Medium Power Transistor

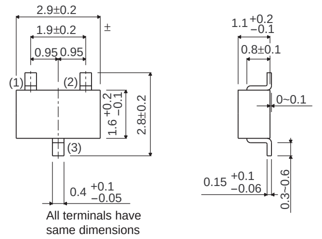
2SA1036K

●Features

1) Large I_C.
   $I_{CMAX.}$ = -500mA
2) Low $V_{CE(sat)}$. Ideal for low-voltage operation.
3) Complements the 2SC2411K.

●Dimensions (Unit : mm)

2SA1036K



ROHM : SMT3
EIAJ : SC-59

(1) Emitter
(2) Base
(3) Collector

Abbreviated symbol : H ∗

∗ Denotes h_{FE}

●Structure

Epitaxial planer type
PNP silicon transistor

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	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	Tj	150	°C	
Storage temperature	Tstg	–55 to +150	°C	

∗$P_{C\ MAX.}$ must not be exceeded.

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	–40	–	–	V	I_C= –100μA
Collector-emitter breakdown voltage	BV_{CEO}	–32	–	–	V	I_C= –1mA
Emitter-base breakdown voltage	BV_{EBO}	–5	–	–	V	I_E= –100μA
Collector outoff current	I_{CBO}	–	–	–1	μA	V_{CB}= –20V
Emitter cutoff current	I_{EBO}	–	–	–1	μA	V_{EB}= –4V
Collector-emitter saturation voltage	$V_{CE(sat)}$	–	–	–0.6	V	I_C/I_B= –300mA/–30mA
DC current transfer ratio	h_{FE}	120	–	390	–	V_{CE}= –3V, I_C= –100mA
Transition frequency	f_T	–	200	–	MHz	V_{CE}= –5V, I_E=20mA, f=100MHz
Output capacitance	Cob	–	7	–	pF	V_{CB}= –10V, I_E=0A, f=1MHz

●Packaging specifications

		Package	Taping
		Code	T146
Type	h_{FE}	Basic ordering unit (pieces)	3000
2SA1036K	QR		○

h_{FE} values are classifies as follows.

Item	Q	R
h_{FE}	120 to 270	180 to 390

●Electrical characteristic curves

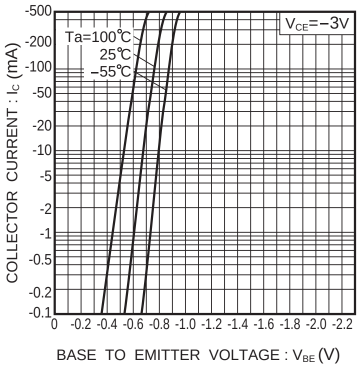


Fig.1 Grounded emitter propogation

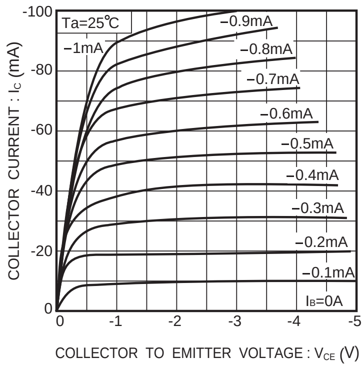


Fig.2 Grounded emitter output characteristics (Ⅰ)

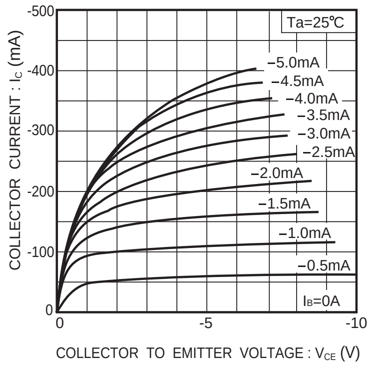


Fig.3 Ground emitter output characteristics (Ⅱ)

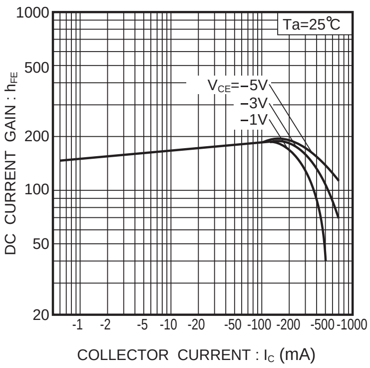


Fig.4 DC current gain vs. collector current (Ⅰ)

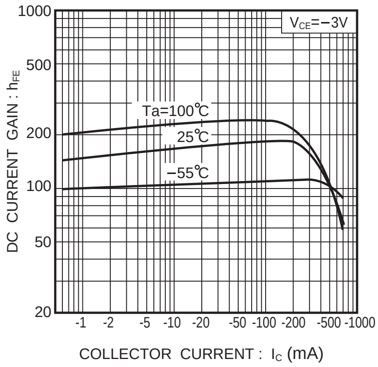


Fig.5 DC current gain vs. collector current (Ⅱ)

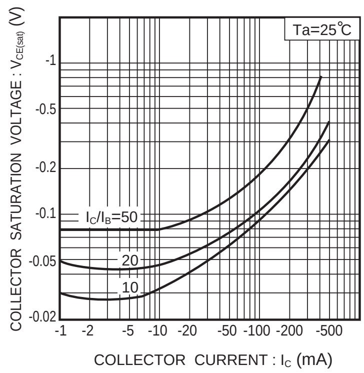


Fig.6 Collector emitter saturation voltage vs. collector current (Ⅰ)

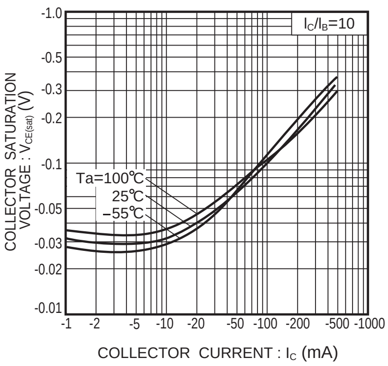


Fig.7 Collector-emitter saturation voltage vs. collector current (Ⅱ)

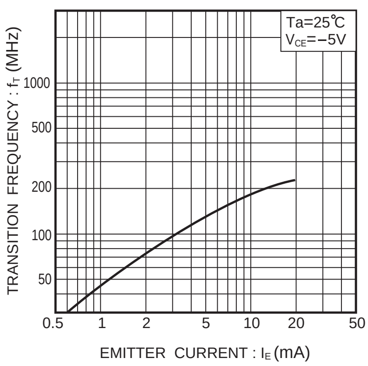


Fig.8 Gain bandwidth product vs. emitter current

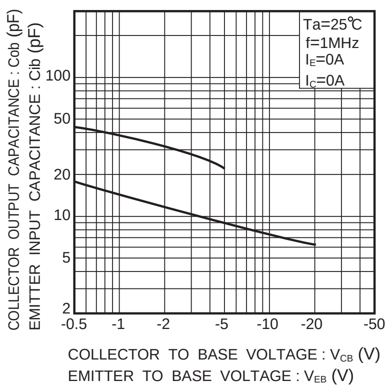


Fig.9 Collectur output capacitance vs. collector-base voltage. Emitter input capacitance vs. emitter -base voltage

Notes

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