

**2SC4125**

## Ultrahigh-Definition CRT Display Horizontal Deflection Output Applications

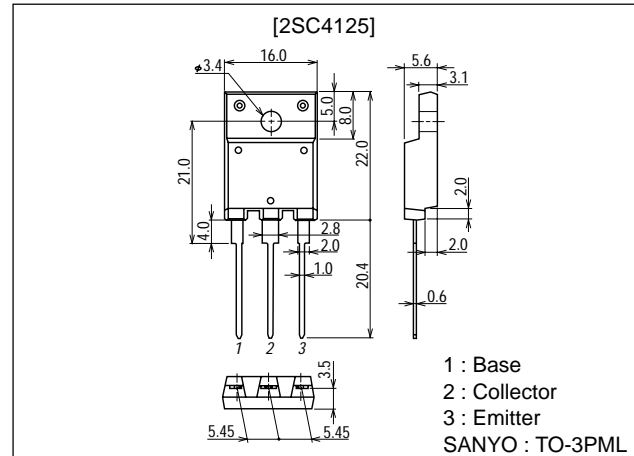
### Features

- Adoption of MBIT process.
- On-chip damper diode.
- High breakdown voltage ( $V_{CBO}=1500V$ ).
- High speed ( $t_f=100ns$  typ).
- High reliability (Adoption of HVP process).

### Package Dimensions

unit:mm

2039D



### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CBO}$		1500	V
Collector-to-Emitter Voltage	$V_{CEO}$		800	V
Emitter-to-Base Voltage	$V_{EBO}$		6	V
Collector Current	$I_C$		10	A
Collector Current (Pulse)	$I_{CP}$		25	A
Collector Dissipation	$P_C$		3	W
		$T_c=25^\circ C$	70	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	$I_{CBO}$	$V_{CB}=800V, I_E=0$			10	$\mu A$
	$I_{CES}$	$V_{CE}=1500V, R_{BE}=0$			1	mA
Collector-to-Emitter Sustain Voltage	$V_{CEO(sus)}$	$I_C=100mA, I_B=0$	800			V
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=4V, I_C=0$	40		130	mA
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=8A, I_B=2A$			5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=8A, I_B=2A$			1.5	V

