

**2SC4694**

## Low-Frequency General-Purpose Amplifier, Muting Applications

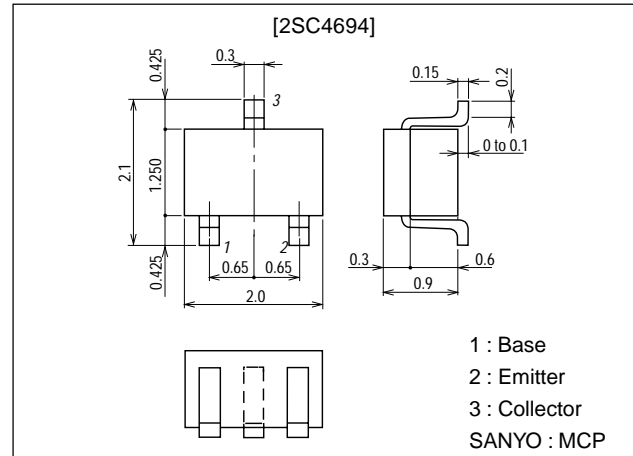
### Features

- Adoption of MBIT process.
- High DC current gain.
- High  $V_{EBO}$  ( $V_{EBO} \geq 25V$ ).
- High reverse  $h_{FE}$  (150 typ).
- Small ON resistance [ $R_{on} = 1\Omega$  ( $I_B = 5mA$ )].
- Very small-sized package permitting 2SC4694-applied sets to be made small and slim.

### Package Dimensions

unit:mm

2059B



### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CBO}$		50	V
Collector-to-Emitter Voltage	$V_{CEO}$		20	V
Emitter-to-Base Voltage	$V_{EBO}$		25	V
Collector Current	$I_C$		500	mA
Collector Current (Pulse)	$I_{CP}$		800	mA
Base Current	$I_B$		100	mA
Collector Dissipation	$P_C$		150	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	$I_{CBO}$	$V_{CB} = 40V, I_E = 0$			0.1	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 20V, I_C = 0$			0.1	$\mu A$
DC Current Gain	$h_{FE1}$	$V_{CE} = 5V, I_C = 10mA$	300		1200	
Gain-Bandwidth Product	$f_T$	$V_{CE} = 10V, I_C = 10mA$		250		MHz
Output Capacitance	$C_{ob}$	$V_{CB} = 10V, f = 1MHz$		3.6		pF

