



## 2SA1710/2SC4490

### High-Definition CRT Display Video Output Applications

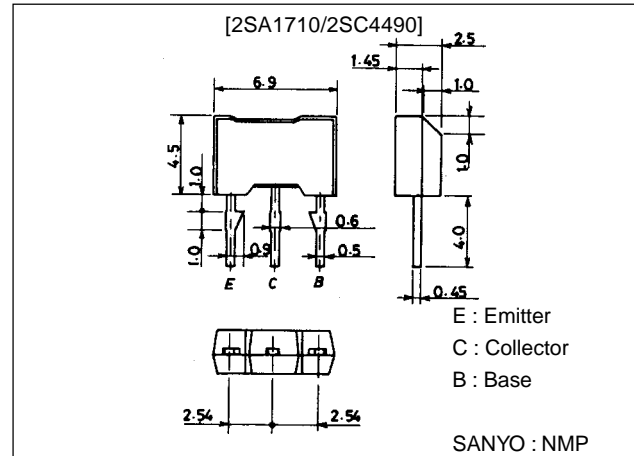
#### Features

- High breakdown voltage ( $V_{CE0} \geq 300V$ ).
- Excellent high frequency characteristic.
- Adoption of MBIT process.

#### Package Dimensions

unit:mm

2064



() : 2SA1710

#### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CB0}$		(-300)	V
Collector-to-Emitter Voltage	$V_{CE0}$		(-300)	V
Emitter-to-Base Voltage	$V_{EB0}$		(-5)	V
Collector Current	$I_C$		(-100)	mA
Collector Current (Pulse)	$I_{CP}$		(-200)	mA
Collector Dissipation	$P_C$		1	W
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	$I_{CBO}$	$V_{CB} = (-)200V, I_E = 0$			(-100)	nA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = (-)4V, I_C = 0$			(-100)	nA
DC Current Gain	$h_{FE}$	$V_{CE} = (-)10V, I_C = (-)10mA$	70*		280*	
Gain-Bandwidth Product	$f_T$	$V_{CE} = (-)30V, I_C = (-)10mA$		70		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)20mA, I_B = (-)2mA$			(-0.6)	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)20mA, I_B = (-)2mA$			(-1.0)	V
Output Capacitance	$C_{ob}$	$V_{CB} = (-)30V, f = 1MHz$		(3.1)		pF
				2.6		pF

