

SANYO	No.3172	2SA1580/2SC4104
		PNP/NPN Epitaxial Planar Silicon Transistors High-Definition CRT Display Applications

Features

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

() : 2SA1580

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

			unit
Collector to Base Voltage	V_{CB0}	(-)70	V
Collector to Emitter Voltage	V_{CEO}	(-)60	V
Emitter to Base Voltage	V_{EBO}	(-)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 $T_a = 25^\circ\text{C}$

			min	typ	max	unit
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	$r_{bb}'c_c$	$V_{CE} = (-)10\text{V}, I_C = (-)10\text{mA}$		8		PS
Output Capacitance	c_{ob}	$V_{CB} = (-)10\text{V}, f = 1\text{MHz}$		(1.7)1.3		pF
Reverse Transfer Capacitance	c_{re}	$V_{CB} = (-)10\text{V}, f = 1\text{MHz}$		(1.3)1.0		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)20\text{mA}, I_B = (-)2\text{mA}$			(- 0.6)0.5	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)20\text{mA}, I_B = (-)2\text{mA}$			(-)1.0	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu\text{A}, I_E = 0$	(-)70			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1\text{mA}, R_{BE} = \infty$	(-)60			V
E-B 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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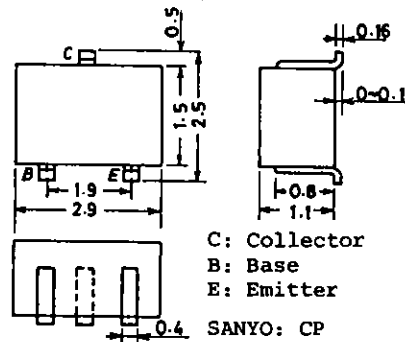
Marking 2SA1580 : QL

2SC4104 : YY

h_{FE} rank : 3,4,5

Package Dimensions 2018A

(unit : mm)



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