Quantity
MPS2907A	TO-92	Bulk	1000pcs/Bag
MPS2907A-TA	TO-92	Tape	2000pcs/Box

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -50V, I_E = 0$			-10	nA
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	$V_{CC} = -30V, I_C = -150mA,$			10	ns
Rise time	t_r	$I_{B1} = -I_{B2} = -15mA$			25	ns
Storage time	t_s	$V_{CC} = -6V, I_C = -150mA,$			225	ns
Fall time	t_f	$I_{B1} = -I_{B2} = -15mA$			60	ns

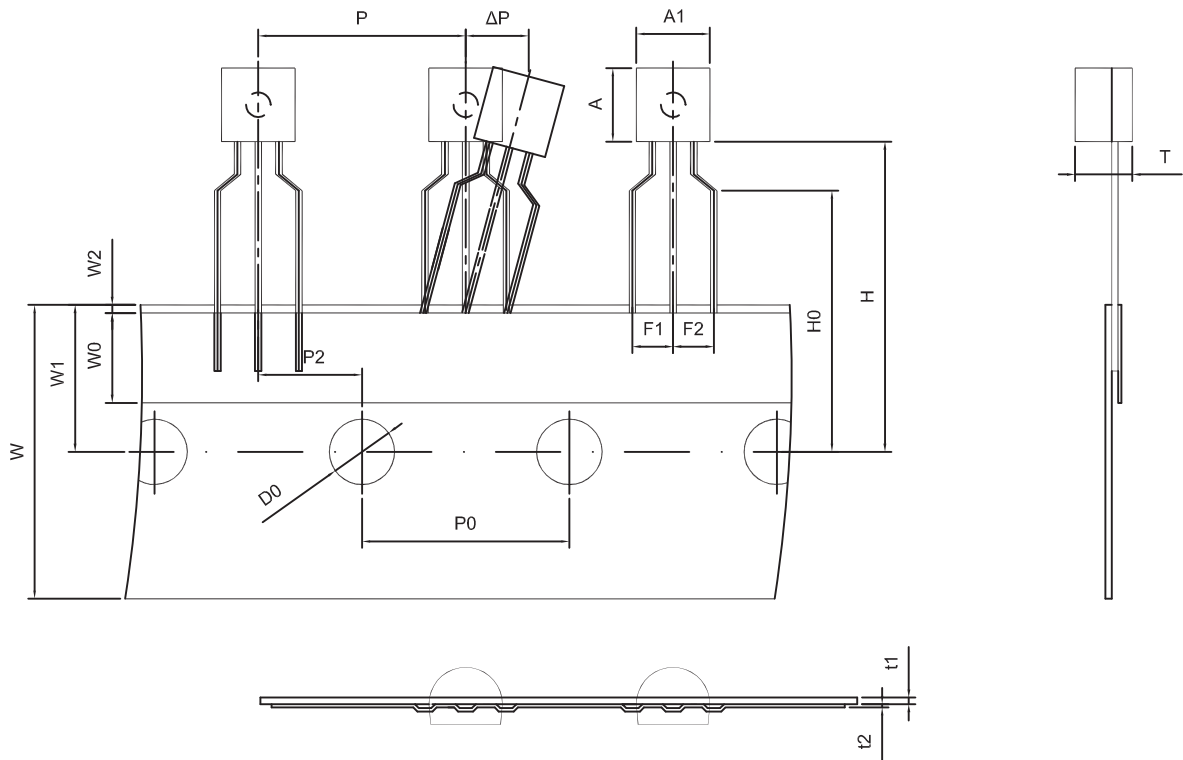
CLASSIFICATION OF $h_{FE(2)}$

Rank	L	H
Range	100-200	200-300

Marking	MPS2907
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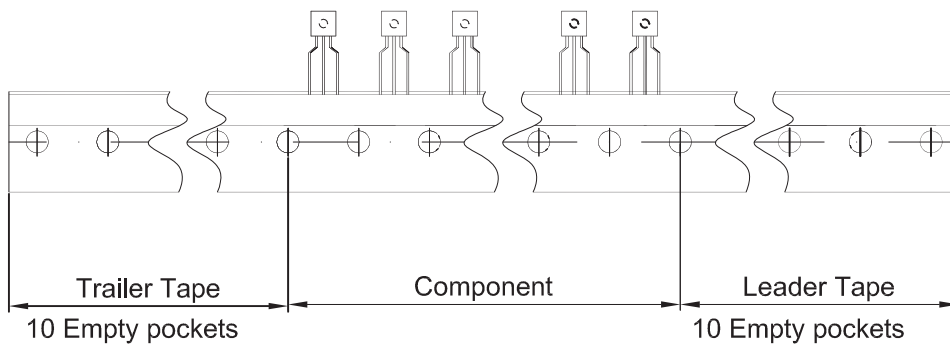


TO-92 PACKAGE TAPEING DIMENSION



Dimensions are in millimeter

A1	A	T	P	P0	P2	F1	F2	W
4.5	4.5	3.5	12.7	12.7	6.35	2.5	2.5	18.0
W0	W1	W2	H	H0	D0	t1	t2	ΔP
6.0	9.0	1.0 MAX.	19.0	16.0	4.0	0.4	0.2	0



Package	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92	2000 pcs	333×162×43	20,000 pcs	350×340×250