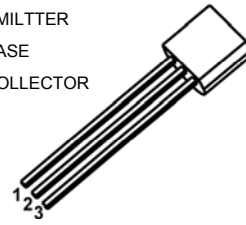


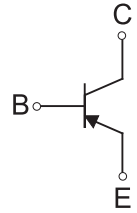
Features

- High voltage

1. EMILTTER
2. BASE
3. COLLECTOR



TO-92



Schematic Diagram

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Units
Collector-Base Voltage	V _{CBO}	-310	V
Collector-Emitter Voltage	V _{CEO}	-305	V
Emitter-Base Voltage	V _{EBO}	-5	V
Collector Current-Continuous	I _C	-200	mA
Collector Current-Pulsed	I _{CM}	-500	mA
Collector Power Dissipation	P _C	625	mW
Thermal Resistance, Junction to Ambient	R _{θJA}	200	°C/W
Thermal Resistance, Junction to Case	R _{θJC}	83.3	°C/W
Operation Junction and Storage Temperature Range	T _J , T _{stg}	-55 to +150	°C

Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	V _{(BR)CBO}	I _C =-100uA, I _E =0	-310	-	-	V
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =-1mA, I _B =0	-305	-	-	V
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	I _E =-100μA, I _C =0	-5	-	-	V
Collector Cut-Off Current	I _{CBO}	V _{CB} =-200V, I _E =0	-	-	-0.25	μA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =-5V, I _C =0	-	-	-0.1	μA
DC Current Gain	h _{FE(1)}	V _{CE} =-10V, I _C =-1mA	60	-	-	-
	h _{FE(2)}	V _{CE} =-10V, I _C =-10mA	80	-	250	-
	h _{FE(3)}	V _{CE} =-10V, I _C =-80mA	60	-	-	-
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C =-20mA, I _B =-2mA	-	-	-0.2	V
Base-Emitter Saturation Voltage	V _{BE(sat)}	I _C =-20mA, I _B =-2mA	-	-	-0.9	V
Transition Frequency	f _T	V _{CE} =-20V, I _C =-10mA, F=30MHz	50	-	-	MHz

