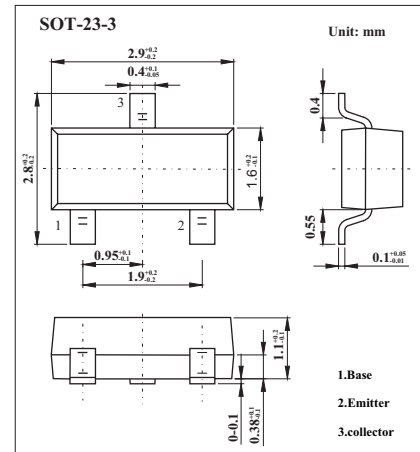


## Medium Power Transistor 2SA1036K

### ■ 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	$\mu A$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = -4 V$			-1	$\mu A$
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

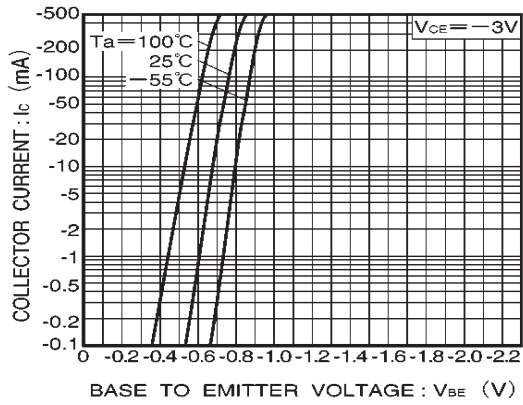


Fig.1 Grounded emitter propagation

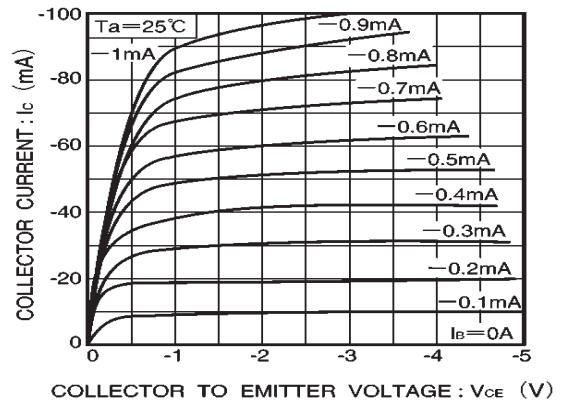


Fig.2 Grounded emitter output characteristics ( I )

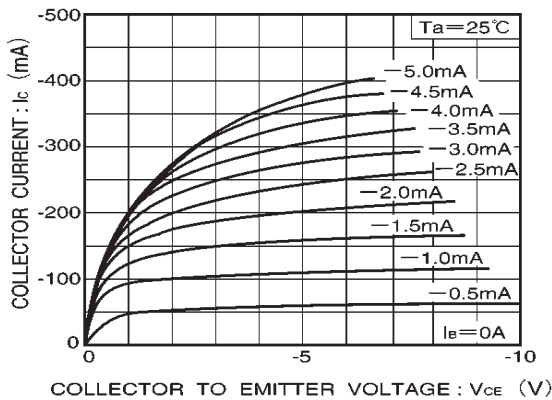


Fig.3 Grounded emitter output characteristics ( II )

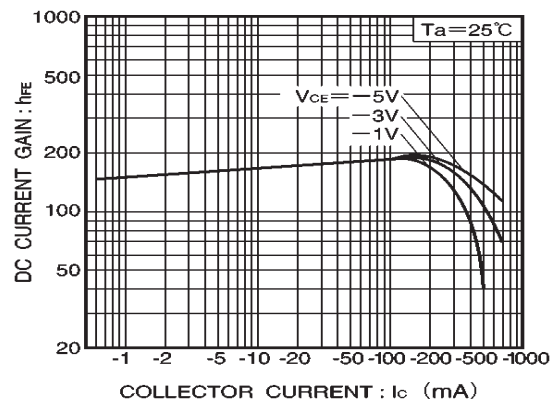


Fig.4 DC current gain vs. collector current ( I )

