

**2SA1435****High  $h_{FE}$ , AF Amplifier Applications****Applications**

- Low frequency general-purpose amplifiers, drivers, muting circuits.

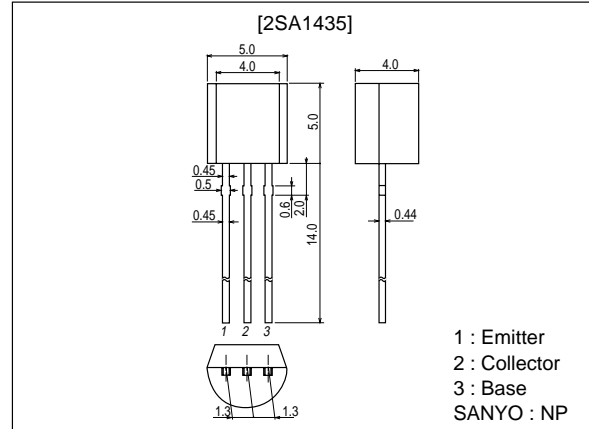
**Features**

- Adoption of MBIT process.
- High DC current gain ( $h_{FE}=500$  to  $1200$ ).
- Large current capacity.
- Low collector-to-emitter saturation voltage ( $V_{CE(sat)} \leq 0.5V$  max).
- High  $V_{EBO}$  ( $V_{EBO} \geq 15V$ ).

**Package Dimensions**

unit:mm

2003B

**Specifications****Absolute Maximum Ratings** at  $T_a = 25^\circ C$ 

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CBO}$		- 30	V
Collector-to-Emitter Voltage	$V_{CEO}$		- 25	V
Emitter-to-Base Voltage	$V_{EBO}$		- 15	V
Collector Current	$I_C$		- 300	mA
Collector Current (Pulse)	$I_{CP}$		- 500	mA
Collector Dissipation	$P_C$		600	mW
Junction Temperature	$T_J$		150	$^\circ C$
Storage Temperature	$T_{stg}$		- 55 to +150	$^\circ C$

