



## 2SB514/2SD330

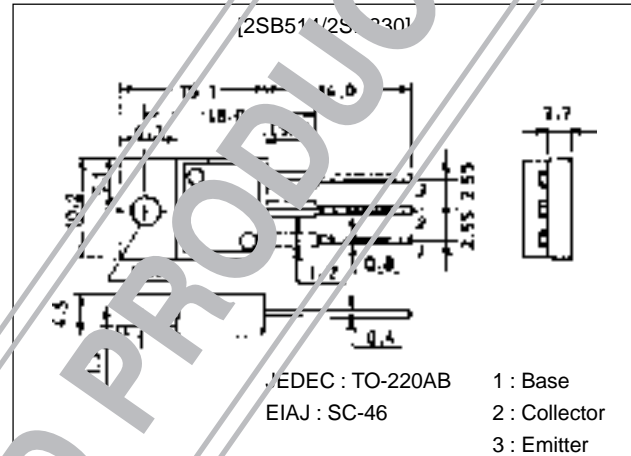
### 50V/2A Low-Frequency Power Amplifier Applications

#### Features

- Especially suited for use in output stage of 10W AF Power amplifier.
- Complementary pair with the 2SB514 and 2SD313.

#### Package Dimensions

unit:mm  
2010C



( ) : 2SB514

#### Specifications

**Absolute Maximum Ratings** at  $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CB0}$		(-)50	V
Collector-to-Emitter Voltage	$V_{CE0}$		(-)50	V
Emitter-to-Base Voltage	$V_{EB0}$		(-)5	V
Collector Current	$I_C$		(-)2	A
Collector Current (Pulse)	$I_{CP}$		(-)5	A
Collector Dissipation	$P_C$	$T_J = 25^\circ\text{C}$	1.75	W
			20	W
Junction Temperature	$T_J$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

**Electrical Characteristics** at  $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = (-)20\text{V}, I_E = 0$			(-)0.1	mA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = (-)4\text{V}, I_C = 0$			(-)1.0	mA
DC Current Gain	$h_{FE1}$	$V_{CE} = (-)2\text{V}, I_C = (-)1\text{A}$	40*		320*	
	$h_{FE2}$	$V_{CE} = (-)2\text{V}, I_C = (-)0.1\text{A}$	35			
Gain-Bandwidth Product	$f_T$	$V_{CE} = (-)5\text{V}, I_C = (-)0.5\text{A}$		8		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)2\text{A}, I_B = (-)0.2\text{A}$			(-)1.0	V
Base-to-Emitter Voltage	$V_{BE}$	$I_C = (-)1\text{A}, V_{CE} = (-)5\text{V}$			(-)1.5	V

\* : The 2SB514/2SD330 are classified by  $h_{FE}$  as follows :