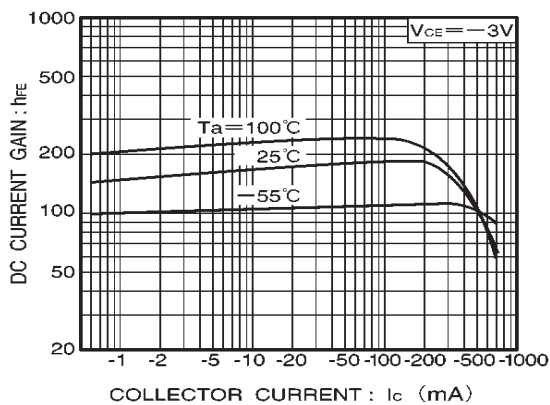


Fig.5 DC current gain vs. collector current ( II )

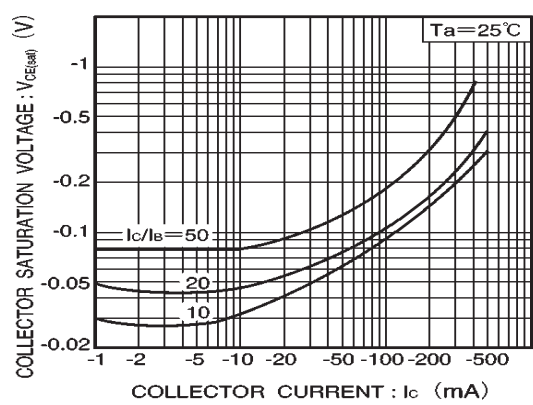


Fig.6 Collector-emitter saturation voltage vs. collector current ( I )

### 2SA1036K

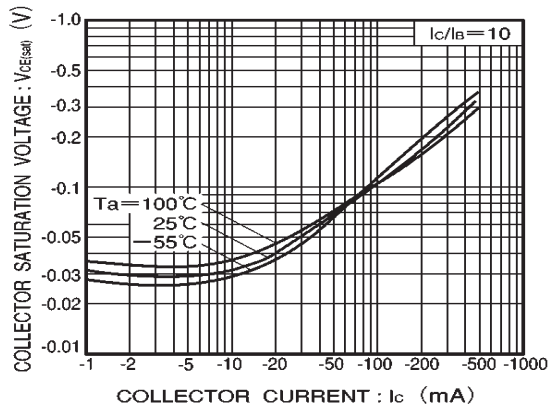


Fig.7 Collector-emitter saturation voltage vs. collector current ( II )

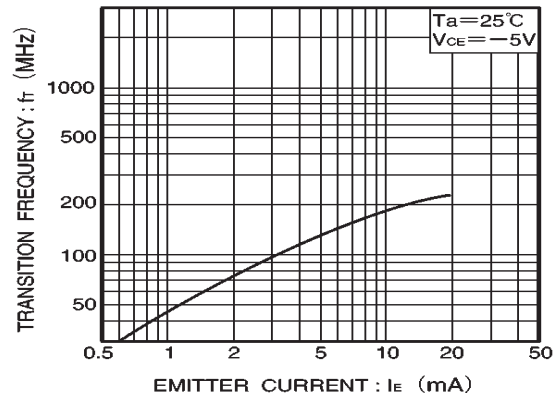


Fig.8 Gain bandwidth product vs. emitter current

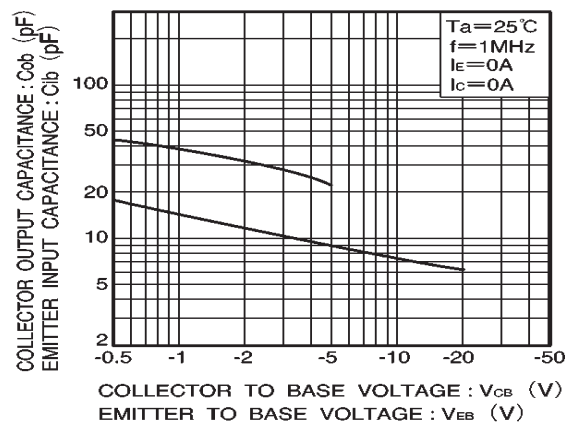


Fig.9 Collector output capacitance vs. collector-base voltage. Emitter input capacitance vs. emitter-base voltage