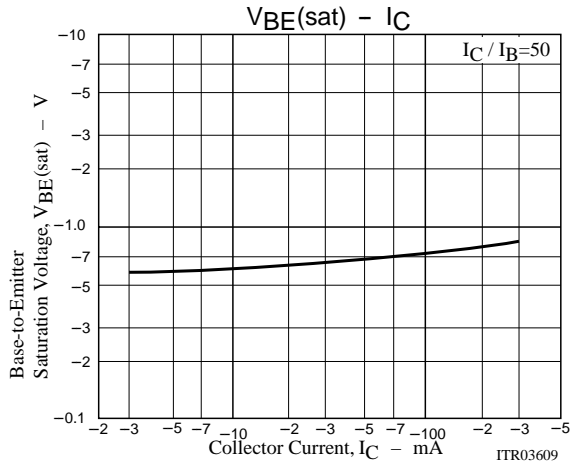
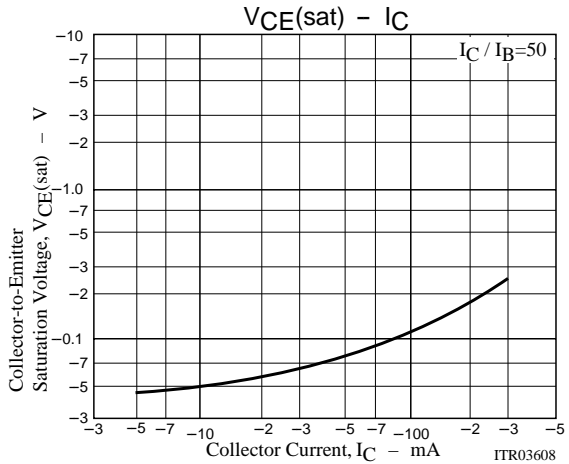
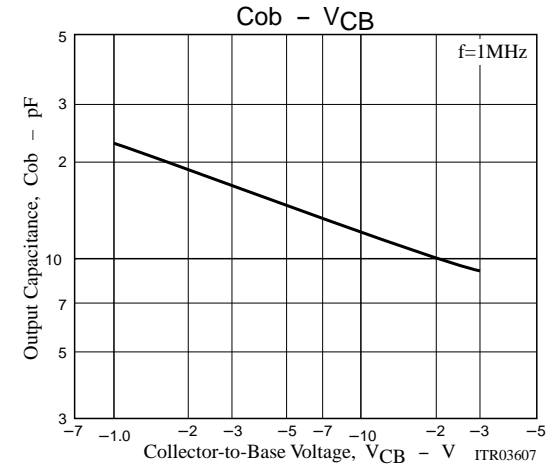
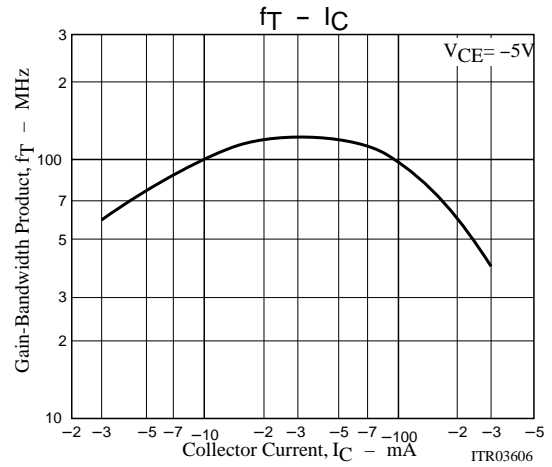
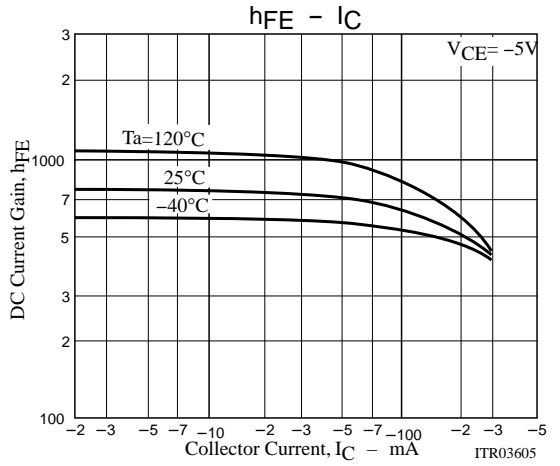
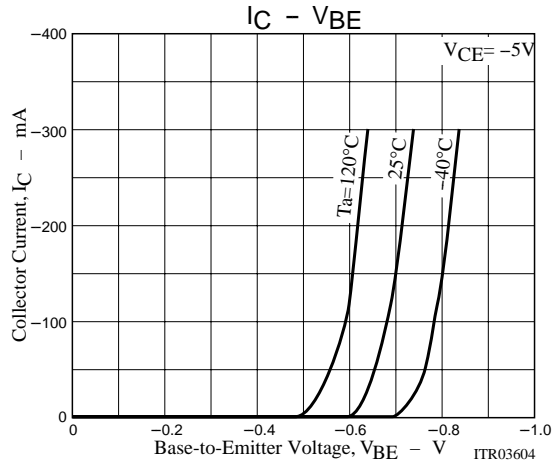
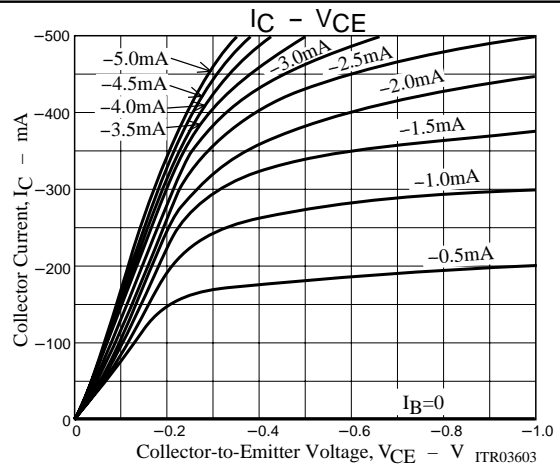
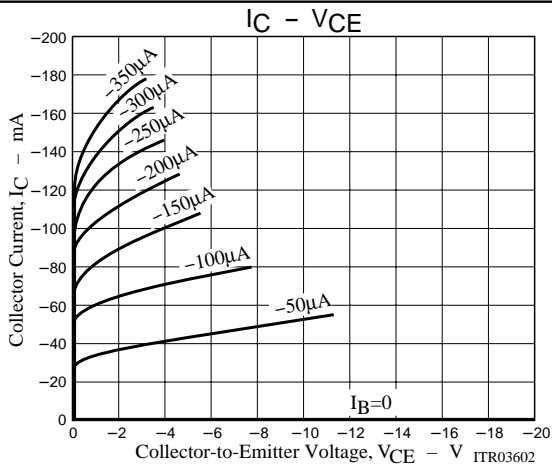
**Electrical Characteristics** at  $T_a = 25^\circ C$ 

