

SILICON POWER TRANSISTOR 2SB548, 549/2SD414, 415

PNP/NPN SILICON EPITAXIAL TRANSISTOR FOR LOW-FREQUENCY POWER AMPLIFIERS

FEATURES

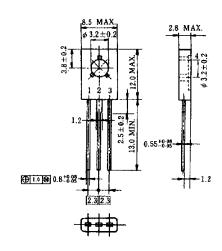
- Ideal for audio amplifier drivers with 30 W to 50 W output
- · High voltage
- · Available for small mount spaces due to small and thin package
- · Easy to be attached to radiators

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Parameter	Symbol	2SB548/	2SB549/	Unit
		2SD414	2SD415	
Collector to base voltage	VcBo	-100/120		٧
Collector to emitter voltage	Vceo	-80/80 -100/100		V
Emitter to base voltage	V _{EBO}	-5.0/5.0		٧
Collector current	Ic(DC)	-0.8/0.8		Α
Collector current	C(pulse)*	-1.5/1.5		Α
Total power dissipation	P⊤ (Ta = 25°C)	1.0		W
Total power dissipation	P _T (Tc = 25°C)	10		W
Junction temperature	Tj	150		ç
Storage temperature	T _{stg}	-55 to +150		°C

^{*} PW \leq 10 ms, duty cycle \leq 50%

PACKAGE DRAWING (UNIT: mm)



Electrode Connection

- 1. Emitter
- 2. Collector connected to mounting plane
- 3. Base
- 4. Fin (Collector)

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Collector cutoff current	Ісво	Vcb = -80/80 V, IE = 0			-1.0/1.0	μΑ
Emitter cutoff current	ІЕВО	$V_{EB} = -3.0/3.0 \text{ V, Ic} = 0$			-1.0/1.0	μΑ
DC current gain	h _{FE1}	$V_{CE} = -5.0/5.0 \text{ V}, \text{ Ic} = -2.0/2.0 \text{ mA}^*$	20			
DC current gain	h _{FE2}	$V_{CE} = -5.0/5.0 \text{ V}, \text{ Ic} = -200/200 \text{ mA*}$	40	90	320	
Collector saturation voltage	V _{CE(sat)}	$I_C = -500/500 \text{ mA}, I_B = -50/50 \text{ mA}^*$		-0.4/0.3	-2.0/2.0	٧
Base saturation voltage	V _{BE(sat)}	$I_C = -500/500 \text{ mA}, I_B = -50/50 \text{ mA}^*$		-0.9/0.9	-1.5/1.5	V
Gain bandwidth product	f⊤	$V_{CE} = -5.0/5.0 \text{ V}, \text{ Ic} = -100/100 \text{ mA}$		70/45		MHz
Collector capacitance	Cob	Vcb = -10/10 V, IE = 0, f = 1.0 MHz		25/15		pF

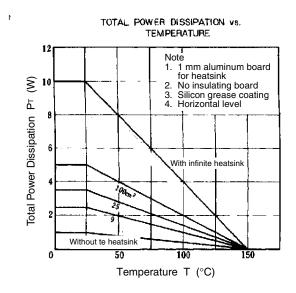
^{*} Pulse test PW \leq 350 μ s, duty cycle \leq 2%

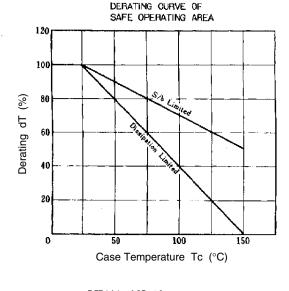
hfe2 CLASSIFICATION

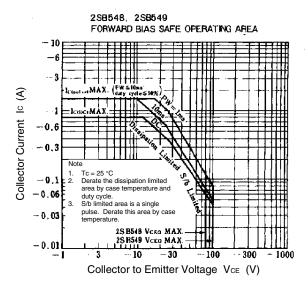
Marking	S	R	Q	Р
h _{FE2}	40 to 80	60 to 120	100 to 200	160 to 320

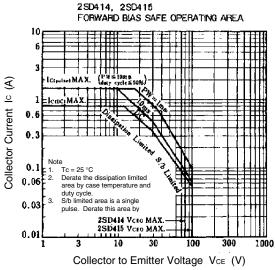
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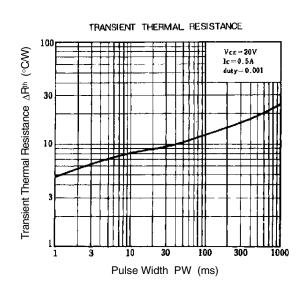
TYPICAL CHARACTERISTICS (Ta = 25°C)

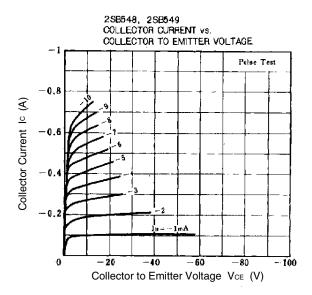


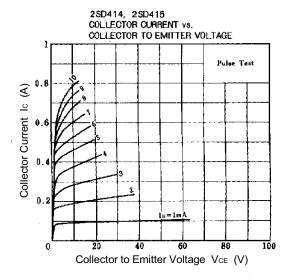


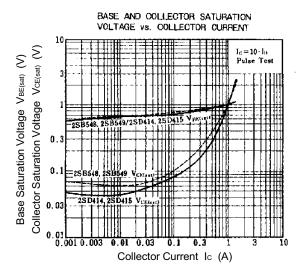


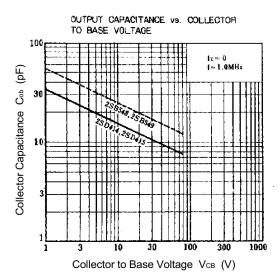


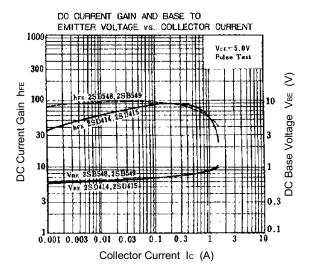


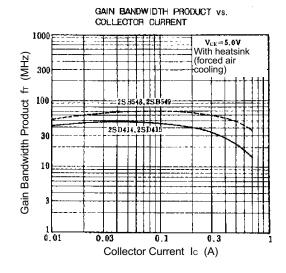












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