Ordering number:EN4536

FP209

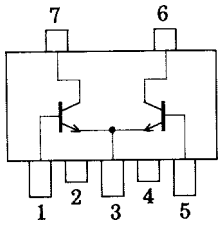
NPN Epitaxial Planar Silicon Transistor

Driver Applications

Features

- Composite type with 2 transistors (NPN) contained in one package, facilitating high-density mounting.
- The FP209 is formed with 2 chips being equivalent to the 2SD1621, placed in one package.

Electrical Connection



1:Base (NPN TR)
2, 7:Collector (NPN TR)
3:Emitter Common
4, 6:Collector (NPN TR)
5:Base (NPN TR)

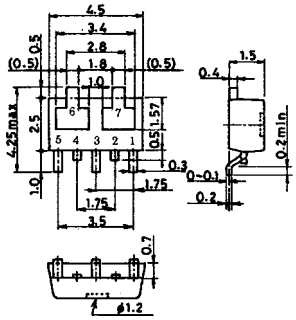
(Top view)

Package Dimensions

unit:mm

2097A

[FP209]



1:Base (NPN TR)
2, 7:Collector (NPN TR)
3:Emitter Common
4, 6:Collector (NPN TR)
5:Base (NPN TR)

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(Bottom view)

Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		30	V
Collector-to-Emitter Voltage	V_{CEO}		25	V
Emitter-to-Base Voltage	V_{EBO}		6	V
Collector Current	I_C		2	A
Collector Current (Pulse)	I_{CP}		5	A
Base Current	I_B		400	mA
Collector Dissipation	P_C	Mounted on ceramic board (250mm²×0.8mm) 1unit	0.8	W
Total Dissipation	P_T	Mounted on ceramic board (250mm²×0.8mm)	1.1	W
Junction Temperature	Tj		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

Electrical Characteristics at Ta=25˚C

Parameter	Symbol	Conditons	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=20V, I_E=0			100	nA
Emitter Cutoff Current	I_{EBO}	V_{EB}=4V, I_C=0			100	nA
DC Current Gain	h_{FE}	V_{CE}=2V, I_C=100mA	140		400	
Gain-Bandwidth Product	f_T	V_{CE}=10V, I_C=50mA		150		MHz
Output Capacitance	Cob	V_{CB}=10V, f=1MHz		19		pF
C-E Saturation Voltage	$V_{CE(sat)}$	I_C=1.5A, I_B=75mA		0.18	0.4	V
B-E Saturation Voltage	$V_{BE(sat)}$	I_C=1.5A, I_B=75mA		0.85	1.2	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	I_C=10μA, I_E=0	30			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	I_C=1mA, R_{BE}=∞	25			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	I_E=10μA, I_C=0	6			V
Turn-ON Time	t_{on}	See specified Test Circuit		60		ns
Storage Time	t_{stg}	See specified Test Circuit		500		ns
Fall Time	t_f	See specified Test Circuit		25		ns

Marking:209

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Switching Time Test Circuit