40	C	50	60	D	120	100	E	200	160	F	320
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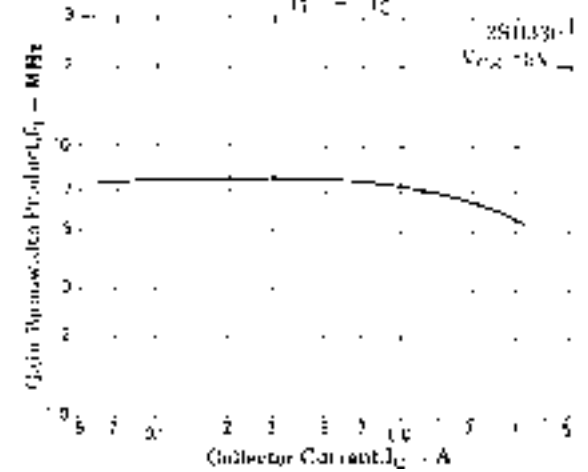
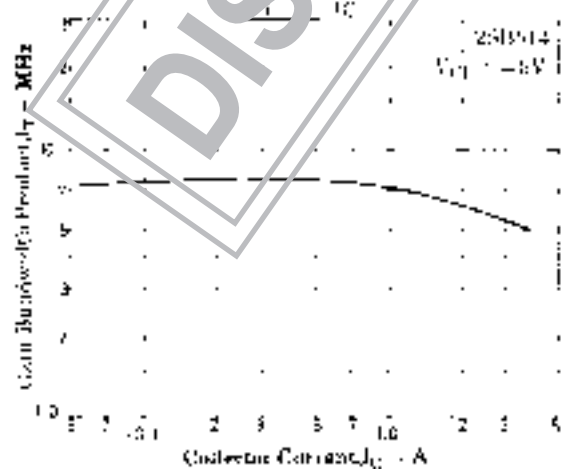
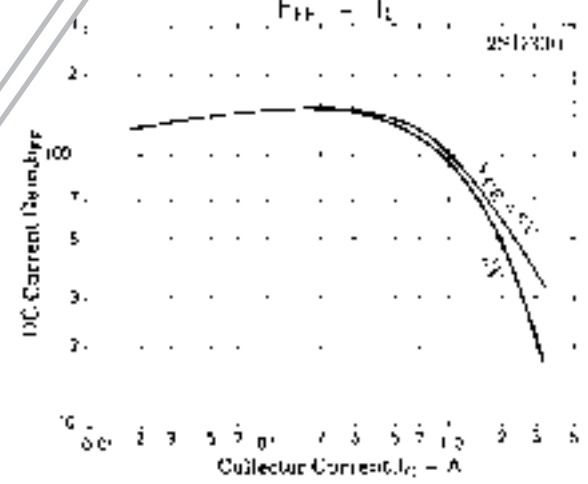
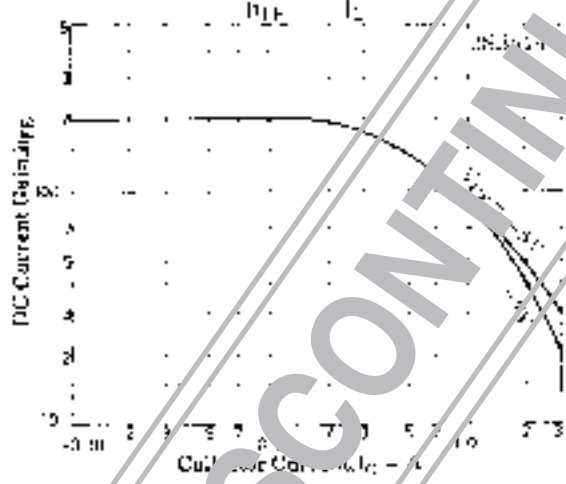
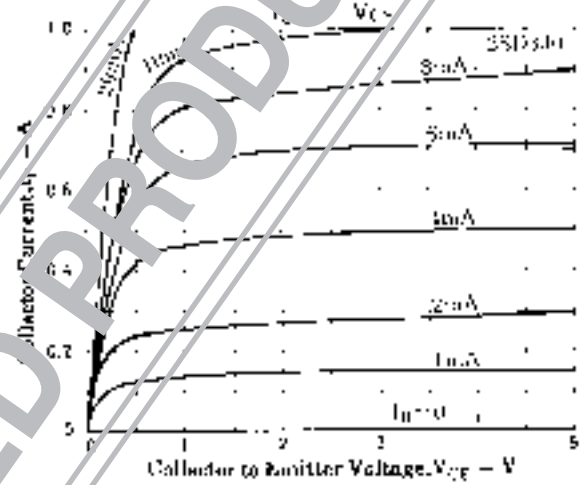
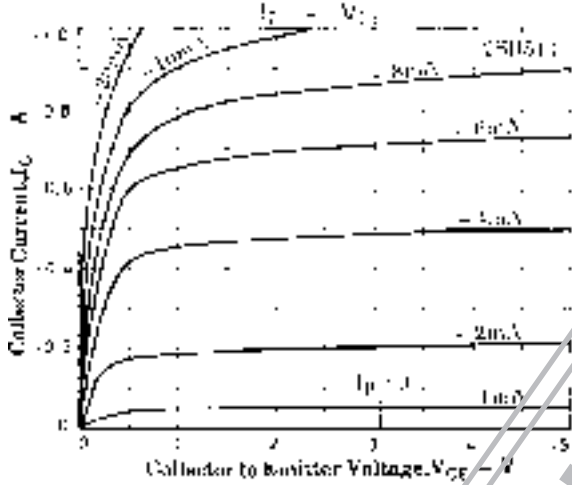
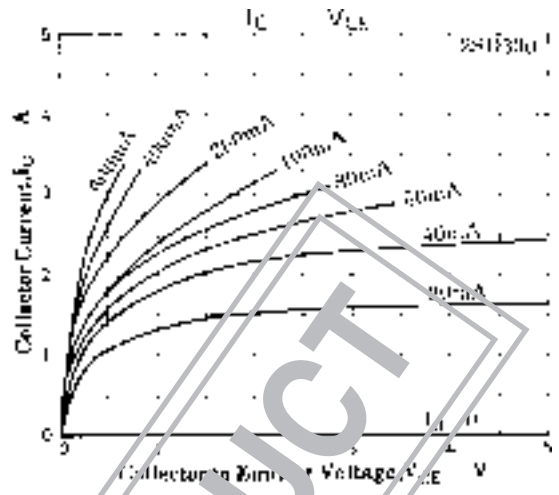
