Ordering number:ENN575D

PNP/NPN Epitaxial Planar Silicon Transistors

2SB764/2SD863

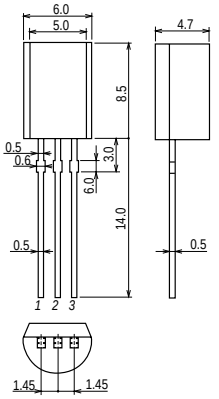
Voltage Regulator, Relay Lamp Driver Electrical Equipment Applications

Package Dimensions

unit:mm

2006B

[2SB764/2SD863]



1 : Emitter
2 : Collector
3 : Base
SANYO : MP

( ) : 2SB764

Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(–)60	V
Collector-to-Emitter Voltage	V_{CEO}		(–)50	V
Emitter-to-Base Voltage	V_{EBO}		(–)5	V
Collector Current	I_C		(–)1	A
Collector Current (Pulse)	I_{CP}		(–)2	A
Collector Dissipation	P_C		0.9	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}=(–)50V, I_E=0			(–)1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(–)4V, I_C=0			(–)1	μA
DC Current Gain	$h_{FE}1$	V_{CE}=(–)2V, I_C=(–)50mA	60*		320*	
	$h_{FE}2$	V_{CE}=(–)2V, I_C=(–)1A	30			
Gain-Bandwidth Product	f_T	V_{CE}=(–)10V, I_C=(–)50mA		150		MHz
Output Capacitance	C_{ob}	V_{CB}=(–)10V, f=1MHz		(20)		pF
				12		pF

Continued on next page.

■ Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO representative nearest you before using any SANYO products described or contained herein in such applications.

■ SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges,or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

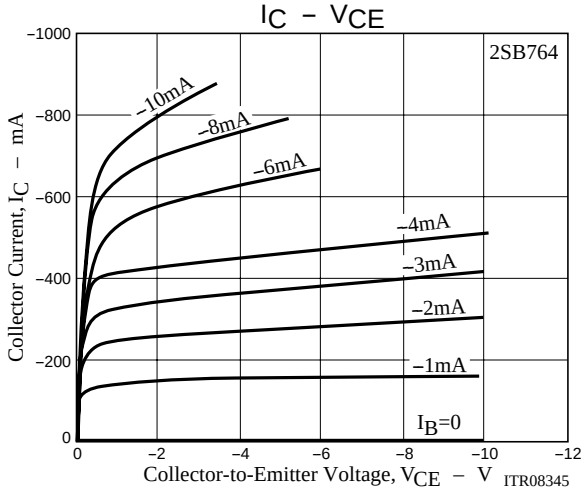
SANYO Electric Co.,Ltd. Semiconductor Company
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

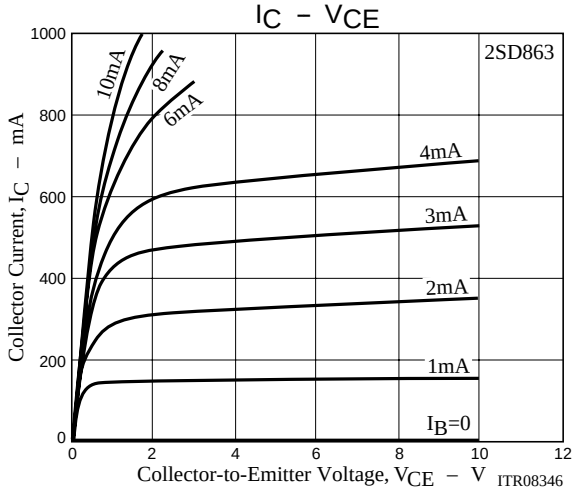
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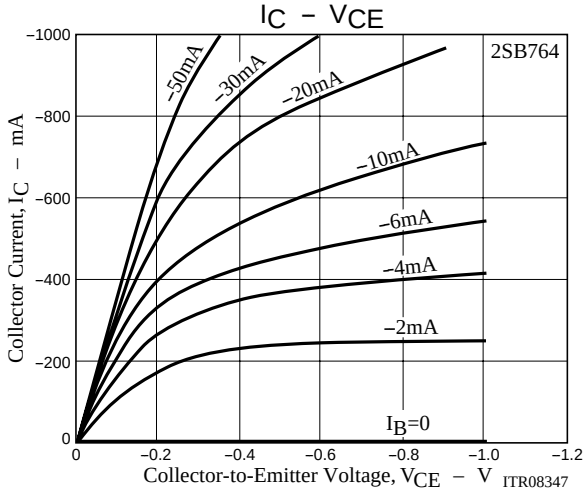
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=(–)500mA, I_B=(–)50mA		(–0.2)	(–0.7)	V
				0.15	0.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=(–)500mA, I_B=(–)50mA		(–)0.85	(–)1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=(–)10μA, I_E=0	(–)60			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=(–)1mA, R_{BE}=∞	(–)50			V
Emitter-to-Base Breakdown Votage	$V_{(BR)EBO}$	I_E=(–)10μA, I_C=0	(–)5			V