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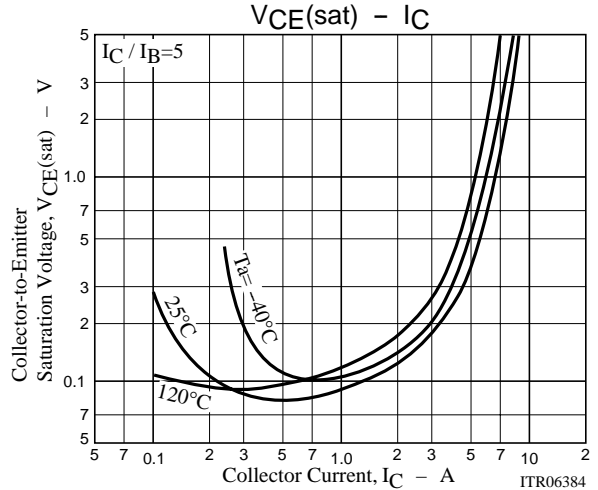
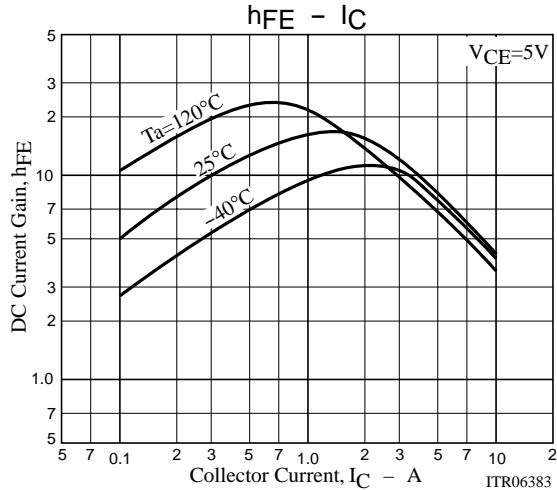
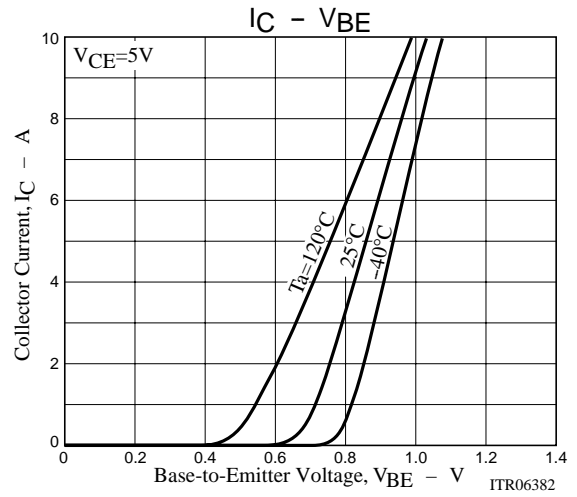
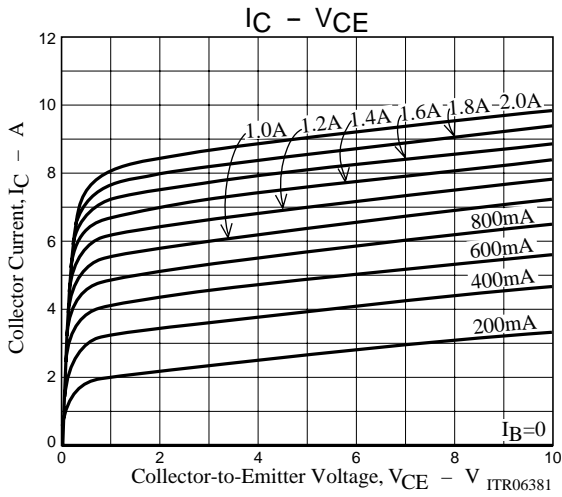
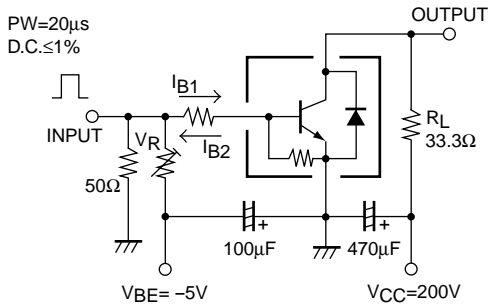
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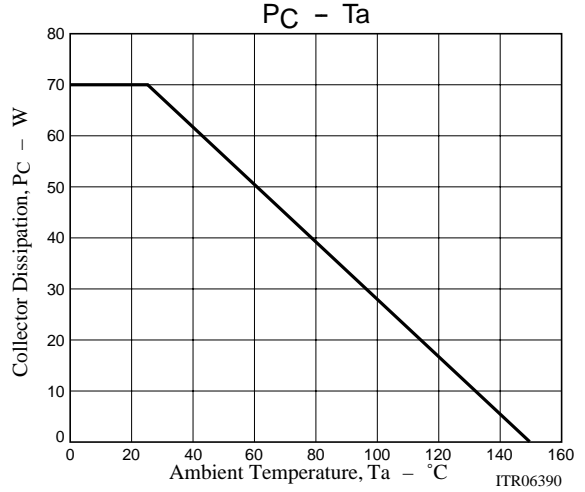
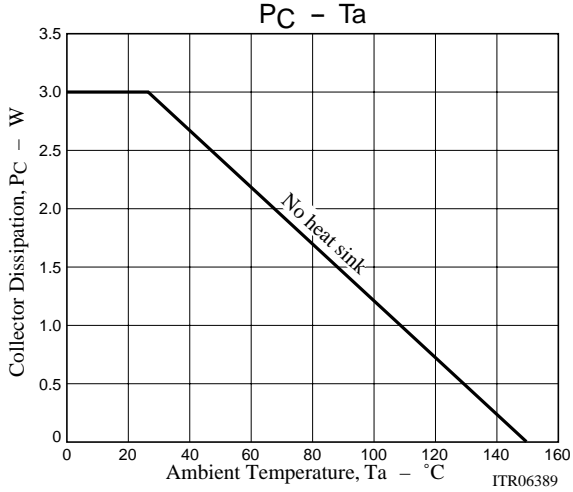
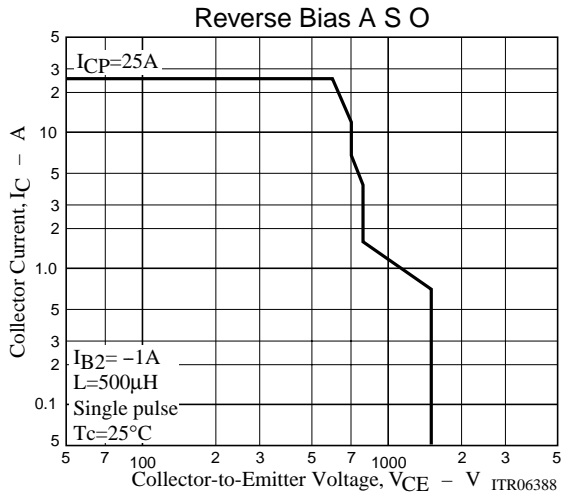
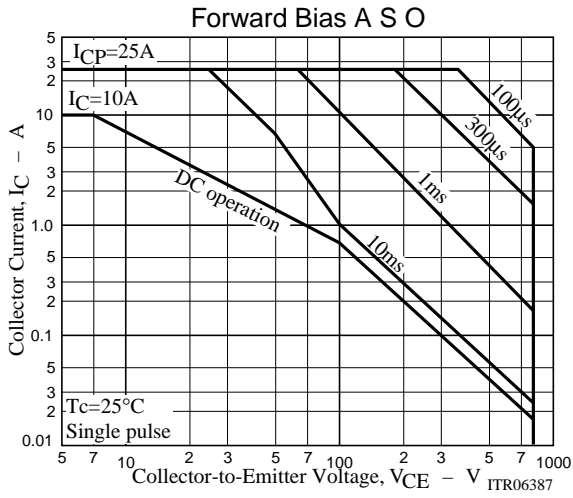
