

Medium Power Transistor

(-32V, -0.5A)

- Features

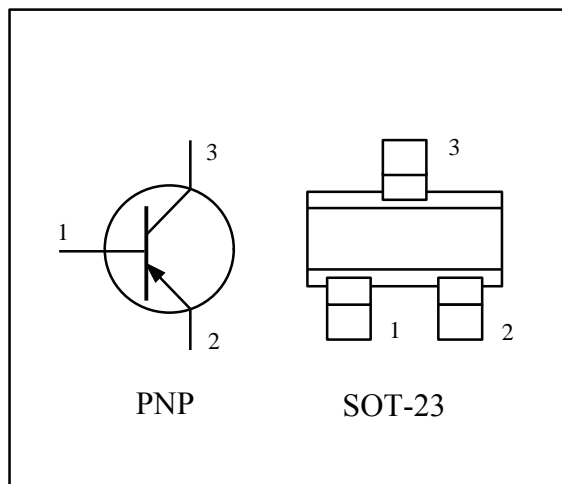
- 1) Large I_C .
 $I_{CMax} = -500mA$
- 2) Low $V_{CE(sat)}$. Ideal for low-voltage operation.
- 3) We declare that the material of product compliance with RoHS requirements.

- Structure

Epitaxial planar type
PNP silicon transistor

- DEVICE MARKING

- | |
|--------------------|
| 1) FTA1036K-P = HP |
| 2) FTA1036K-Q = HQ |
| 3) FTA1036K-R = HR |



- Absolute maximum ratings ($T_a = 25^{\circ}C$)

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	T_j	150	$^{\circ}C$
Storage temperature	T_{stg}	-55 ~ +150	$^{\circ}C$

* $P_{C MAX}$, must not be exceeded.

- ORDERING INFORMATION

Device	Package	Shipping
FTA1036K*LT1G	SOT-23	3000/Tape & Reel

● Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	-40	-	-	V	$I_C = -100\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	-32	-	-	V	$I_C = -1mA$
Emitter-base breakdown voltage	BV_{EBO}	-5	-	-	V	$I_E = -100\mu A$
Collector cutoff current	I_{CBO}	-	-	-1	μA	$V_{CB} = -20V$
Emitter cutoff current	I_{EBO}	-	-	-1	μA	$V_{EB} = -4V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-0.1	-0.25	V	$I_C = -100mA, I_B = -10mA$
DC current transfer ration	h_{FE}	82	-	390	-	$V_{CE} = -3V, I_C = -10mA$
Transition frequency	f_T	-	200	-	MHz	$V_{CE} = -5V, I_E = 20mA, f = 100MHz$
Output capacitance	C_{ob}	-	7	-	pF	$V_{CB} = -10V, I_E = 0A, f = 1MHz$

● h_{FE} values are classified as follows.

Item	P	Q	R
h_{FE}	82 ~ 180	120 ~ 270	180 ~ 390

● Electrical characteristic curves

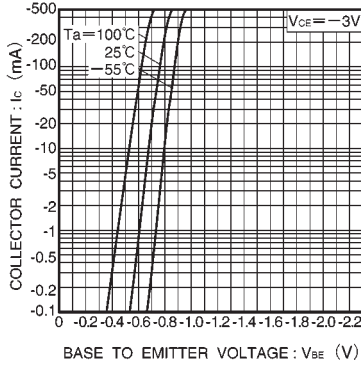


Fig.1 Grounded emitter propagation

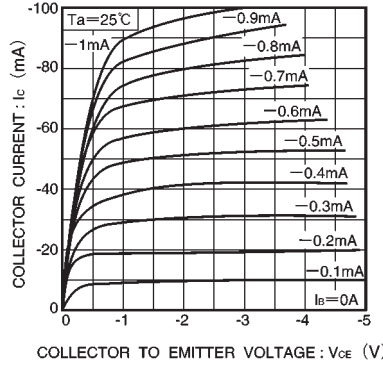


Fig.2 Grounded emitter output characteristics (I)

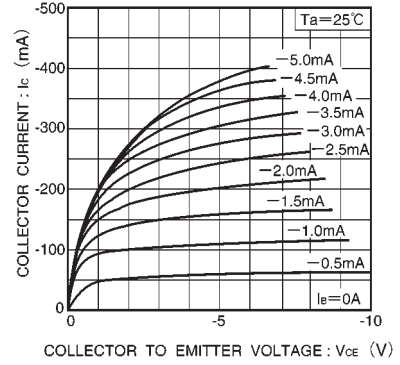


Fig.3 Grounded emitter output characteristics (II)