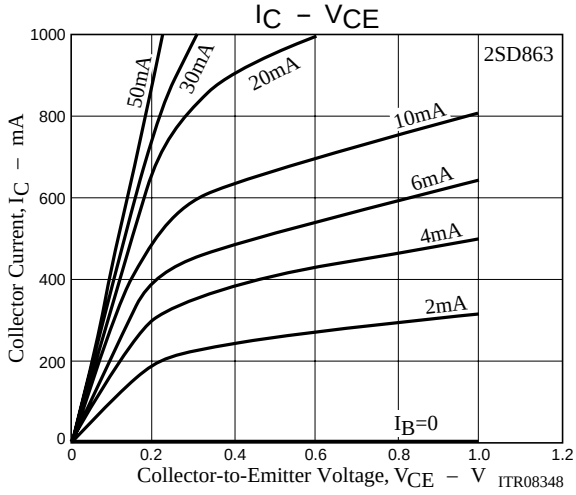
* : The SB764/2SD863 are classified by 50mA h_{FE} as follows :

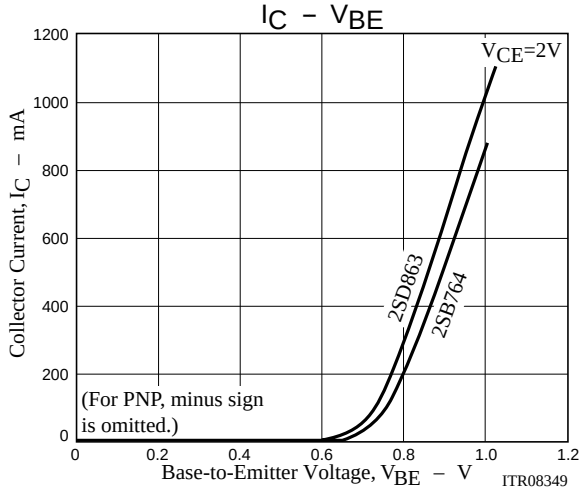
Rank	D	E	F
h_{FE}	60 to 120	100 to 200	160 to 320