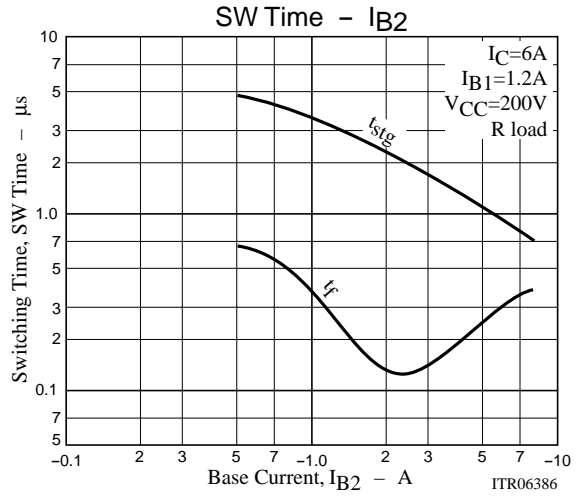
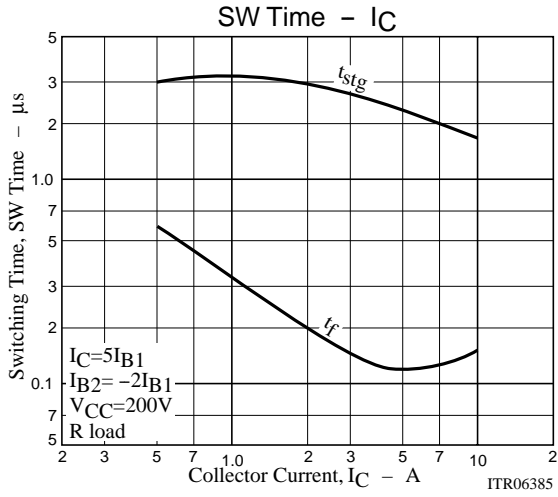
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
DC Current Gain	$h_{FE1}$	$V_{CE}=5V, I_C=1A$	8			
	$h_{FE2}$	$V_{CE}=5V, I_C=8A$	4		6	
Diode Forward Voltage	$V_F$	$I_{EC}=10A$			2	V
Storage Time	$t_{stg}$	$I_C=6A, I_{B1}=1.2A, I_{B2}=-2.4A$			3	$\mu s$
Fall Time	$t_f$	$I_C=6A, I_{B1}=1.2A, I_{B2}=-2.4A$	0.1	0.2		$\mu s$

## Switching Time Test Circuit



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