



**2SA812-M4
 2SA812-M5
 2SA812-M6
 2SA812-M7**

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- High DC Current Gain: $90 \leq h_{FE} \leq 600$ ($V_{CE} = -6.0V$, $I_C = -1mA$)
- High voltage: $V_{CEO} = -50V$
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

Maximum Ratings

Symbol	Rating	Rating	Unit
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{CBO}	Collector-Base Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-5.0	V
I_C	Collector Current	-100	mA
P_C	Collector power dissipation	200	mW
T_J	Junction Temperature	-55 to +150	°C
T_{STG}	Storage Temperature	-55 to +150	°C

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units
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OFF CHARACTERISTICS

I_{CBO}	Collector Cutoff Current ($V_{CB} = -60Vdc$, $I_E = 0$)	---	---	-0.1	μA_{dc}
I_{EBO}	Emitter Cutoff Current ($V_{EB} = -5.0Vdc$, $I_C = 0$)	---	---	-0.1	μA_{dc}

ON CHARACTERISTICS

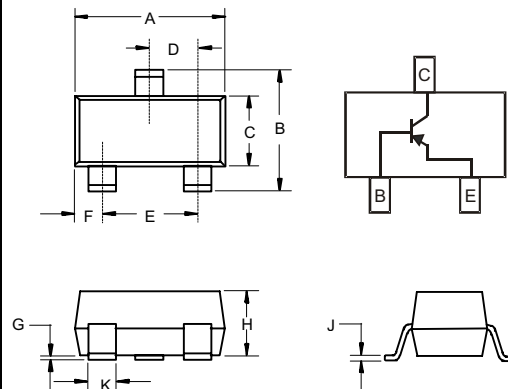
h_F	DC Current Gain* ($I_C = -1.0mA_{dc}$, $V_{CE} = -6.0Vdc$)	90	---	600	---
$V_{CE(sat)}$	Collector Saturation Voltage* ($I_C = -100mA_{dc}$, $I_B = -10mA_{dc}$)	---	---	-0.3	Vdc
V_{BE}	Base Emitter Voltage* ($V_{CE} = -6.0Vdc$, $I_C = -1.0mA_{dc}$)	---	---	-0.68	Vdc
f_T	Gain Bandwidth product ($V_{CE} = -6.0Vdc$, $I_E = -10mA_{dc}$)	180	---	---	MHz

