Ordering number:EN3171

PNP/NPN Epitaxial Planar Silicon Transistors

2SA1575/2SC4080

High-Frequency Amplifier, Wide-Band Amplifier Applications

Features

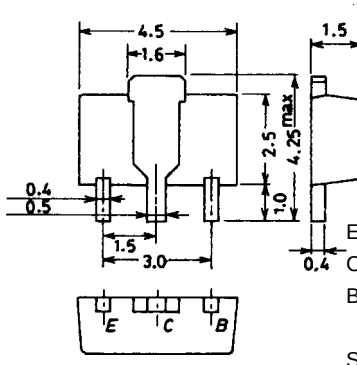
- High f_T.
- High breakdown voltage.
- Small reverse transfer capacitance and excellent high-frequency characteristic.
- Adoption of FBET process.

Package Dimensions

unit:mm

2038

[2SA1575/2SC4080]



E : Emitter
C : Collector
B : Base

SANYO : PCP
(Bottom view)

( ) : 2SA1575

Specifications

Absolute Maximum Ratings at Ta = 25˚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 (250mm²×0.8mm)	1.3	W
Junction Temperature	Tj		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

Electrical Characteristics at Ta = 25˚C

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

Marking 2SA1575 : AF
2SC4080 : CI
h_{FE} rank : C, D, E, F

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