

**2SC4563**

Ultrahigh-Definition CRT Display Video Output Applications

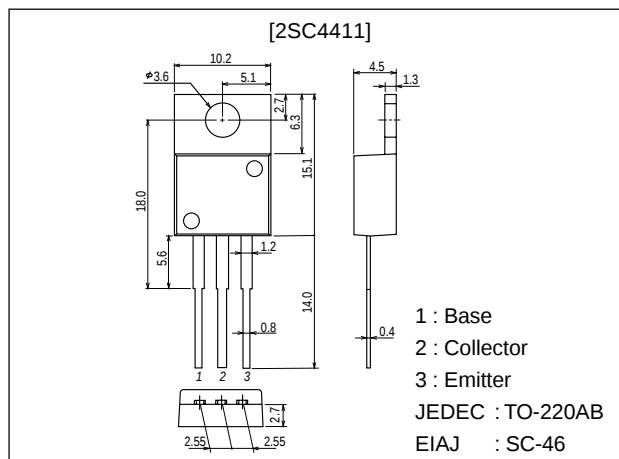
Features

- High f_T : $f_T=1.2\text{GHz}$ typ.
- High breakdown voltage : $V_{CEO}\geq 80\text{V}$.
- High current : $I_C=500\text{mA}$.
- Small reverse transfer capacitance : $C_{re}=3.8\text{pF}$ ($V_{CB}=30\text{V}$).
- Adoption of FBET process.

Package Dimensions

unit:mm

2010C



Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		100	V
Collector-to-Emitter Voltage	V_{CEO}		80	V
Emitter-to-Base Voltage	V_{EBO}		3	V
Collector Current	I_C		500	mA
Collector Current (Pulse)	I_{CP}		1.0	A
Collector Dissipation	P_C		1.3	W
		$T_c=25^\circ\text{C}$	10	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}	$V_{CB}=80\text{V}$, $I_E=0$			0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=2\text{V}$, $I_C=0$			5.0	μA
DC Current Gain	h_{FE1}	$V_{CE}=10\text{V}$, $I_C=50\text{mA}$	30		200	
	h_{FE2}	$V_{CE}=10\text{V}$, $I_C=500\text{mA}$	20			
Gain-Bandwidth Product	f_T	$V_{CE}=10\text{V}$, $I_C=100\text{mA}$		1.2		GHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=300\text{mA}$, $I_B=30\text{mA}$			0.6	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=300\text{mA}$, $I_B=30\text{mA}$			1.2	V

