

# 2SA1036K 2SA1577

## Transistor, PNP

### Features

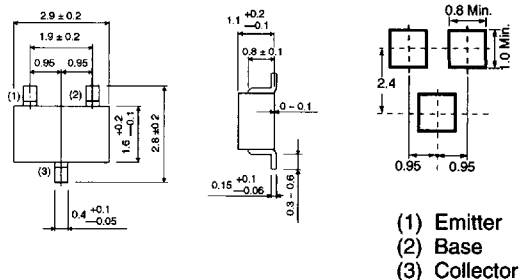
- available in SMT3 (SMT, SC-59) and UMT3 (UMT, SC-70) packages
- package marking: 2SA1036K and 2SA1577; H★, where ★ is  $h_{FE}$  code
- large collector current:  
 $I_{C(max)} = -500 \text{ mA}$
- suitable for low-voltage operations because of its low saturation voltage
- complementary pair with 2SC2411K and 2SC4097

### Applications

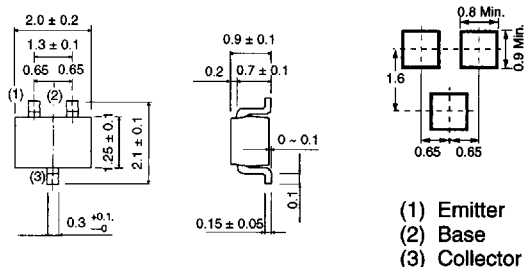
- medium power amplifier

### Dimensions (Units : mm)

#### 2SA1036K (SMT3)



#### 2SA1577 (UMT3)



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

Parameter	Symbol	Limits	Unit	Conditions
Collector-to-base voltage	$V_{CBO}$	-40	V	
Collector-to-emitter voltage	$V_{CEO}$	-32	V	
Emitter-to-base voltage	$V_{EBO}$	-5	V	
Collector current	$I_C$	-500	mA	Do not exceed $P_{C(max)}$
Collector dissipation	$P_C$	200	mW	
Junction temperature	$T_j$	150	$^\circ\text{C}$	
Storage temperature	$T_{stg}$	-55 ~ +150	$^\circ\text{C}$	

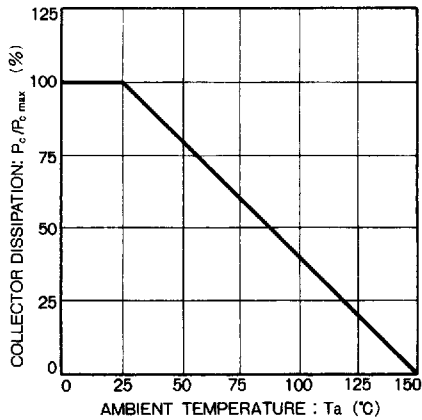
**Electrical characteristics (unless otherwise noted,  $T_a = 25^\circ\text{C}$ )**

Parameter	Symbol	Min	Typical	Max	Unit	Conditions
Collector-to-base breakdown voltage	$BV_{CBO}$	-40			V	$I_C = -100\ \mu\text{A}$
Collector-to-emitter breakdown voltage	$BV_{CEO}$	-32			V	$I_C = -1\ \text{mA}$
Emitter-to-base breakdown voltage	$BV_{EBO}$	-5			V	$I_E = -100\ \mu\text{A}$
Collector cutoff current	$I_{CBO}$			-1	$\mu\text{A}$	$V_{CB} = -20\ \text{V}$
Emitter cutoff current	$I_{EBO}$			-1	$\mu\text{A}$	$V_{EB} = -4\ \text{V}$
DC current gain	$h_{FE}$	82		390		$V_{CE} = -3\ \text{V}$ , $I_C = -10\ \text{mA}$
Collector-to-emitter saturation voltage	$V_{CE(sat)}$			-0.4	V	$I_C / I_B = -100\ \text{mA} / -10\ \text{mA}$
Transition frequency	$f_T$		200		MHz	$V_{CE} = -5\ \text{V}$ , $I_E = 20\ \text{mA}$ , $f = 100\ \text{MHz}$
Output capacitance	$C_{ob}$		7.0		pF	$V_{CB} = -10\ \text{V}$ , $I_E = 0\ \text{mA}$ , $f = 1\ \text{MHz}$