CLASSIFICATION OF h_{FE}

Marking	M4	M5	M6	M7
Range	90-180	135-270	200-400	300-600

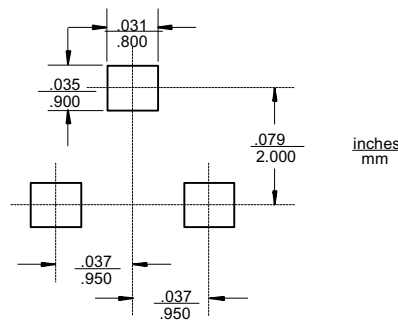
**PNP Silicon
 Epitaxial Transistors**

SOT-23

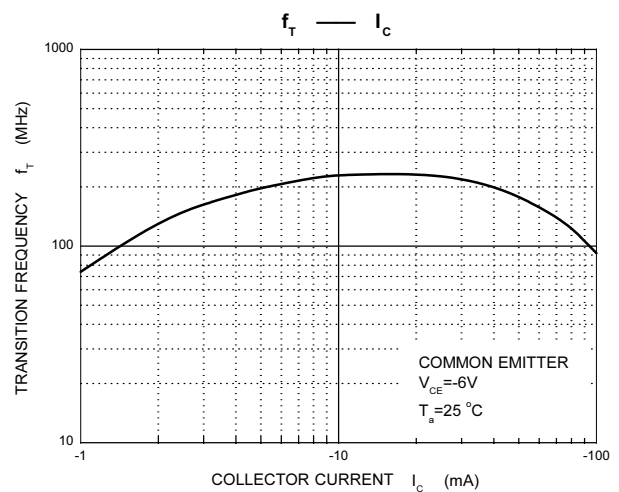
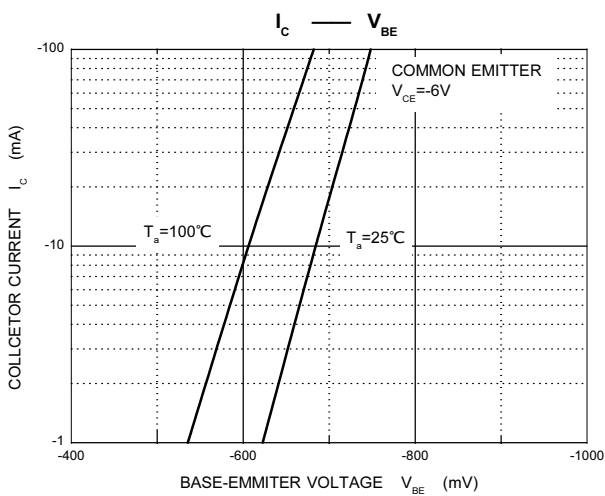
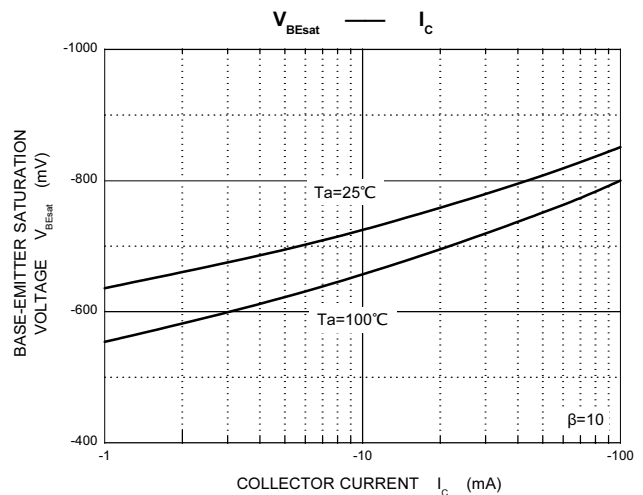
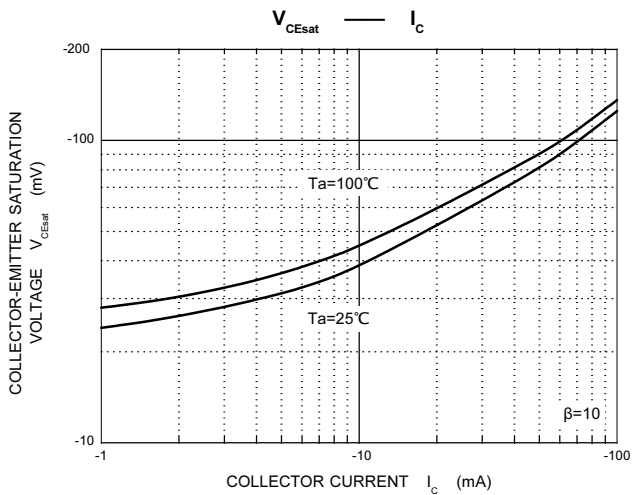
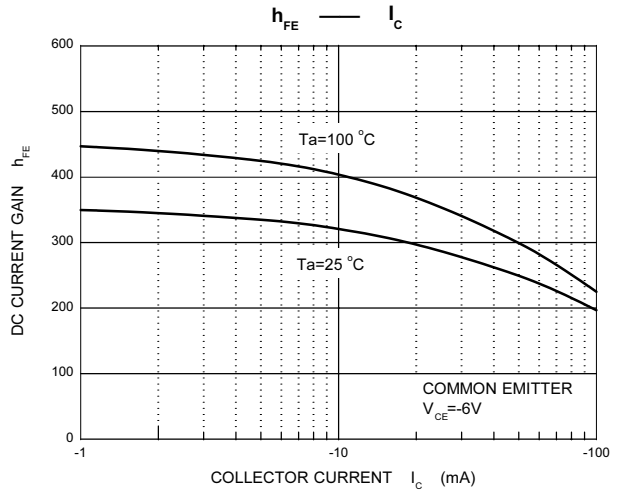
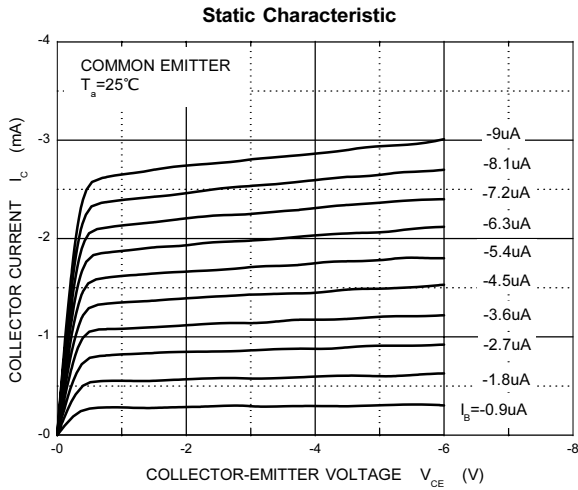


DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

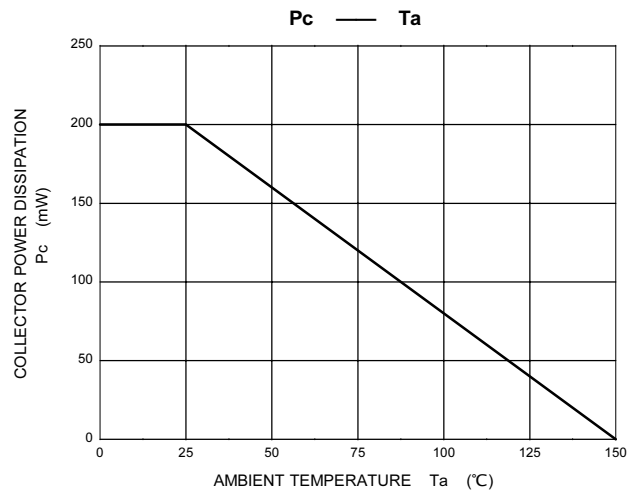
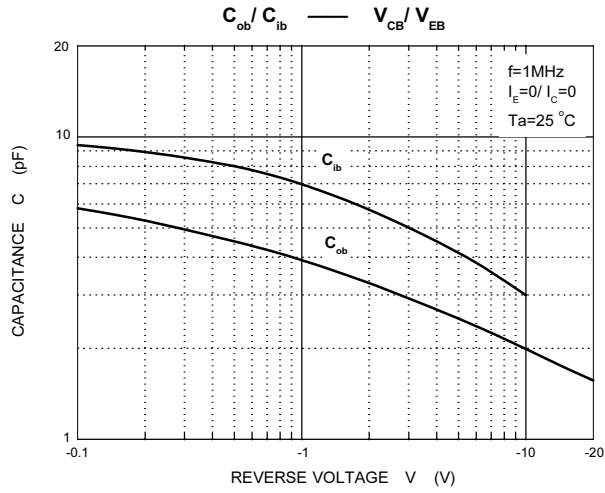
**Suggested Solder
 Pad Layout**



Typical Characteristics



Typical Characteristics





TM

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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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