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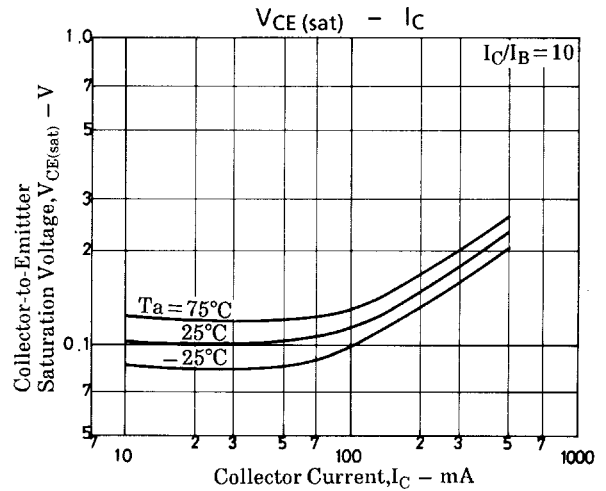
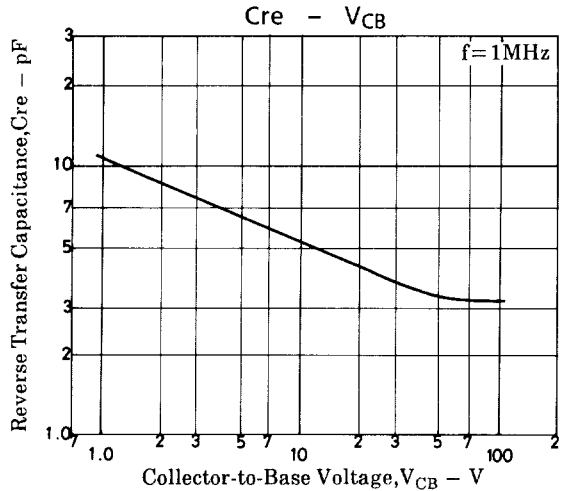
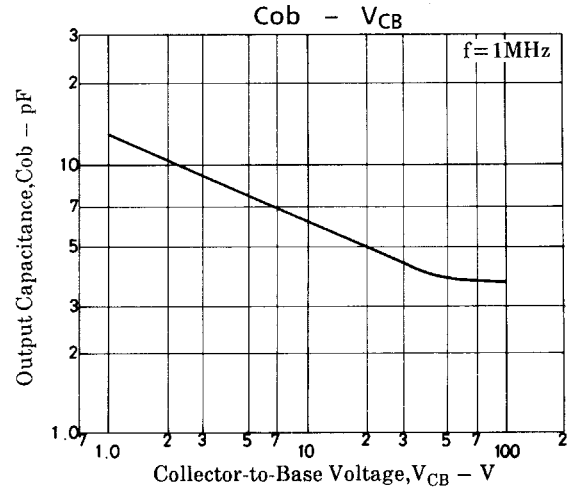
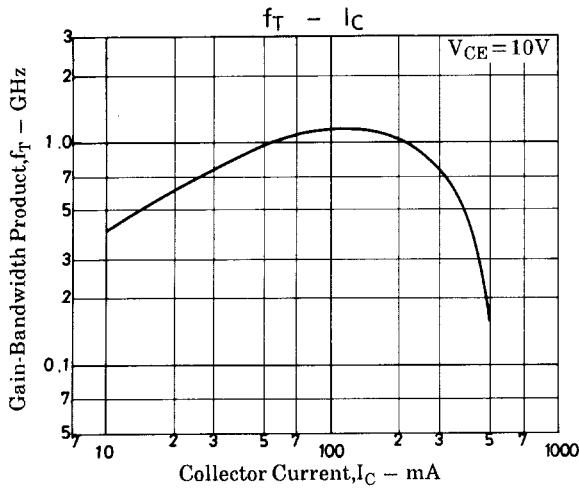
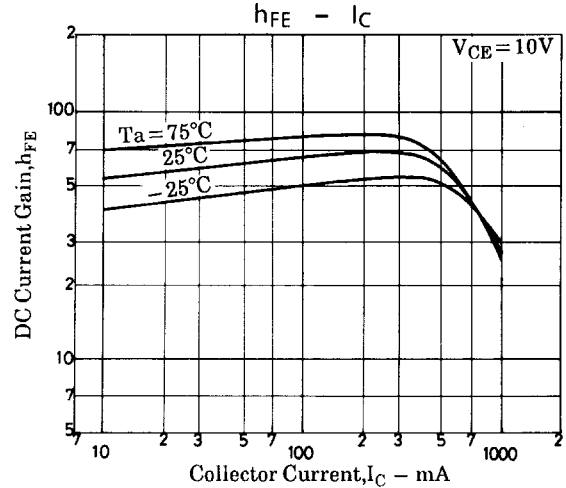
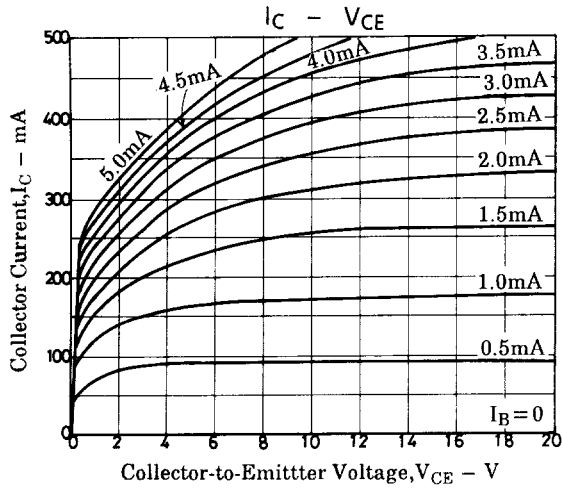
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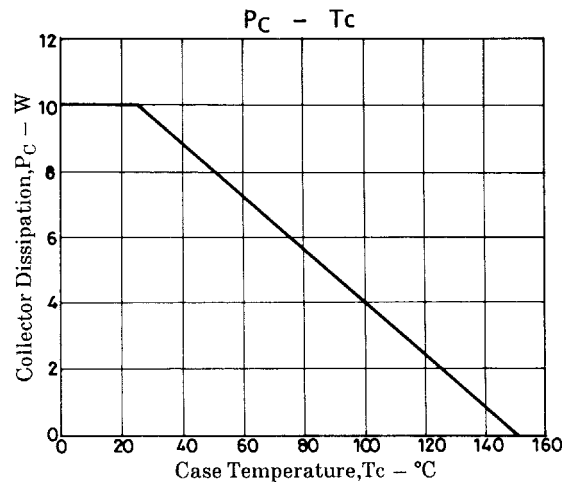
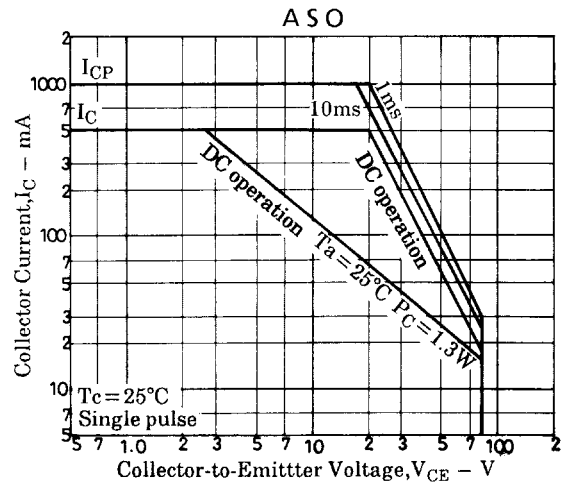
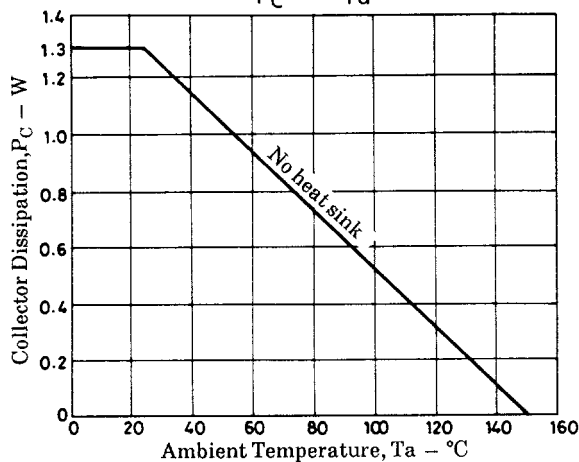
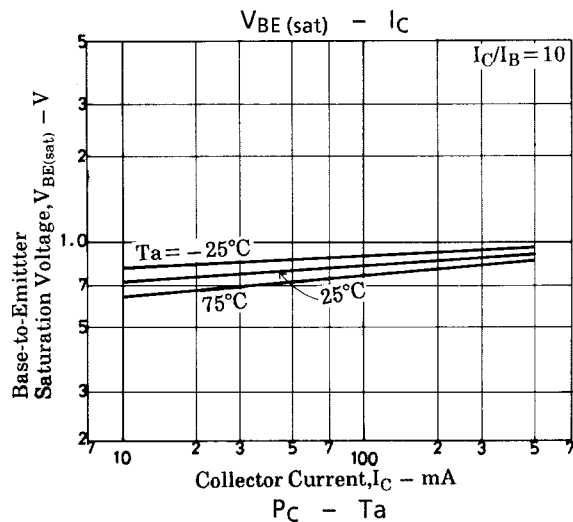
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11299HA (KT)/O0794TS (KOTO) BX-1681 No.4728-1/3

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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	100			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	80			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	3			V
Output Capacitance	C_{ob}	$V_{CB}=30V, f=1MHz$		4.4		pF
Reverse Transfer Capacitance	C_{re}	$V_{CB}=30V, f=1MHz$		3.8		pF





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