Ordering number : EN3133A

Discontinued

SANYO Semiconductors

DATA SHEET

2SA1729 — PNP Epitaxial Planar Silicon Transistor
High-Speed Switching Applications

Features

- Adoption of FBET, MBIT processes.
- Large current capacity.
- Low collector-to-emitter saturation voltage.
- High-speed switching.
- Small-sized package.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		–50	V
Collector-to-Emitter Voltage	V_{CEO}		–40	V
Emitter-to-Base Voltage	V_{EBO}		–5	V
Collector Current	I_C		–1.5	A
Collector Current (Pulse)	I_{CP}		–3	A
Collector Dissipation	P_C	Mounted on a ceramic board (250mm^2×0.8mm)	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}=–40V, I_E=0A			–1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=–3V, I_C=0A			–1	μA

Marking : AG

Continued on next page.

Continued from preceding page.

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
DC Current Gain	$h_{FE}1$	V_{CE}=-2V, I_C=-100mA	70*		280*	
	$h_{FE}2$	V_{CE}=-2V, I_C=-1.5A	25			
Gain-Bandwidth Product	f_T	V_{CE}=-2V, I_C=-100mA		300		MHz
Output Capacitance	Cob	V_{CB}=-10V, f=1MHz		18		pF
Collector-to-Emitter Saturation Voltage	V_{CE}(sat)	I_C=-800mA, I_B=-40mA		-0.3	-0.8	V
Base-to-Emitterr Saturation Voltage	V_{BE}(sat)	I_C=-800mA, I_B=-40mA		-0.9	-1.3	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=-10μA, I_E=0A	-50			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=-1mA, R_{BE}=∞	-40			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=-10μA, I_C=0A	-5			V
Turn-ON Time	t_{on}	See specified Test Circuit.		50	100	ns
Storage Time	t_{stg}	See specified Test Circuit.		120	220	ns
Turn-OFF Time	t_{off}	See specified Test Circuit.		150	300	ns

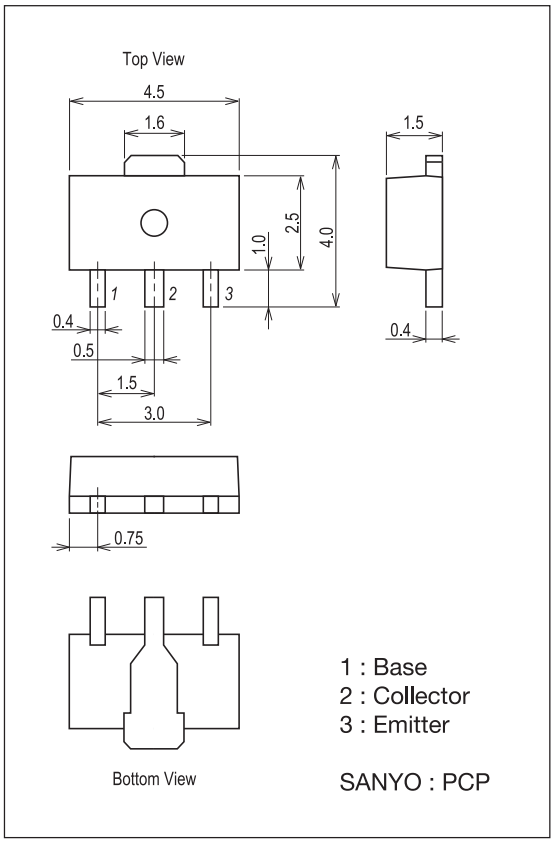
*: The 2SA1729 is classified by 100mA h_{FE} as follows:

Rank	Q	R	S
h_{FE}	70 to 140	100 to 200	140 to 280

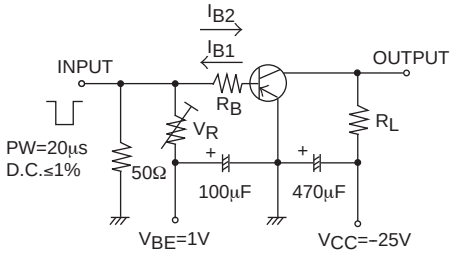
Package Dimensions

unit : mm (typ)

7007B-004



Switching Time Test Circuit



I_C=20I_{B1}= -20I_{B2}= -800mA

Discontinued