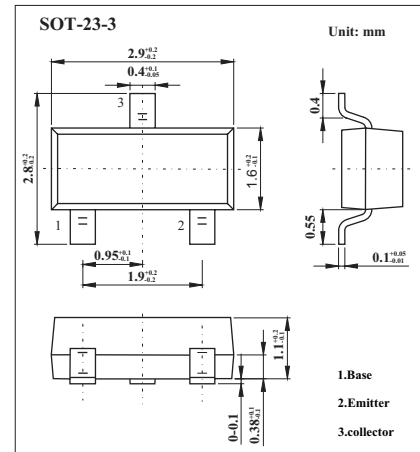


Medium Power Transistor

2SA1036K

■ Features

- Large I_c . $I_{cMax.} = -500mA$
- Low $V_{CE(sat)}$. Ideal for low-voltage operation.



■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-40	V
Collector-emitter voltage	V_{CEO}	-32	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current *	I_c	-0.5	A
Collector power dissipation	P_c	0.2	W
Junction temperature	T_j	150	$^\circ C$
Storage temperature	T_{stg}	-55 to +150	$^\circ C$

* P_c max. must not be exceeded.

■ Electrical Characteristics $T_a = 25^\circ C$

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

■ h_{FE} Classification

Marking	HP	HQ	HR
Rank	P	Q	R
h_{FE}	82~180	120~270	180~390

2SA1036K

■ Typical Characteristics

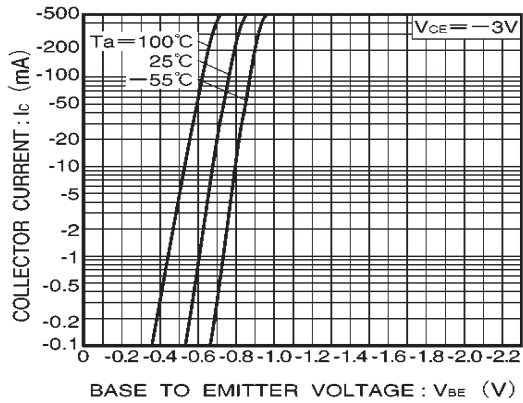


Fig.1 Grounded emitter propagation

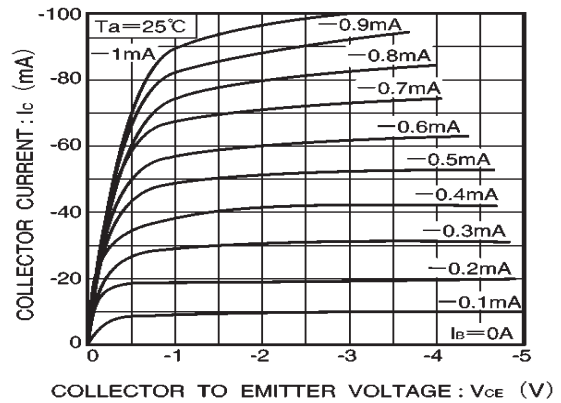


Fig.2 Grounded emitter output characteristics (I)

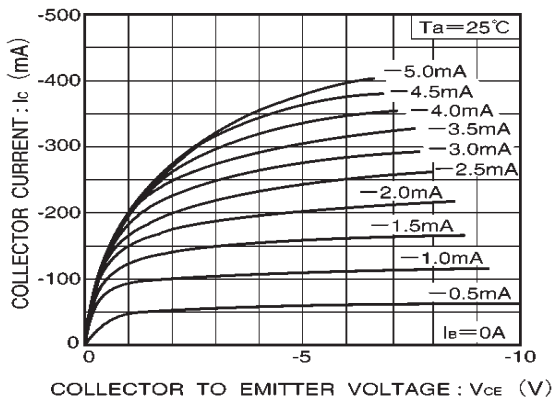


Fig.3 Grounded emitter output characteristics (II)

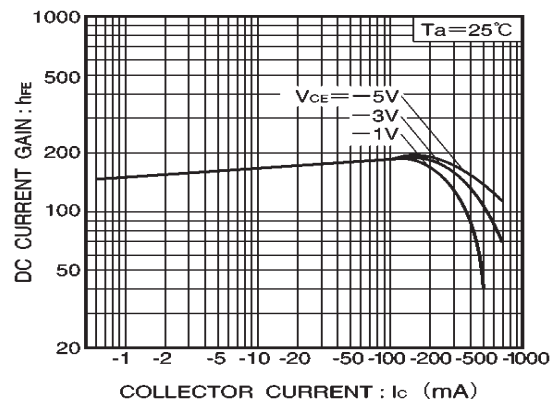


Fig.4 DC current gain vs. collector current (I)