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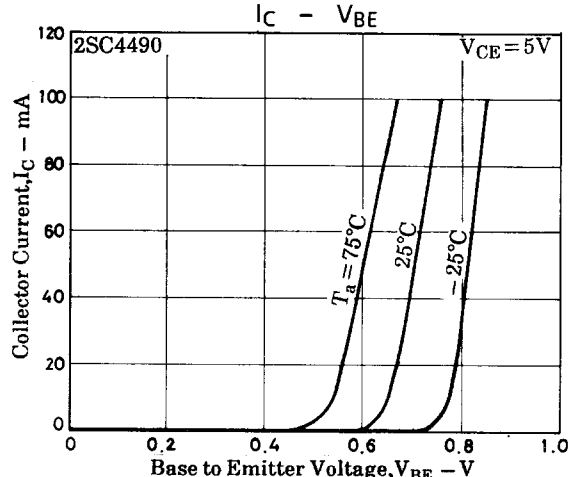
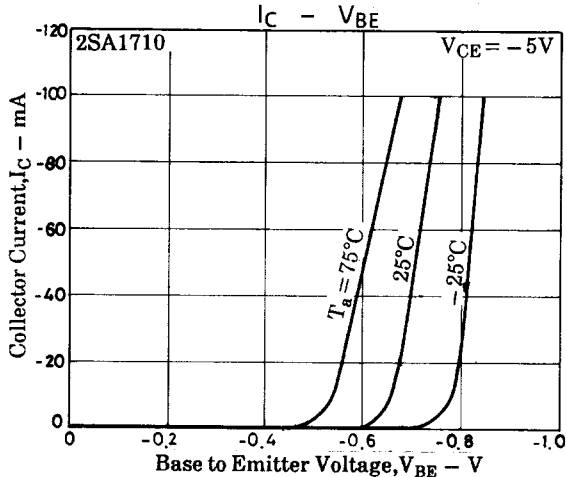
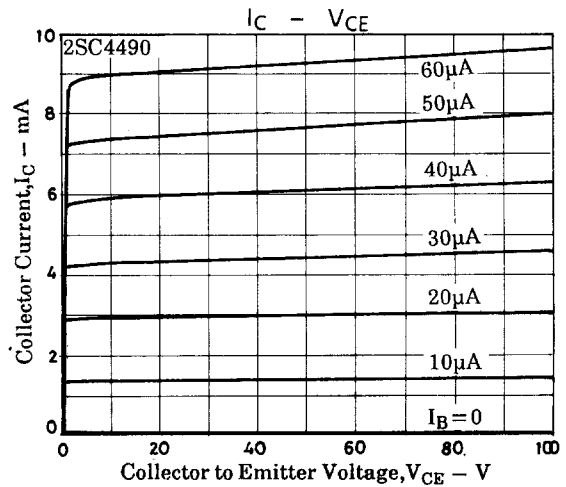
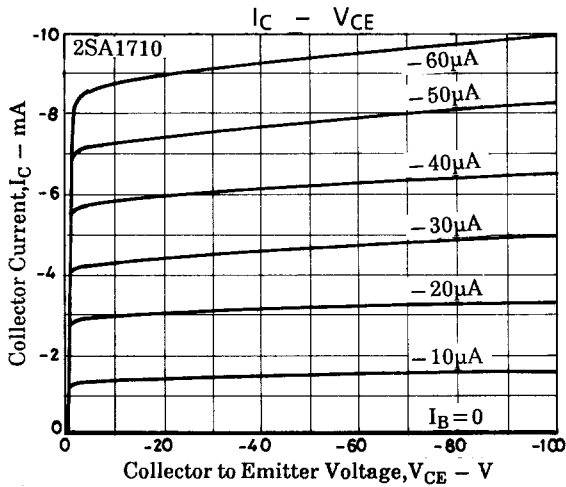
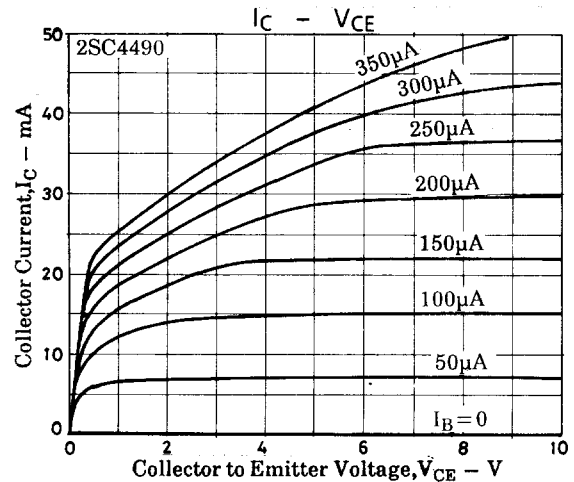
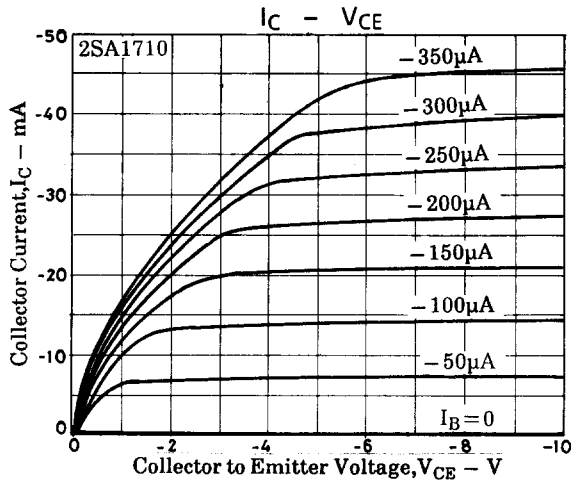