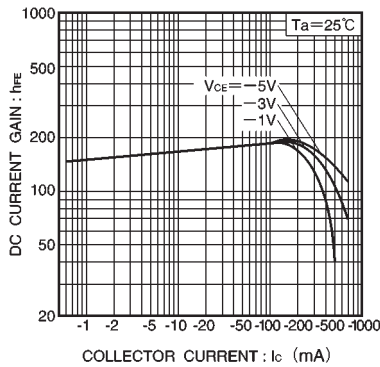


Fig.4 DC current gain vs. collector current (I)

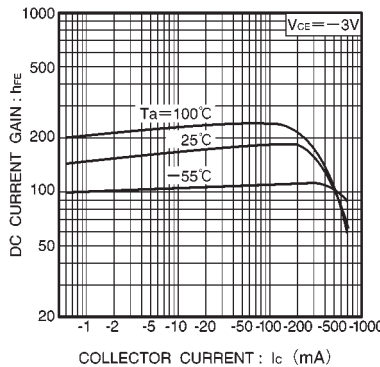


Fig.5 DC current gain vs. collector current (II)

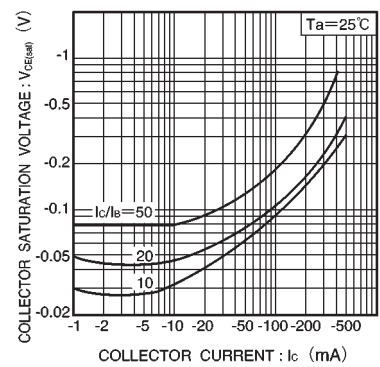


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

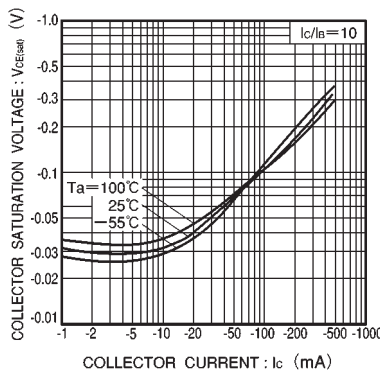


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

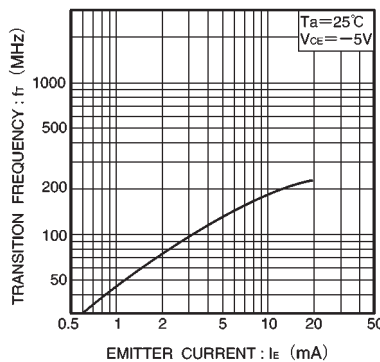


Fig.8 Gain bandwidth product vs. emitter current

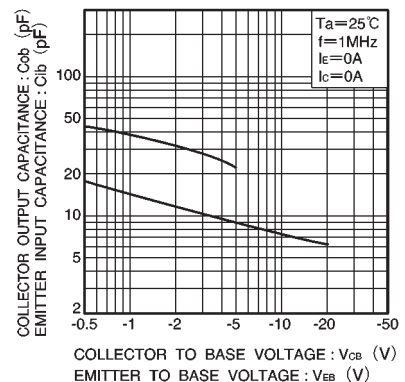
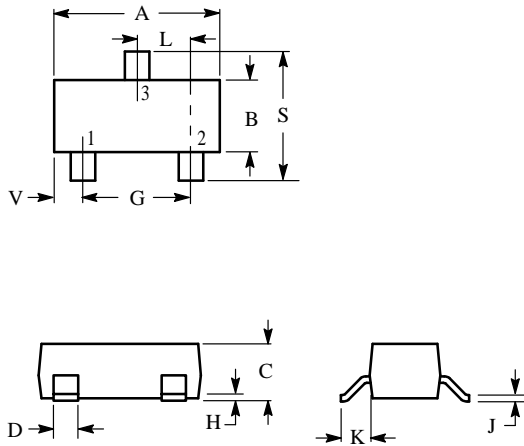


Fig.9 Collector output capacitance vs. collector-base voltage. Emitter input capacitance vs. emitter-base voltage

SOT-23



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.1102	0.1197	2.80	3.04
B	0.0472	0.0551	1.20	1.40
C	0.0350	0.0440	0.89	1.11
D	0.0150	0.0200	0.37	0.50
G	0.0701	0.0807	1.78	2.04
H	0.0005	0.0040	0.013	0.100
J	0.0034	0.0070	0.085	0.177
K	0.0140	0.0285	0.35	0.69
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.1039	2.10	2.64
V	0.0177	0.0236	0.45	0.60

- PIN 1. BASE
 2. EMITTER
 3. COLLECTOR