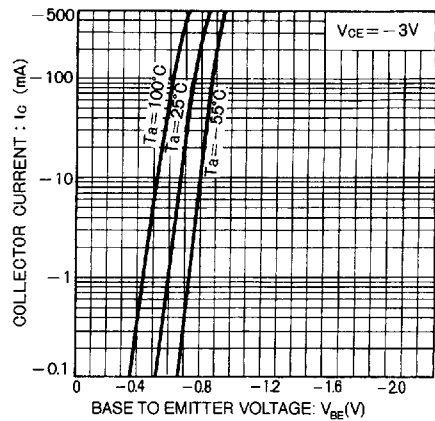
 **$h_{FE}$  rankings**

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

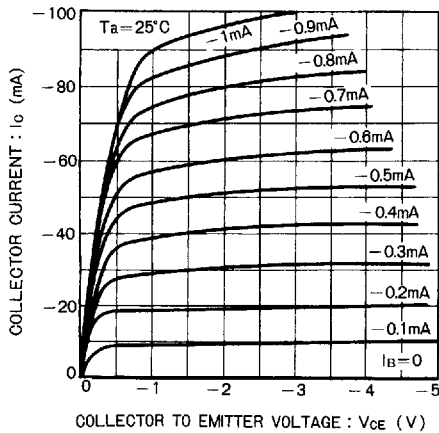
**Electrical characteristic curves**



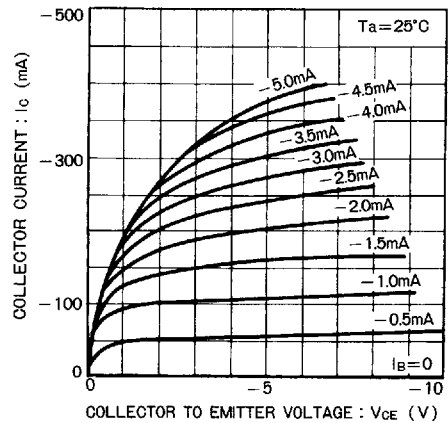
**Figure 1**



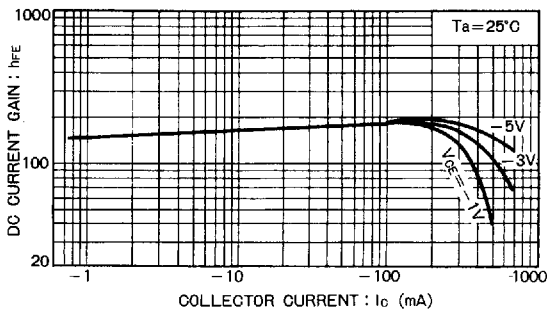
**Figure 2**



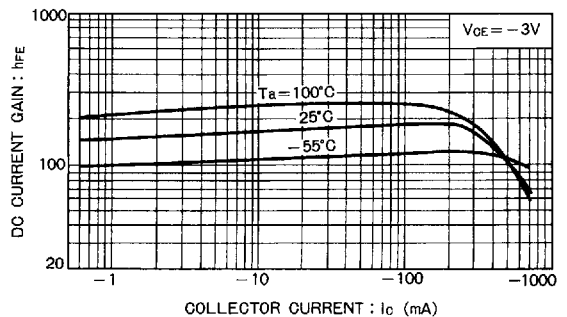
**Figure 3**



**Figure 4**



**Figure 5**



**Figure 6**

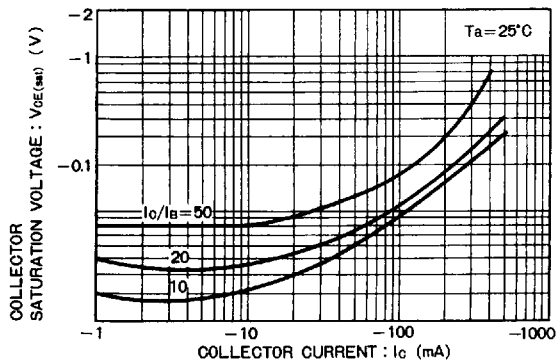


Figure 7

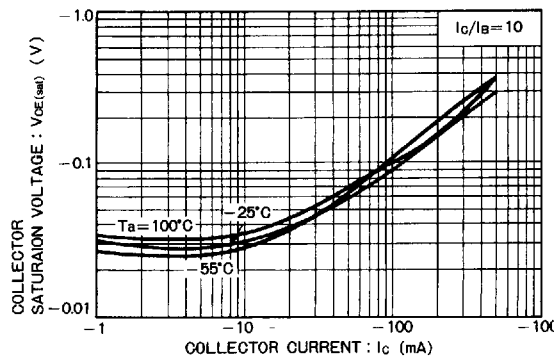


Figure 8

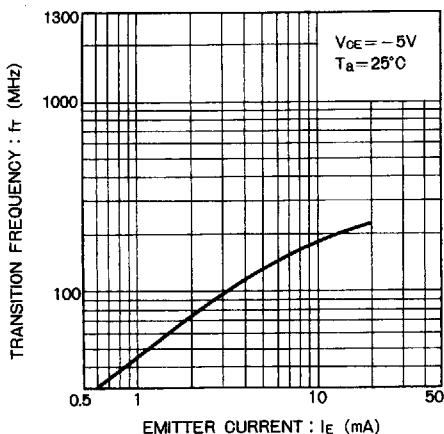


Figure 9

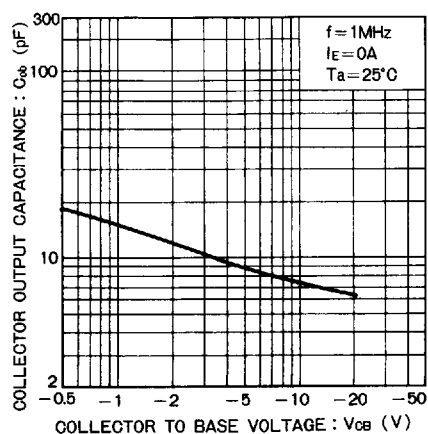


Figure 10

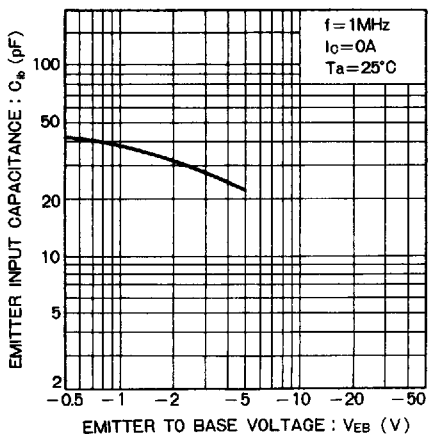


Figure 11

## Ordering information

Package	Tape	
Code	T146	T106
Basic order quantity	3000	3000
2SA1036K	☆	
2SA1577		★
★ = Standard, ☆ = Semi-standard, * = Special order		