



2SA1575/2SC4080

High-Frequency Amplifier, Wide-Band Amplifier Applications

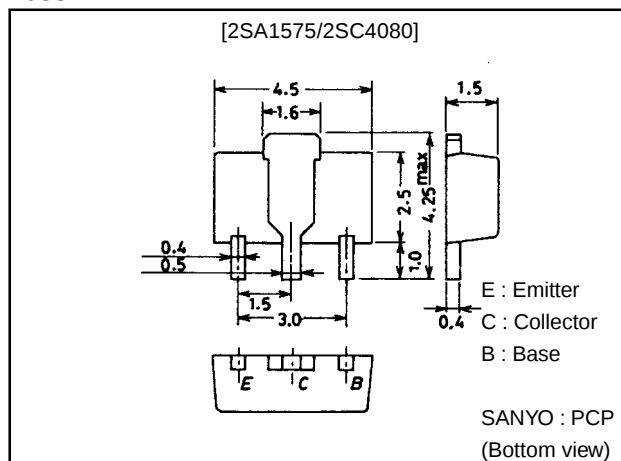
Features

- High f_T .
- High breakdown voltage.
- Small reverse transfer capacitance and excellent high-frequency characteristic.
- Adoption of FBET process.

Package Dimensions

unit:mm

2038



() : 2SA1575

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(-)200	V
Collector-to-Emitter Voltage	V_{CEO}		(-)200	V
Emitter-to-Base Voltage	V_{EBO}		(-)4	V
Collector Current	I_C		(-)100	mA
Collector Current (Pulse)	I_{CP}		(-)200	mA
Collector Dissipation	P_C		500	mW
		Mounted on ceramic board (250mm ² ×0.8mm)	1.3	W
Junction Temperature	T_j		150	°C
Storage Temperature	T_{stg}		-55 to +150	°C

Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=(-)150\text{V}$, $I_E=0$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)2\text{V}$, $I_C=0$			(-)1.0	μA
DC Current Gain	h_{FE1}	$V_{CE}=(-)10\text{V}$, $I_C=(-)10\text{mA}$	40*		320*	
	h_{FE2}	$V_{CE}=(-)10\text{V}$, $I_C=(-)60\text{mA}$	20			
Gain-Bandwidth Product	f_T	$V_{CE}=(-)30\text{V}$, $I_C=(-)30\text{mA}$		400		MHz
Output Capacitance	C_{ob}	$V_{CB}=(-)30\text{V}$, $f=1\text{MHz}$		1.8		pF
				(2.3)		pF
Reverse Transfer Capacitance	C_{re}	$V_{CB}=(-)30\text{V}$, $f=1\text{MHz}$		1.4		pF
				(1.7)		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)20\text{mA}$, $I_B=(-)2\text{mA}$			(-)1.0	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	$V_{(BR)CBO}$	$I_C=(-)10\mu\text{A}$, $I_E=0$	(-)200			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1\text{mA}$, $R_{BE}=\infty$	(-)200			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)100\mu\text{A}$, $I_C=0$	(-)4			V

* : The 2SA1575/2SC4080 are classified by 10mA h_{FE} as follows :

40	C	80	60	D	120	100	E	200	160	F	320
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Marking 2SA1575 : AF

2SC4080 : CI

 h_{FE} rank : C, D, E, F

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