



Micro Commercial Components



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**2SA1036-P
2SA1036-Q
2SA1036-R**

Features

- Halogen free available upon request by adding suffix "-HF"
- Large I_c . $I_{CMax.} = -0.5 A$
- Low $V_{CE(sat)}$. Ideal for low-voltage operation.
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)

Maximum Ratings @ $T_a = 25^\circ C$ (unless otherwise noted)

Symbol	Parameter	Value	Unit
I_c	Collector Current	-0.5	A
P_D	Collector Power Dissipation	0.2	W
T_J	Junction Temperature	150	$^\circ C$
T_{STG}	Storage Temperature Range	-55 to +150	$^\circ C$

Electrical Characteristics @ $25^\circ C$ Unless Otherwise Specified

Symbol	Parameter	Min	TYPE	Max	Units
OFF CHARACTERISTICS					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_c = -1mA, I_E = 0$)	-32			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_c = -100\mu A, I_E = 0$)	-40			V
$V_{(BR)EBO}$	Collector-Base Breakdown Voltage ($I_E = -100\mu A, I_c = 0$)	-5.0			V
I_{CBO}	Collector-Base Cutoff Current ($V_{CB} = -20Vdc, I_E = 0$)			- 1	μA
I_{EBO}	Emitter-Base Cutoff Current ($V_{EB} = -4.0Vdc, I_c = 0$)			- 1	μA

ON CHARACTERISTICS

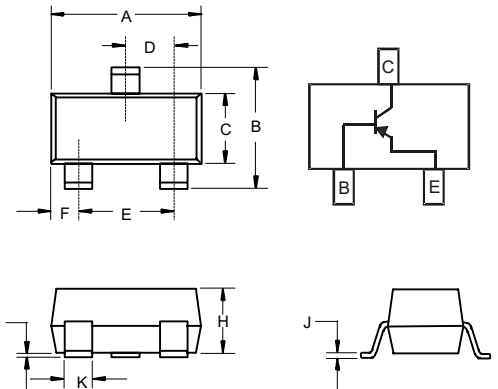
h_{FE}	DC Current Gain ($I_c = -10mA, V_{CE} = -3.0Vdc$)	82		390	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_c = -100mA, I_B = -10mA$)			-0.4	Vdc
F_T	Transition Frequency ($V_{CE} = -5Vdc, I_c = -20mA, f = 100MHz$)		200		MHZ
C_{ob}	($V_{CB} = -10Vdc, I_E = 0, f = 1MHz$)		7		pF

CLASSIFICATION OF h_{FE}

Rank	P	Q	R
Range	82-180	120-270	180-390
Marking	HP	HQ	HR

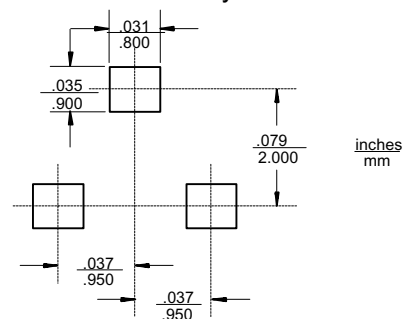
PNP Silicon Epitaxial Transistors

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



2SA1036 Typical Characteristics

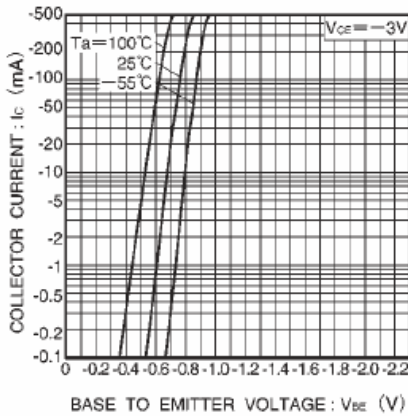


Fig.1 Grounded emitter propagation

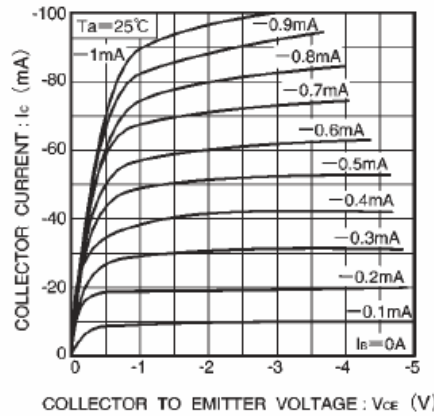


Fig.2 Grounded emitter output characteristics (I)

