

Description

- General purpose amplifier
- D-PAK for surface mount applications

Features

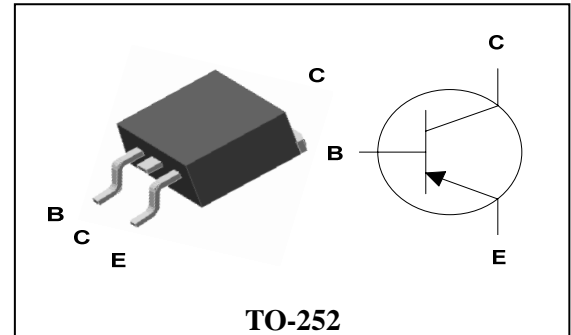
- P_C (Collector dissipation) = 15W
- Low speed switching applications
- Complementary pair with STC722D

Ordering Information

Type NO.	Marking	Package Code
STA723D	STA723 □YWW	TO-252

□ : h_{FE} rank, YWW(Y : Year code, WW : Weekly code)

PIN Connection



Absolute maximum ratings

($T_a=25^\circ\text{C}$)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CBO}	-40	V
Collector-Emitter voltage	V_{CEO}	-30	V
Emitter-Base voltage	V_{EBO}	-5	V
Collector current	I_C	-3	A(DC)
	I_{CP}^*	-6	A(Pulse)
Collector Power dissipation ($T_c=25^\circ\text{C}$)	P_C	15	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 ~ 150	$^\circ\text{C}$

* : Single pulse, $t_p=300\ \mu\text{s}$

Electrical Characteristics

($T_a=25^\circ\text{C}$)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV_{CBO}	$I_C=-50\ \mu\text{A}$, $I_B=0$	-40	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	$I_C=-1\ \text{mA}$, $I_B=0$	-30	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	$I_E=-50\ \mu\text{A}$, $I_B=0$	-5	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB}=-20\text{V}$, $I_B=0$	-	-	-1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-4\text{V}$, $V_{BE}=0$	-	-	-1	μA
DC current gain	h_{FE}	$V_{CE}=-3\text{V}$, $I_C=-500\ \text{mA}$	80	-	390	-
		$V_{CE}=-3\text{V}$, $I_C=-3\ \text{A}$	10	-	-	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C=-2\ \text{A}$, $I_B=-200\ \text{mA}$	-	-0.5	-0.8	V
Transition frequency	f_T	$V_{CE}=-5\text{V}$, $I_C=-500\ \text{mA}$, $f=1\ \text{MHz}$	-	120	-	MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10\text{V}$, $I_E=0$, $f=1\ \text{MHz}$	-	13	-	pF