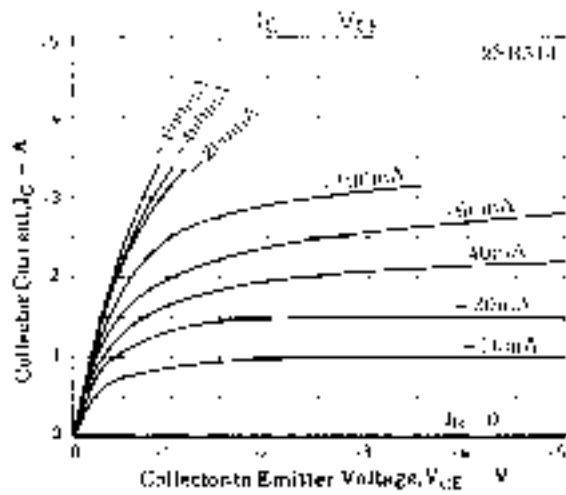
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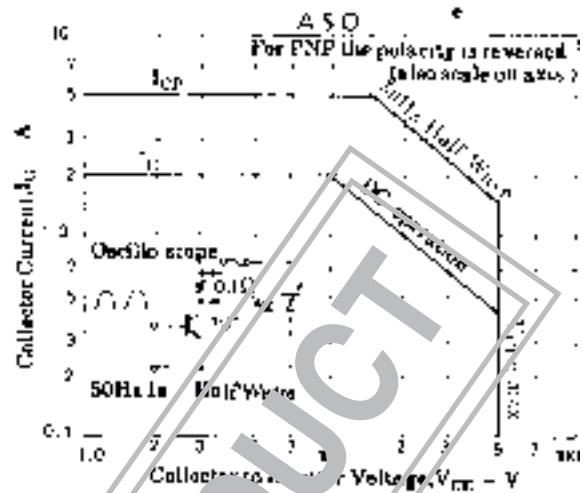
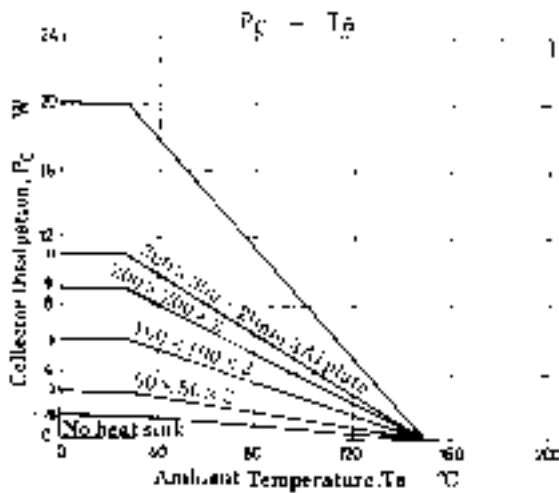
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

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2SB514/2SD330



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