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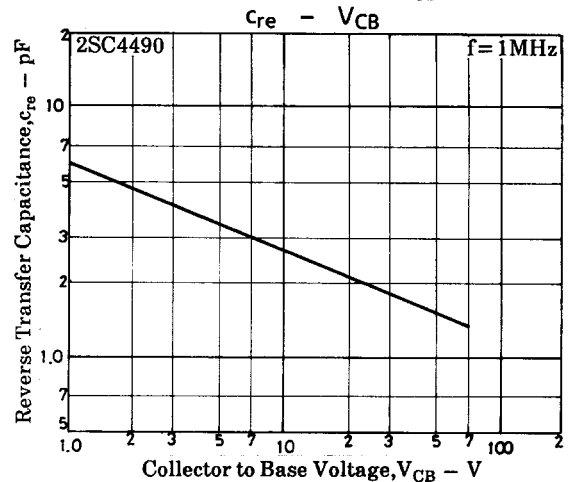
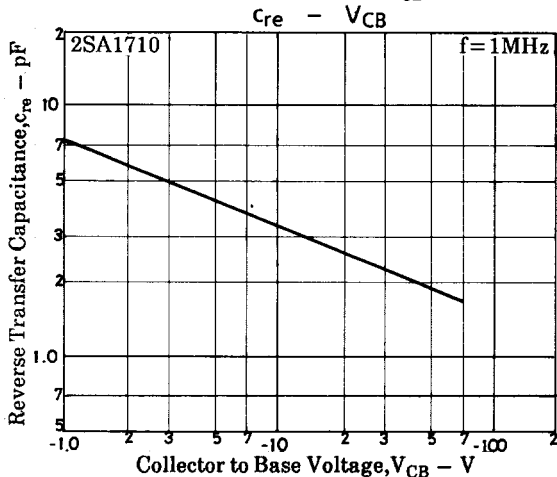
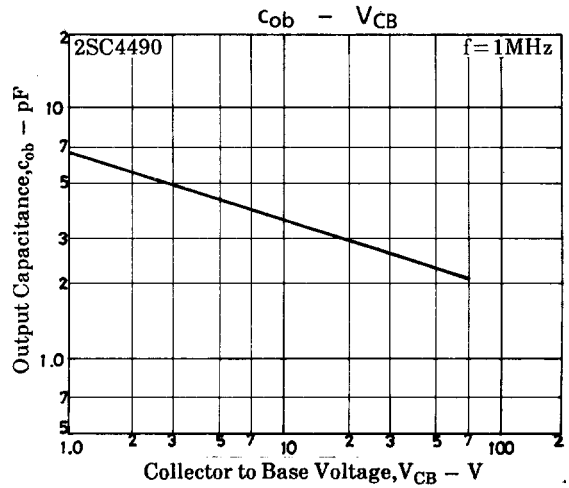
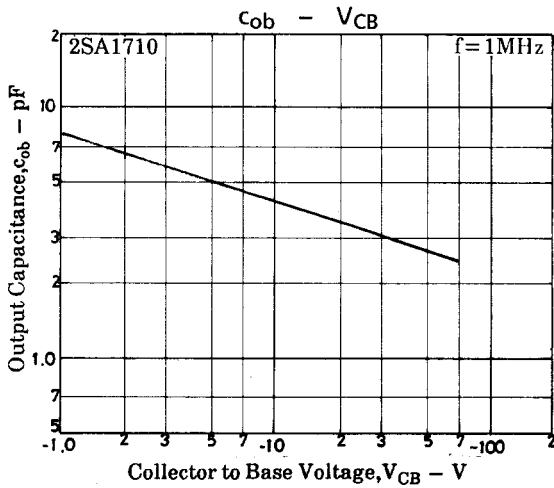
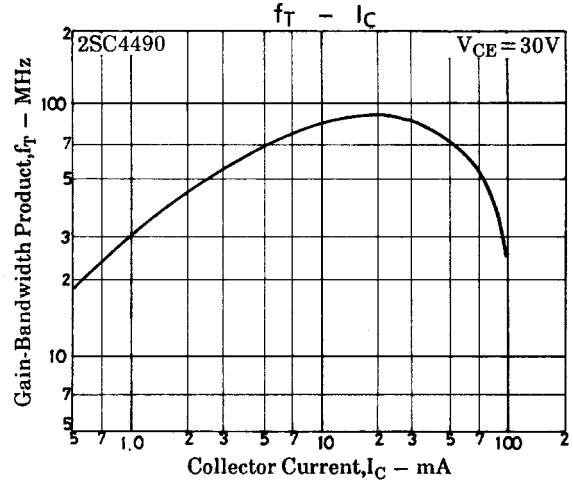
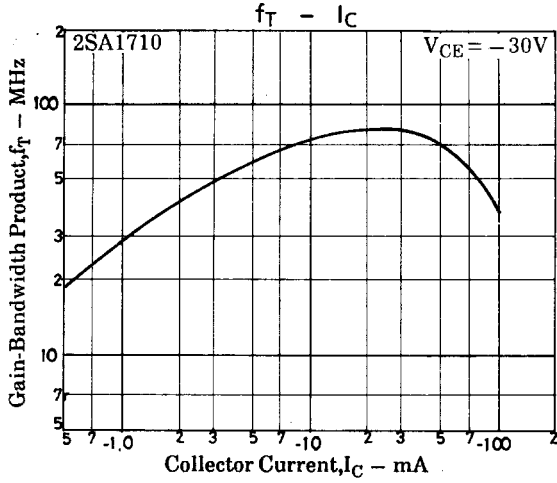
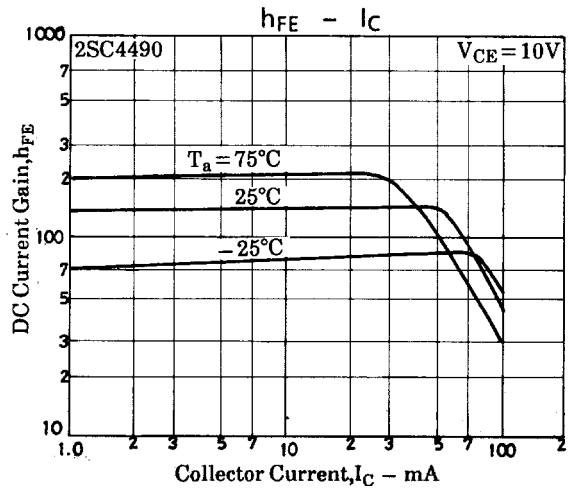
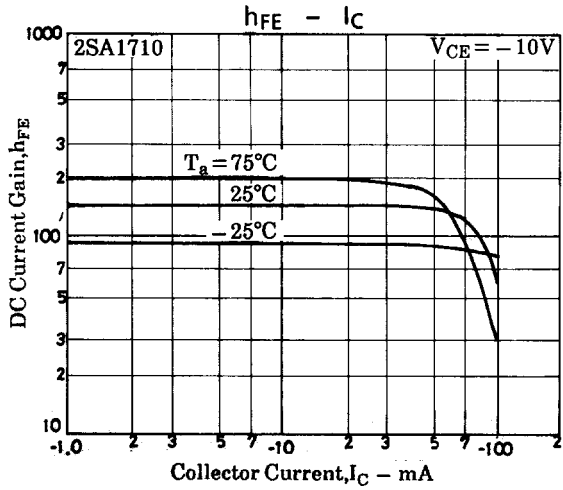
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Transfer Capacitance	$C_{re}$	$V_{CB}=(-)30V, f=1MHz$		(2.3)		pF
				1.8		pF
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$	(-300)			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	(-300)			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)10\mu A, I_C=0$	(-5)			V