* : h_{FE} rank / O : 80~218, Y : 120~270, G : 180~390

Electrical Characteristic Curves

Fig. 1 $P_C - T_c$

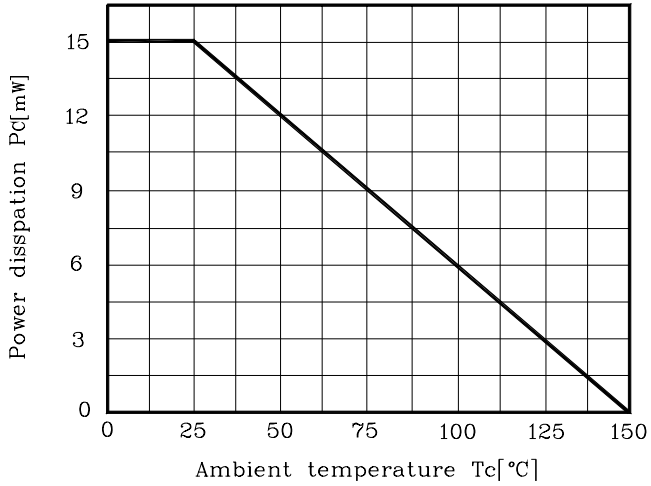


Fig. 2 $h_{FE} - I_C$

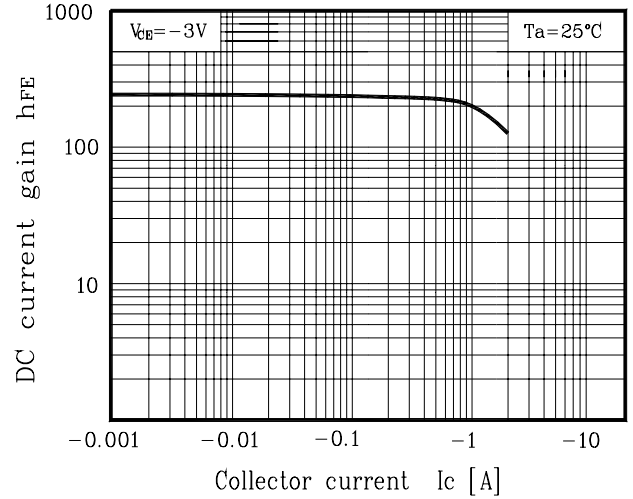


Fig. 3 $V_{CE(sat)} - I_C$

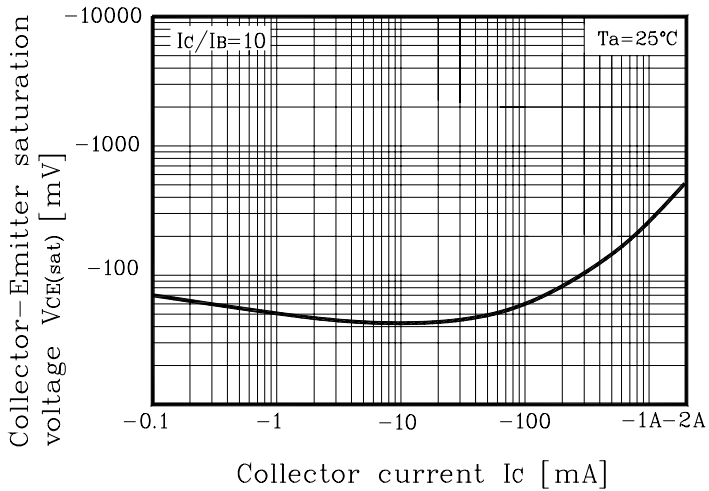


Fig. 4 $f_T - I_C$

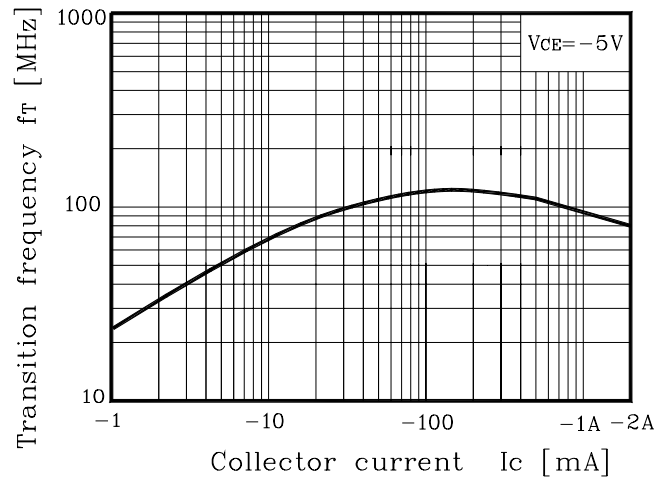
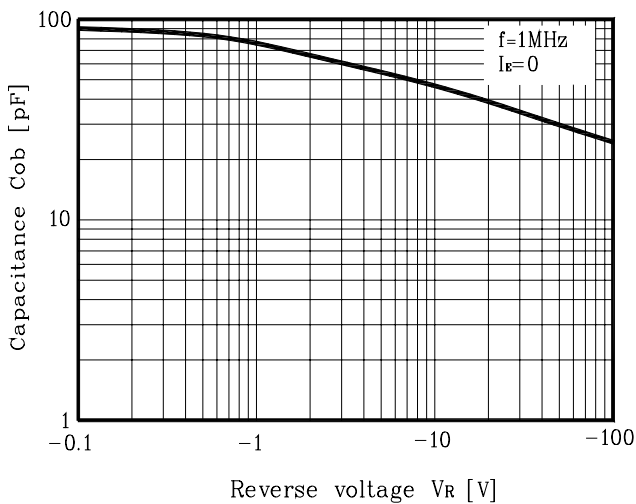
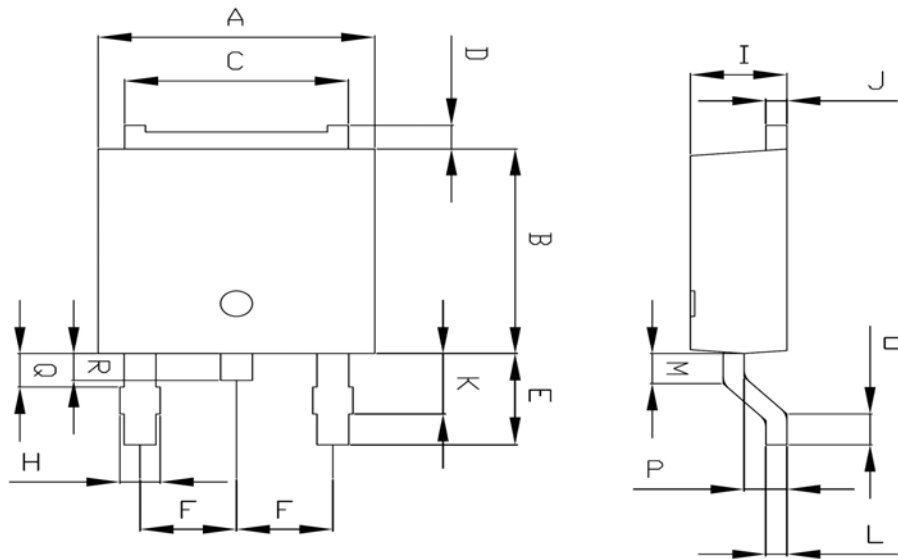


Fig. 5 $C_{ob} - V_R$

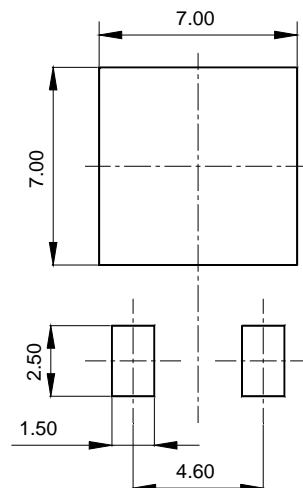


Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	6.40	6.60	6.80	
B	5.90	6.10	6.30	
C	5.04	5.34	5.64	
D	0.50	0.70	0.90	
E	2.50	2.70	2.90	
F	2.10	2.30	2.50	
H	0.96 MAX			
I	2.20	2.30	2.40	
J	0.40	0.50	0.60	
K	1.60	1.80	2.00	
L	0.40	0.50	0.60	
M	0.81	0.91	1.01	
O	0.80	0.90	1.00	
P	0.90	1.00	1.10	
Q	0.95 MAX			
R	0.60	0.80	1.00	

※Recommend PCB solder land [Unit: mm]



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