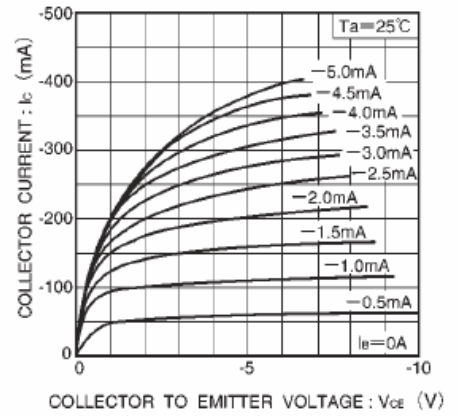


Fig.3 Grounded emitter output characteristics (II)

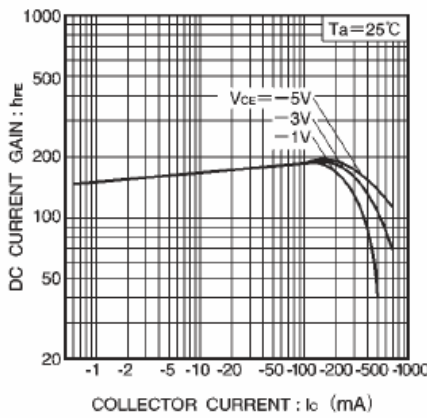


Fig.4 DC current gain vs. collector current (I)

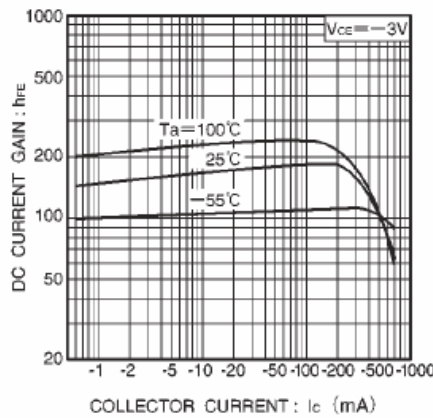


Fig.5 DC current gain vs. collector current (II)

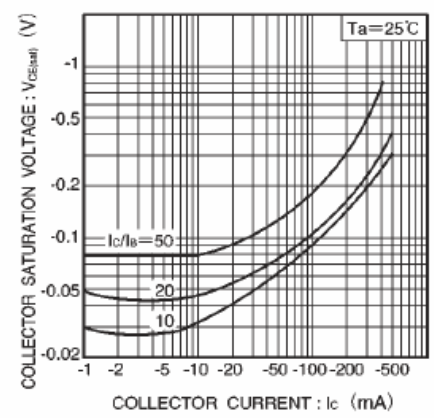


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

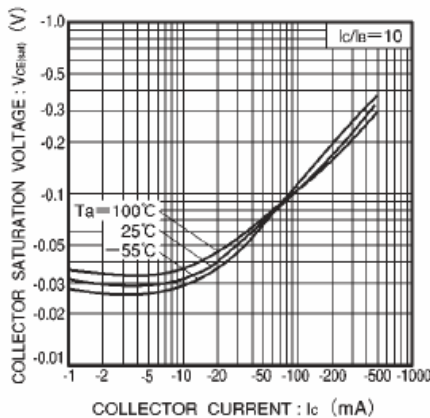


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

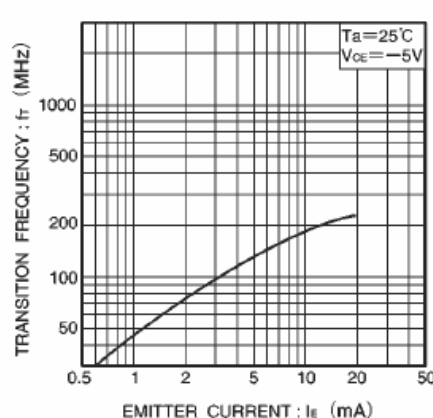


Fig.8 Gain bandwidth product vs. emitter current

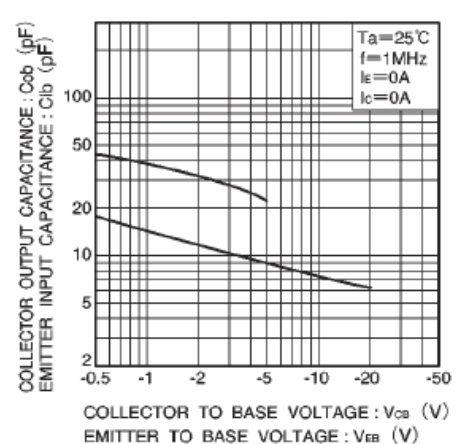


Fig.9 Collector output capacitance vs. collector-base voltage. Emitter input capacitance vs. emitter-base voltage



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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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