Marking :WT

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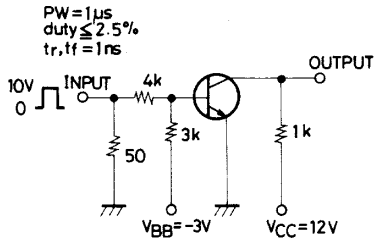
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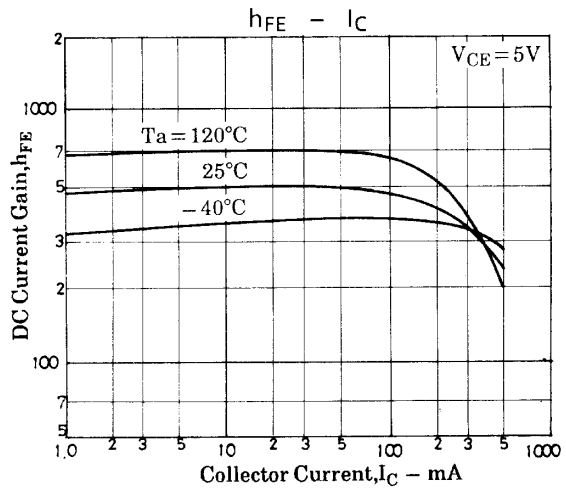
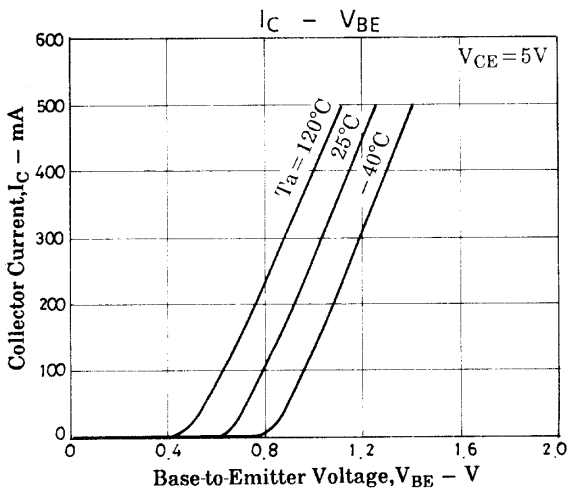
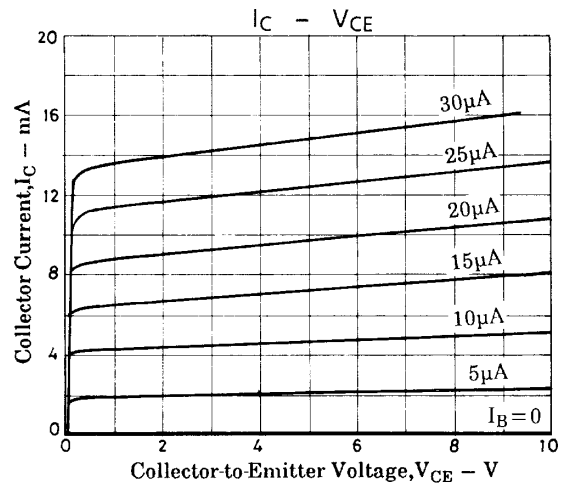
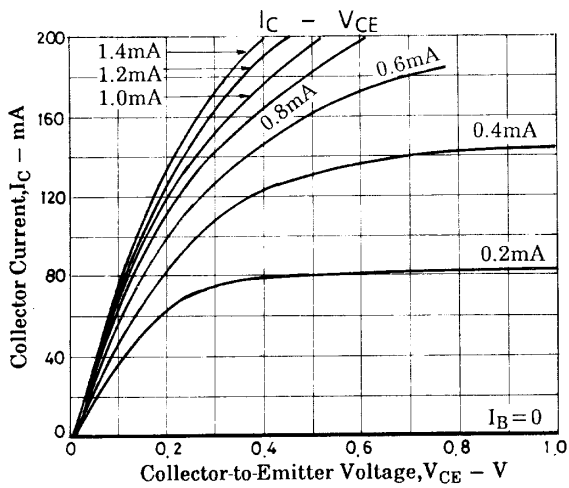
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=2mA$		0.12	0.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=100mA, I_B=2mA$		0.85	1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	50			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	20			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	25			V
Turn-ON Time	$t_{on}$	See specified Test Circuit.		135		ns
Storage Time	$t_{stg}$	See specified Test Circuit.		450		ns
Fall Time	$t_f$	See specified Test Circuit.		100		ns