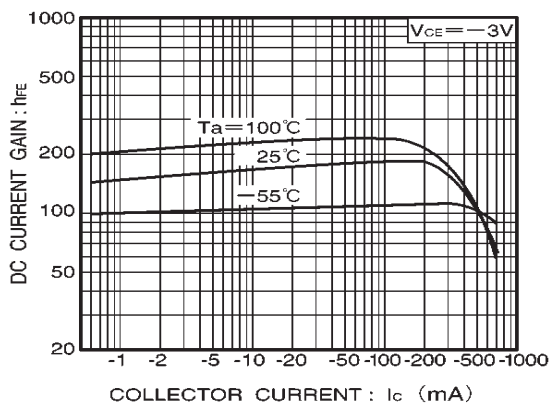


Fig.5 DC current gain vs. collector current (II)

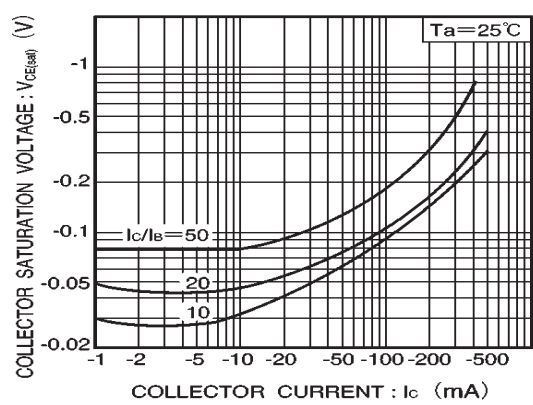


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

2SA1036K

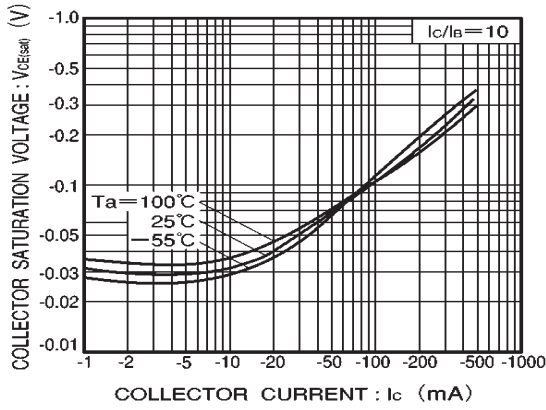


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

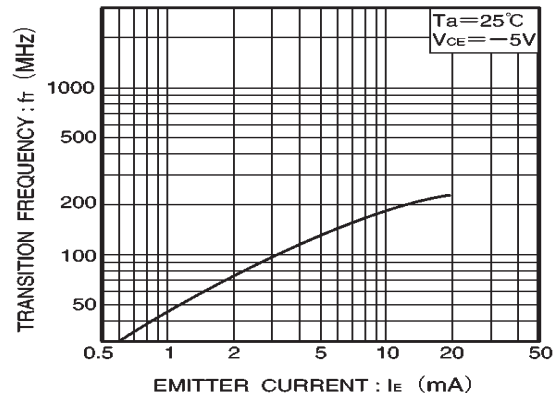


Fig.8 Gain bandwidth product vs. emitter current

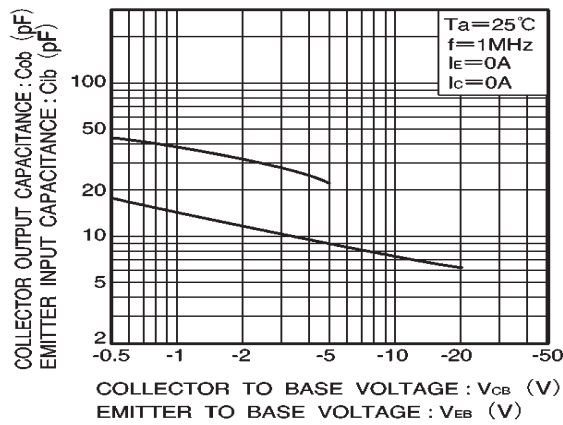


Fig.9 Collector output capacitance vs. collector-base voltage. Emitter input capacitance vs. emitter-base voltage