



2SA1580/2SC4104

High-Definition CRT Display Applications

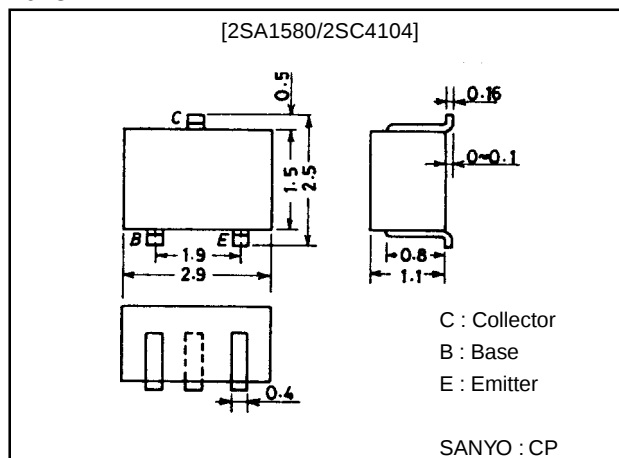
Features

- High f_T .
- Small reverse transfer capacitance.
- Adoption of FBET process.

Package Dimensions

unit:mm

2018A



() : 2SA1580

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		(-)70	V
Collector-to-Emitter Voltage	V_{CE0}		(-)60	V
Emitter-to-Base Voltage	V_{EB0}		(-)4	V
Collector Current	I_C		(-)50	mA
Collector Current (Pulse)	I_{CP}		(-)100	mA
Collector Dissipation	P_C		200	mW
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}	$V_{CB}=(-)40\text{V}, I_E=0$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)3\text{V}, I_C=0$			(-)1.0	μA
DC Current Gain	h_{FE}	$V_{CE}=(-)10\text{V}, I_C=(-)10\text{mA}$	60*		270*	
Gain-Bandwidth Product	f_T	$V_{CE}=(-)10\text{V}, I_C=(-)10\text{mA}$	350	700		MHz
Base-to-Collector Time Constant	τ_{bb',c_c}	$V_{CE}=(-)10\text{V}, I_C=(-)10\text{mA}$		8		ps
Output Capacitance	C_{ob}	$V_{CB}=(-)10\text{V}, f=1\text{MHz}$		1.3		pF
				(1.7)		pF
Reverse Transfer Capacitance	C_{re}	$V_{CB}=(-)10\text{V}, f=1\text{MHz}$		1.0		pF
				(1.3)		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)20\text{mA}, I_B=(-)2\text{mA}$			0.5	V
					(-0.6)	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)20\text{mA}, I_B=(-)2\text{mA}$			(-)1.0	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu\text{A}, I_E=0$	(-)70			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1\text{mA}, R_{BE}=\infty$	(-)60			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)10\mu\text{A}, I_C=0$	(-)4			V

* : The 2SA1580/2SC4104 are classified by 10mA h_{FE} as follows :

60	3	120	90	4	180	135	5	270
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Marking 2SA1580 : QL

2SC4104 : YY

 h_{FE} rank : 3,4,5
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