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = -20V, I_E = 0$			- 0.1	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = -10V, I_C = 0$			- 0.1	$\mu A$
DC Current Gain	$h_{FE1}$	$V_{CE} = -5V, I_C = -10mA$	500	800	1200	
	$h_{FE2}$	$V_{CE} = -5V, I_C = -200mA$	200			
Gain-Bandwidth Product	$f_T$	$V_{CE} = -10V, I_C = -10mA$		100		MHz
Output Capacitance	$C_{ob}$	$V_{CB} = -10V, f = 1MHz$		12		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -200mA, I_B = -4mA$		- 0.18	- 0.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -200mA, I_B = -4mA$		- 0.77	- 1.1	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	- 30			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1mA, R_{BE} = \infty$	- 25			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	- 15			V

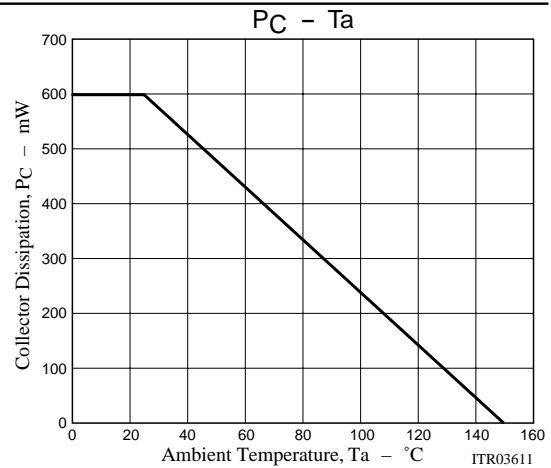
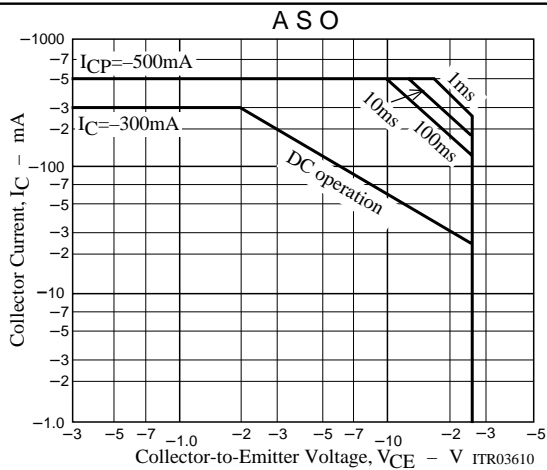
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