Ordering number:EN2803

NPN Epitaxial Planar Silicon Transistor

2SD2028

Low-Frequency Power Amplifier Applications

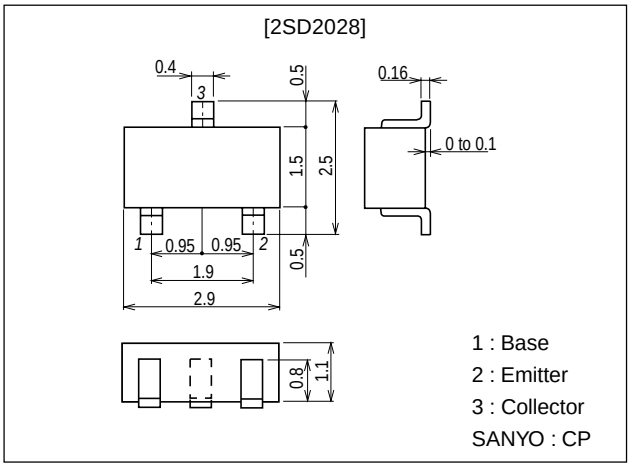
Features

- With Zener diode (11±3V) between collector and base.
- Large current capacity.
- Low collector-to-emitter saturation voltage.
- Ultrasmall-sized package permitting the 2SD2028-applied sets to be made small and slim.

Package Dimensions

unit:mm

2018B



Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}	With Zener diode (11±3V)	8	V
Collector-to-Emitter Voltage	V_{CEO}	With Zener diode (11±3V)	8	V
Emitter-to-Base Voltage	V_{EBO}		5	V
Collector Current	I_C		0.7	A
Collector Current (Pulse)	I_{CP}		1.5	A
Collector Dissipation	P_C		200	mW
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}=6V, I_E=0			100	nA
Emitter Cutoff Current	I_{EBO}	V_{EB}=4V, I_C=0			100	nA
DC Current Gain	$h_{FE}1$	V_{CE}=2V, I_C=50mA	200*		900*	
	$h_{FE}2$	V_{CE}=2V, I_C=500mA	100			
Gain-Bandwidth Product	f_T	V_{CE}=2V, I_C=50mA		200		MHz
Output Capacitance	C_{ob}	V_{CB}=5V, f=1MHz		12		pF

* : The 2SD2028 is classified by 50mA h_{FE} as follows :

200	6	400	300	7	600	450	8	900

(Note) Marking : LT
h_{FE} rank : 6, 7, 8

Continued on next page.

SANYO Electric Co.,Ltd. Semiconductor Bussiness Headquaters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

Continued from preceding page.

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=100mA, I_B=10mA		50	120	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=100mA, I_B=10mA		0.8	1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=100μA, I_E=0	8	11	14	V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=100μA, R_{BE}=∞	8	11	14	V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=10μA, I_C=0	5			V

Electrical Connection