Classification of h_{FE(2)}

Rank	A	B	C
Range	80-100	100-200	200-250

Typical Characteristic Curves

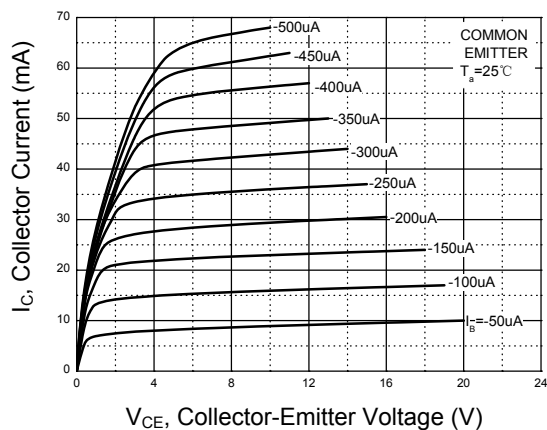


Figure 1. $I_C - V_{CE}$

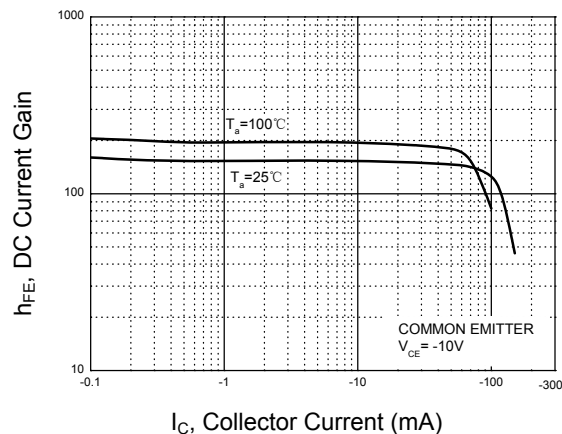


Figure 2. $h_{FE} - I_C$

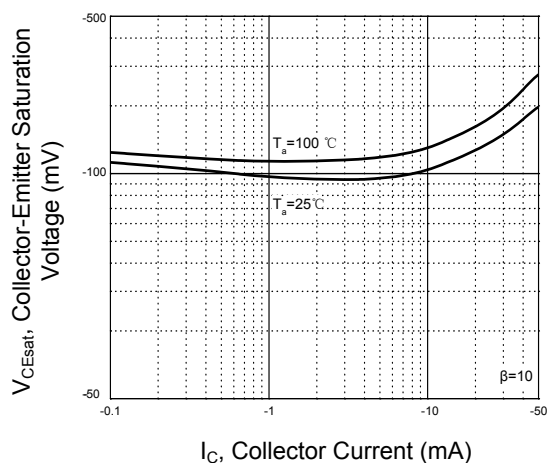


Figure 3. $V_{CEsat} - I_C$

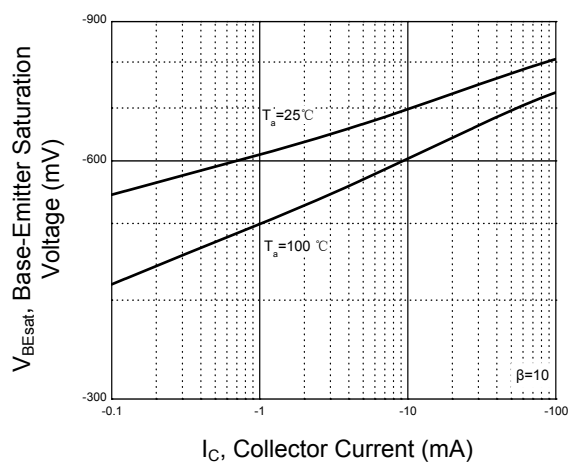


Figure 4. $V_{BEsat} - I_C$

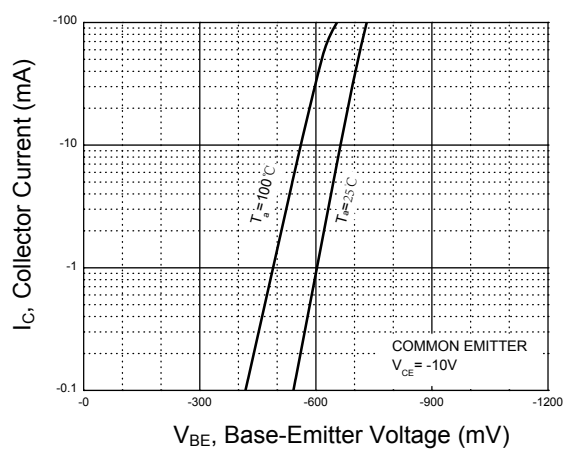


Figure 5. $I_C - V_{BE}$

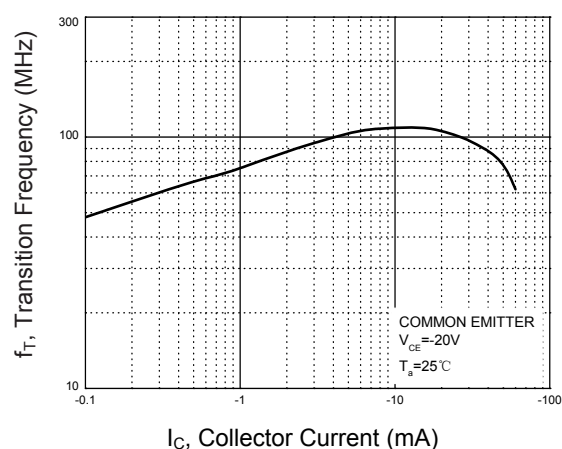


Figure 6. $f_T - I_C$

Typical Characteristic Curves

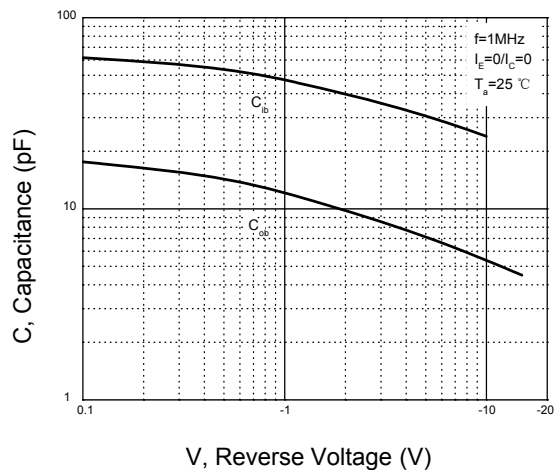


Figure 7. $C_{ob}/C_{ib} - V_{CB}/V_{EB}$

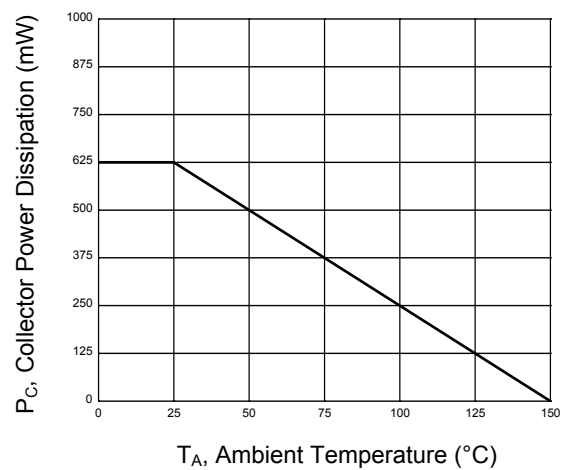
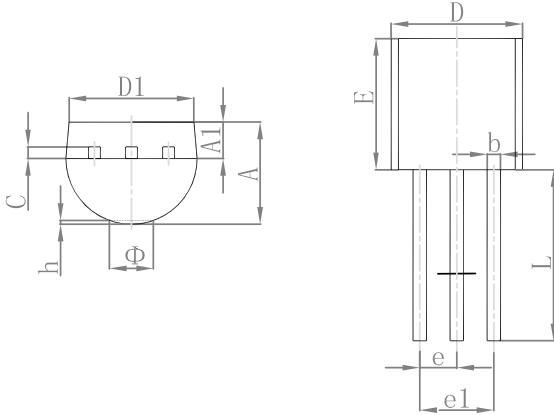


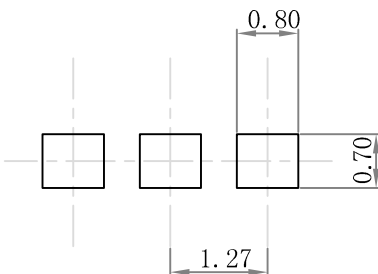
Figure 8. $P_C - T_A$

Package Outline Dimensions (TO-92)



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.300	4.700	0.169	0.185
D1	3.430	-	0.135	-
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Φ	-	1.600	-	0.063
h	0.000	0.380	0.000	0.015

Recommended Pad Layout



Note:

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

Order Information

Device	Package	Marking	Quantity	HSF Status
GSMPSA92-A	TO-92	A92A	2,000pcs / Box	RoHS Compliant
GSMPSA92-B	TO-92	A92B	2,000pcs / Box	RoHS Compliant
GSMPSA92-C	TO-92	A92C	2,000pcs / Box	RoHS Compliant