\* : The 2SA1710/2SC4490 are classified by 100mA  $h_{FE}$  as follows :

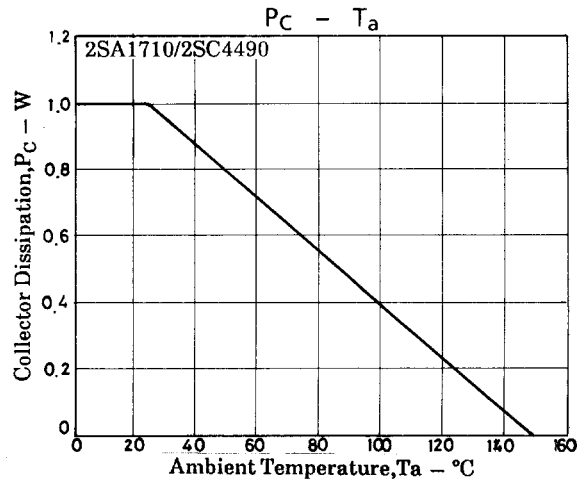
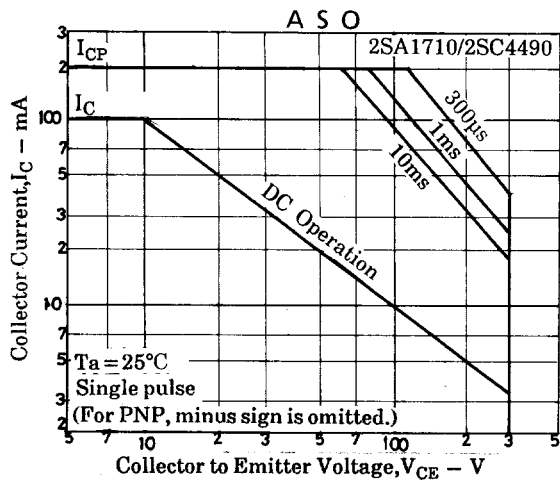
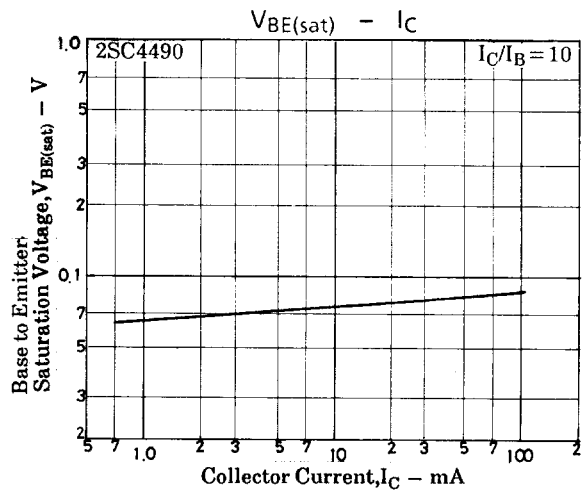
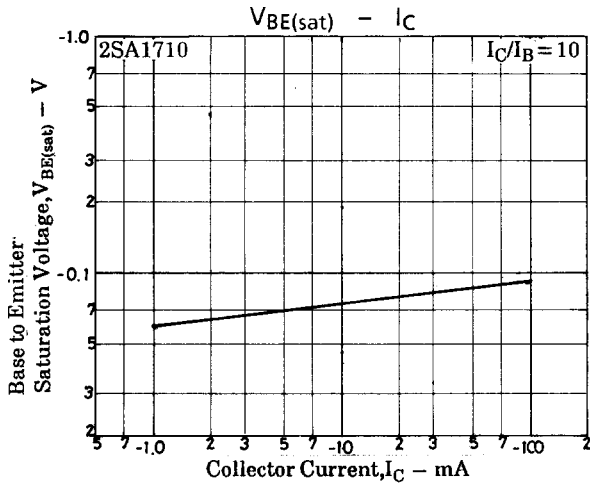
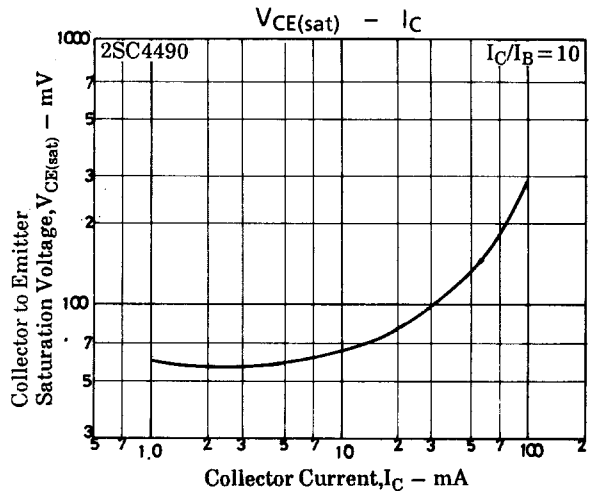
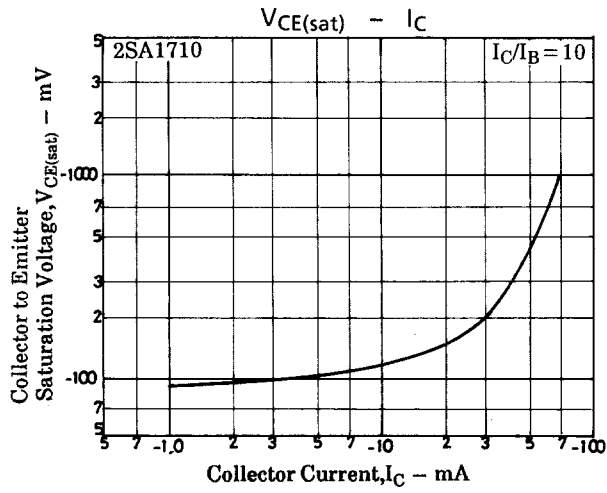
70	Q	140	100	R	200	140	S	280
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