

No.722G

2SB828/2SD1064

PNP/NPN Epitaxial Planar Silicon Transistors

50V/12A Switching Applications

Applications

· Relay drivers, high-speed inverters, converters, and other general high-current switching applications.

Features

· Low-saturation collector-to-emitter voltage : $V_{CE(sat)} = -0.5V$ (PNP), $0.4V$ (NPN) max.
 · Wide ASO leading to high resistance to breakdown.

() : 2SB828

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

			unit
Collector-to-Base Voltage	V_{CBO}	(-)	60 V
Collector-to-Emitter Voltage	V_{CEO}	(-)	50 V
Emitter-to-Base Voltage	V_{EBO}	(-)	6 V
Collector Current	I_C	(-)	12 A
Collector Current (Pulse)	I_{CP}	(-)	17 A
Collector Dissipation	P_C	$T_c = 25^\circ C$	80 W
Junction Temperature	T_j		150 $^\circ C$
Storage Temperature	T_{stg}		-55 to +150 $^\circ C$

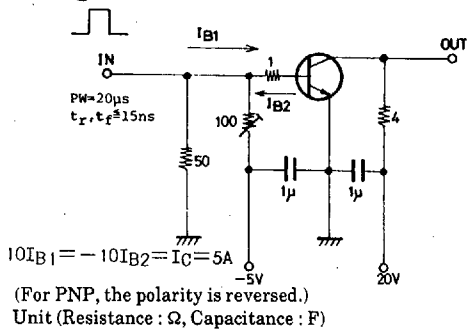
Electrical Characteristics at $T_a = 25^\circ C$

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)40V, I_E = 0$			(-)	0.1 mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4V, I_C = 0$			(-)	0.1 mA
DC Current Gain	$h_{FE}(1)$	$V_{CE} = (-)2V, I_C = (-)1A$	70*		280*	
		$h_{FE}(2)$	$V_{CE} = (-)2V, I_C = (-)5A$	30		
Gain Bandwidth Product	f_T	$V_{CE} = (-)5V, I_C = (-)1A$		10		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)6A, I_B = (-)0.3A$			0.4	V
					(-0.5)	
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)1mA, I_E = 0$	(-)	60		V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1mA, R_{BE} = \infty$	(-)	50		V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)1mA, I_C = 0$	(-)	6		V
Rise Time	t_{on}	See specified Test Circuit.	(0.2)	0.1		μs
Storage Time	t_{stg}	"	(0.4)	1.2		μs
Fall Time	t_f	"	(0.1)	0.05		μs

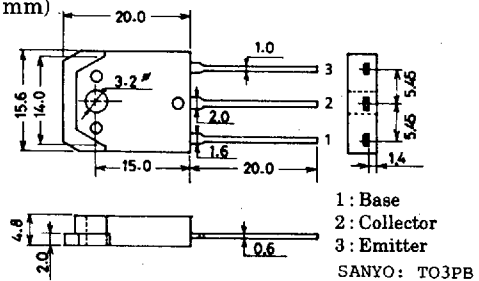
* : The 2SB828/2SD1064 are classified by 1A h_{FE} as follows :

70	Q	140	100	R	200	140	S	280
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Switching Time Test Circuit



Package Dimensions 2022A
(unit : mm)



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