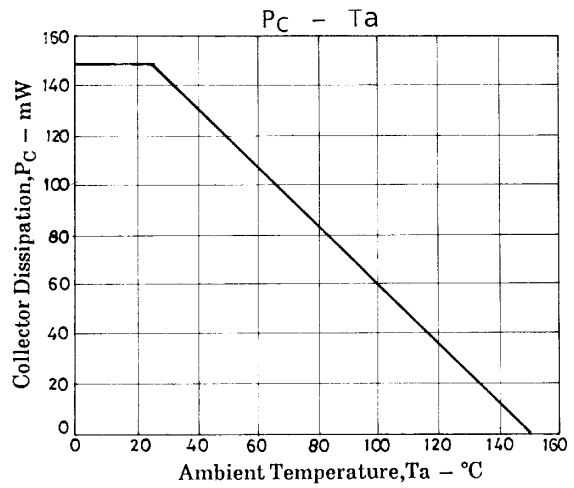
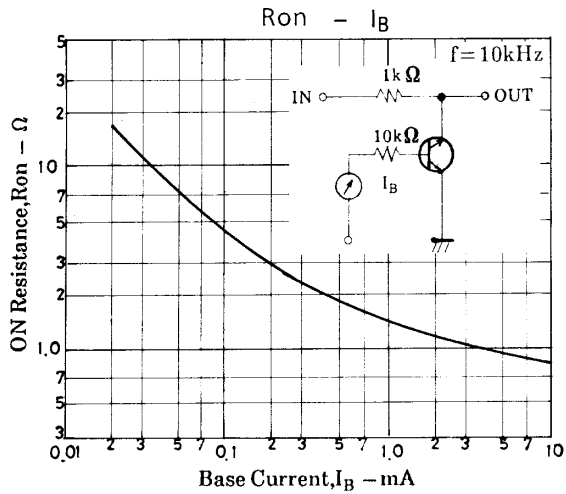
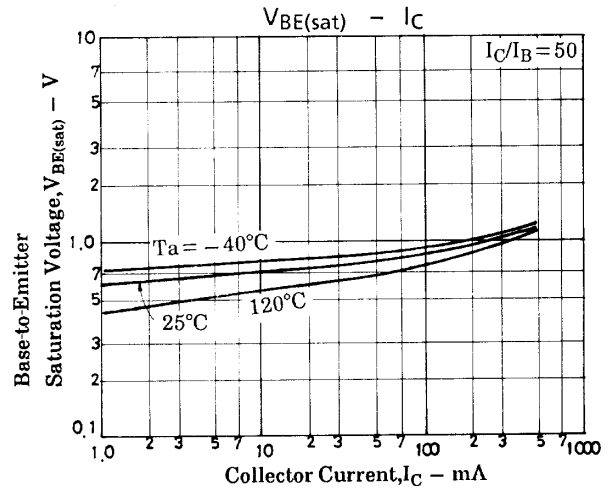
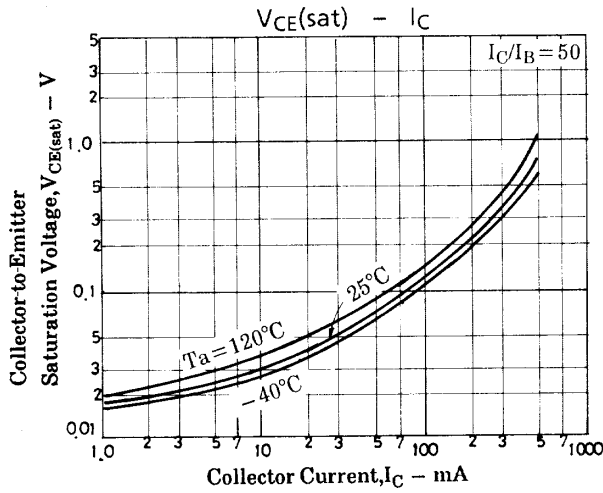
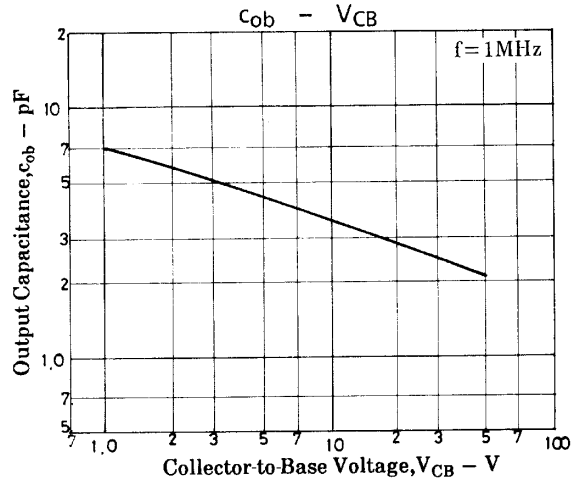
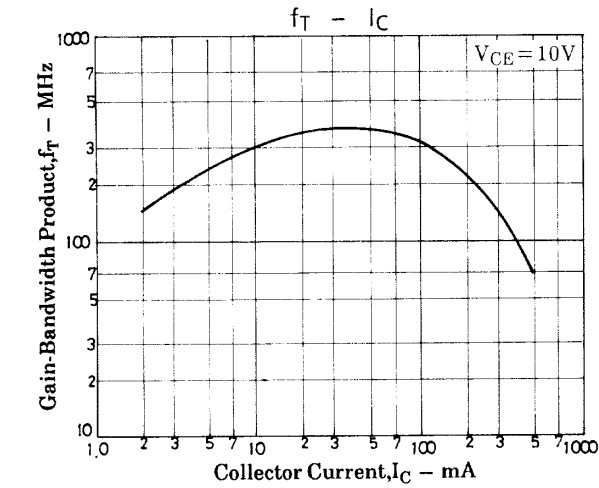
## Switching Time Test Circuit



Unit (resistance :  $\Omega$ )



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