

FEATURES

Large I_C . $I_{CMax} = -500$ mA

Low $V_{CE(sat)}$. Ideal for low-voltage operation.

2SA1036(PNP)


MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-32	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current -Continuous	I_C	-500	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CBO}	$I_C=-100\mu\text{A}, I_E=0$	-40			V
Collector-emitter breakdown voltage	V_{CEO}	$I_C=-1\text{mA}, I_B=0$	-32			V
Emitter-base breakdown voltage	V_{EBO}	$I_E=-100\mu\text{A}, I_C=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-20\text{V}, I_E=0$			-1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-4\text{V}, I_C=0$			-1	μA
DC current gain	h_{FE}	$V_{CE}=-3\text{V}, I_C=-10\text{mA}$	82		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-100\text{mA}, I_B=-10\text{mA}$			-0.4	V
Transition frequency	f_T	$V_{CE}=-5\text{V}, I_C=-20\text{mA}, f=100\text{MHz}$		200		MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10\text{V}, I_E=0, f=1\text{MHz}$		7		pF

CLASSIFICATION OF h_{FE}

Marking	HP	HQ	HR
Range	82-180	120-270	180-390

2SA1036 Typical Characteristics

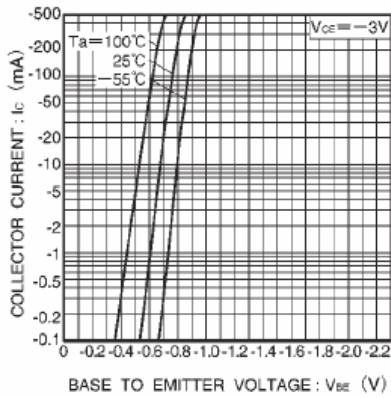


Fig.1 Grounded emitter propagation

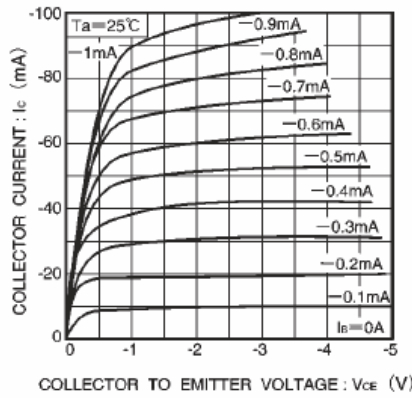


Fig.2 Grounded emitter output characteristics (I)

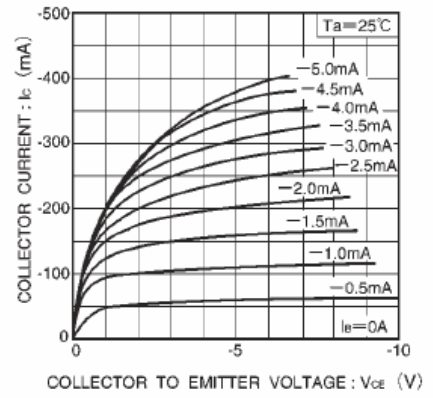


Fig.3 Grounded emitter output characteristics (II)

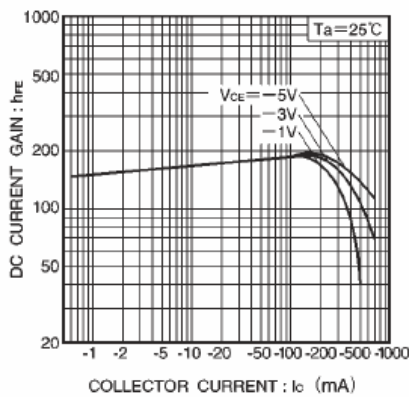


Fig.4 DC current gain vs. collector current (I)

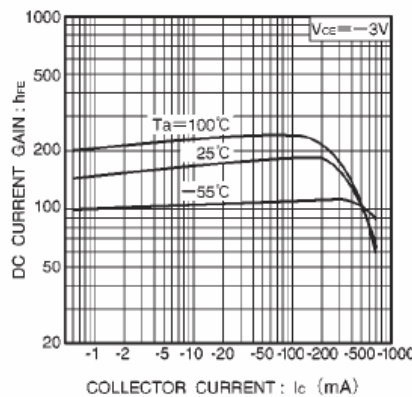


Fig.5 DC current gain vs. collector current (II)

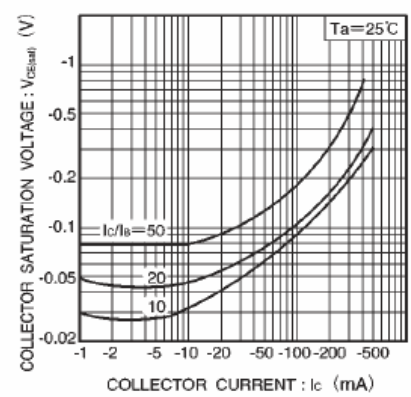


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

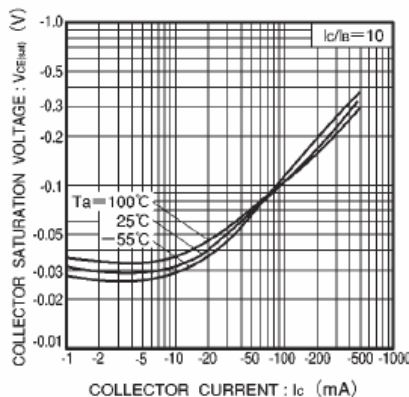


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

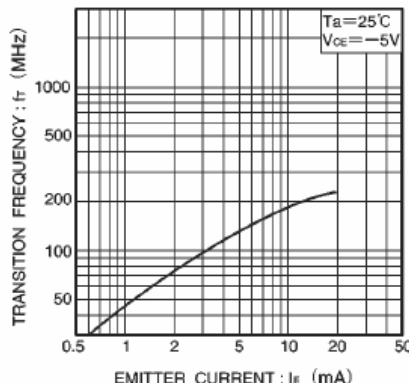


Fig.8 Gain bandwidth product vs. emitter current

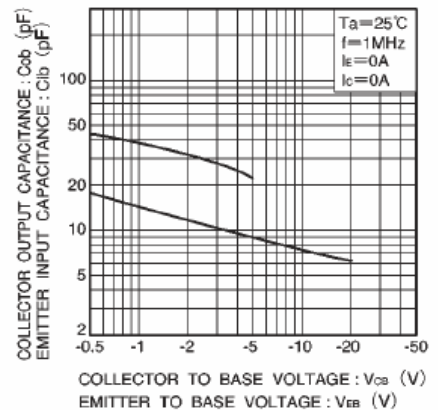


Fig.9 Collector output capacitance vs. collector-base voltage. Emitter input capacitance vs. emitter-base voltage