

PNP Silicon RF Transistors

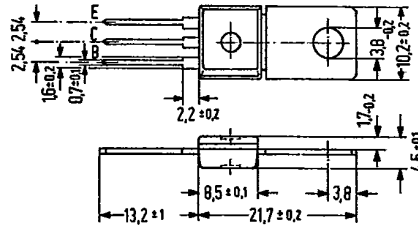
BF 847
BF 848
BF 849

SIEMENS AKTIENGESELLSCHAFT 541 D

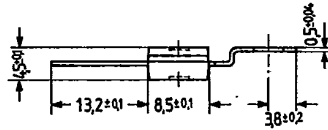
for video and AF output stages

BF 847, BF 848, and BF 849 are epitaxial PNP silicon planar transistors in plastic package similar to TO 202. The collector is conductively connected to the metallic mounting area of the transistor. The transistors are especially designed for use in video output stages of TV receivers, for AF output stages of high operating voltage and as driver transistors in horizontal deflection circuits.

Type	Ordering code
BF 847	Q62702-F662
BF 848	Q62702-F663
BF 849	Q62702-F664



Approx. weight 15 g Dimensions in mm



Available upon request also with bent fixing plate.

Maximum ratings

	BF 847	BF 848	BF 849		
Collector-base voltage	-V _{CB0}	160	270	300	V
Collector-emitter voltage	-V _{CEO}	160	250	300	V
Emitter-base voltage	-V _{EBO}	5	5	5	V
Collector current	-I _C	100	100	100	mA
Base current	-I _B	50	50	50	mA
Collector peak current	-I _{CM}	300	300	300	mA
Junction temperature	T _j	150	150	150	°C
Storage temperature range	T _{stg}	-55 to +150			°C
Total power dissipation					
(T _{amb} ≤ 25°C)	P _{tot}	1.8	1.8	1.8	W
(T _{case} ≤ 100°C)	P _{tot}	2.5	2.5	2.5	W

Thermal resistance

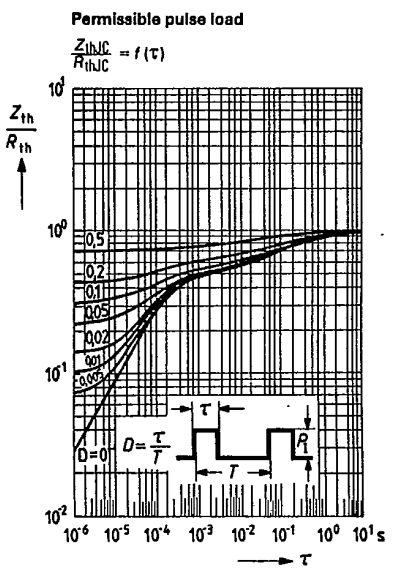
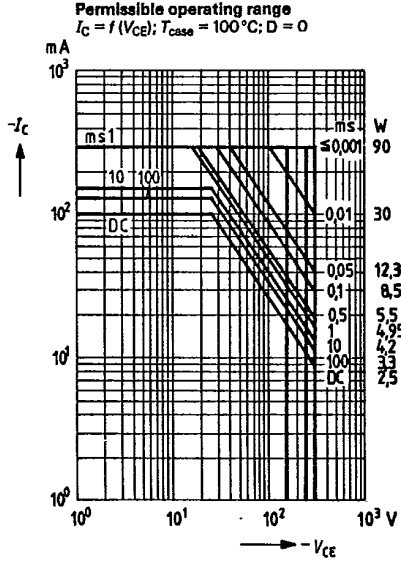
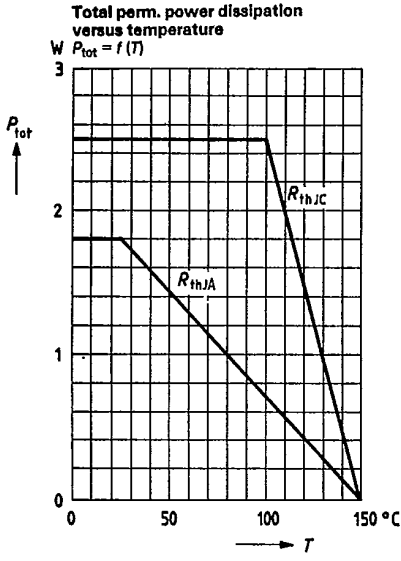
	R _{thJA}	R _{thJC}		
Junction to ambient air	≤ 70	≤ 70	≤ 70	K/W
Junction to case	≤ 20	≤ 20	≤ 20	K/W

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BF 847
 BF 848
 BF 849

Static characteristics ($T_{amb} = 25^{\circ}\text{C}$)		BF 847	BF 848	BF 849	
Collector-base breakdown voltage ($I_C = 100 \mu\text{A}$)	$-V_{(BR)CBO}$	<160	<250	<300	V
Collector-emitter breakdown voltage ($I_C = 10 \text{ mA}$)	$-V_{(BR)CEO}$	<160	<250	<300	V
Emitter-base breakdown voltage ($I_C = 100 \mu\text{A}$)	$-V_{(BR)EBO}$	>5	>5	>5	V
Collector cutoff current ($V_{CB} = 100 \text{ V}$)	$-I_{CBO}$	<50	-	-	nA
($V_{CB} = 200 \text{ V}$)	$-I_{CBO}$	-	<50	-	nA
($V_{CB} = 250 \text{ V}$)	$-I_{CBO}$	-	-	<50	nA
Emitter cutoff current ($V_{EBO} = 3 \text{ V}$)	$-I_{EBO}$	<50	<50	<50	nA
Collector-emitter saturation voltage ($I_C = 30 \text{ mA}$; $I_B = 6 \text{ mA}$)	$-V_{CEsat}$	<1	<1	<1	V
DC current gain ($I_C = 30 \text{ mA}$; $V_{CE} = 10 \text{ V}$)	h_{FE}	>25	>25	>25	-

Dynamic characteristics ($T_{amb} = 25^{\circ}\text{C}$)					
Transition frequency ($V_{CE} = 10 \text{ V}$; $I_C = 15 \text{ mA}$; $f = 20 \text{ MHz}$)	f_T	90	90	90	MHz
Reverse transfer capacitance ($V_{CE} = 30 \text{ V}$; $f = 1 \text{ MHz}$; $I_C = 1 \text{ mA}$)	$-C_{12e}$	4.2	4.2	4.2	pF
Output capacitance ($V_{CB} = 30 \text{ V}$; $f = 1 \text{ MHz}$; $I_E = 0$)	C_{22e}	5.5	5.5	5.5	pF



Characteristic curves for:
 Collector current $I_C = f(V_{BE})$
 Output characteristics $I_C = f(V_{CE})$
 Base current $I_B = f(I_C)$ and
 Transition frequency $f_T = f(I_C)$
 similar to those of BF 857, 858, 859