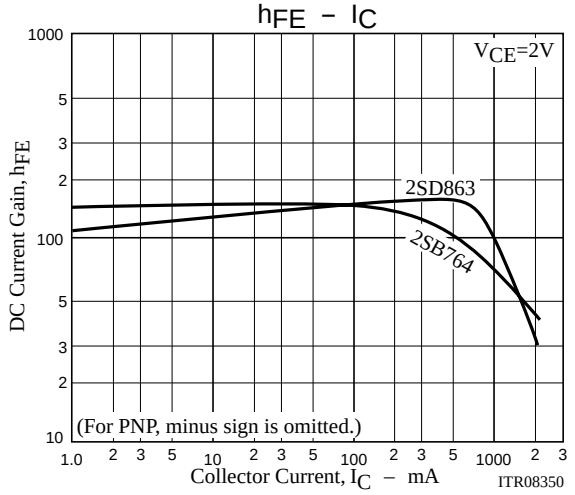


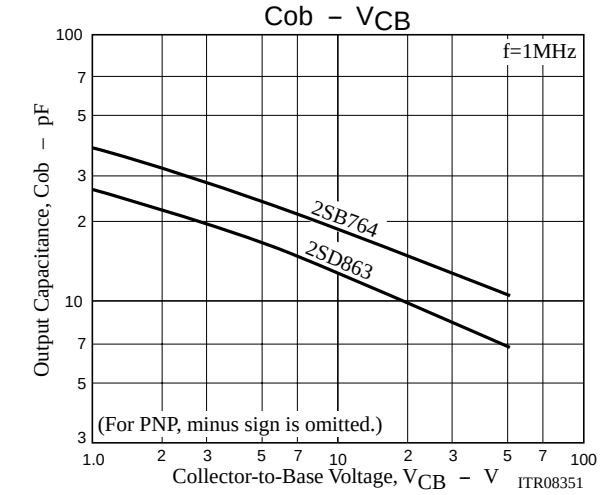


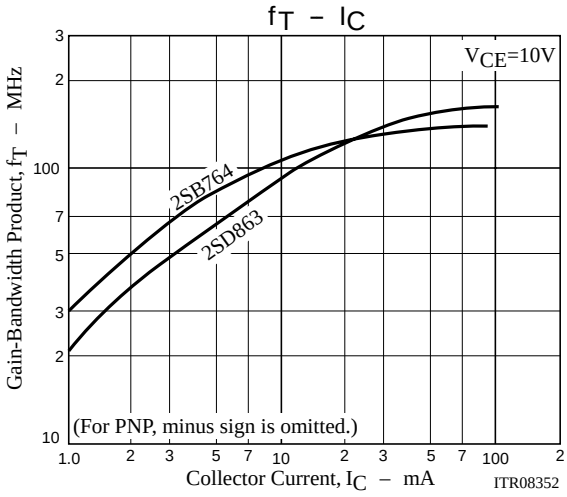


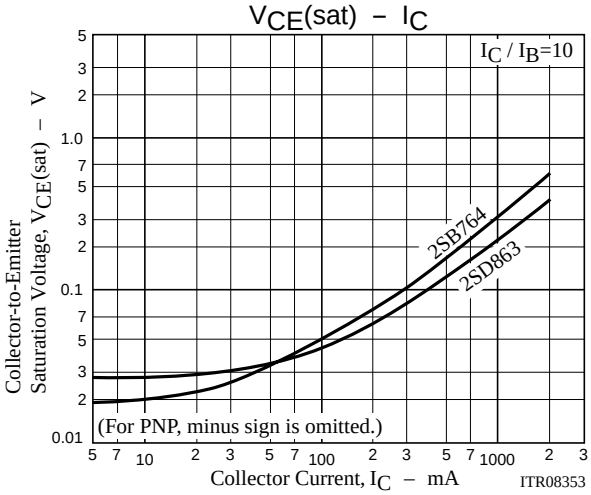


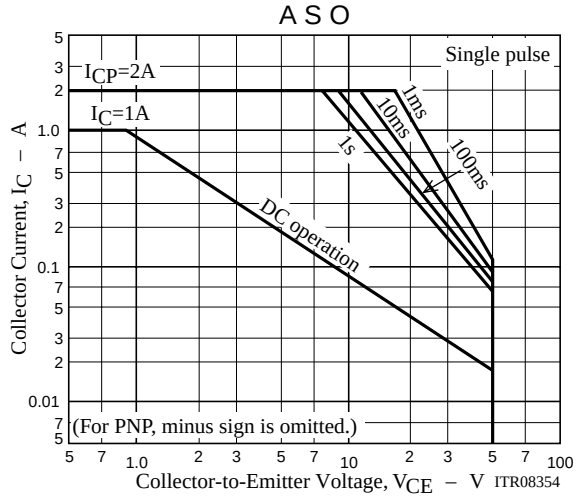


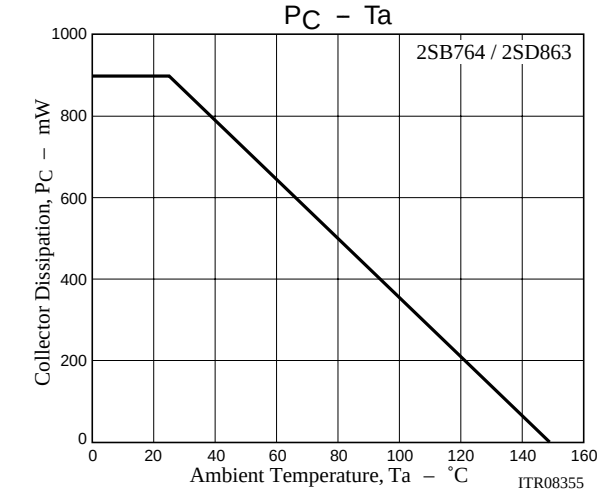



Cob – VCB
f=1MHz
Output Capacitance, Cob – pF
2SB764
2SD863
(For PNP, minus sign is omitted.)
Collector-to-Base Voltage, VCB – V
ITR08351


fT – IC
VCE=10V
Gain-Bandwidth Product, fT – MHz
2SB764
2SD863
(For PNP, minus sign is omitted.)
Collector Current, IC – mA
ITR08352


VCE(sat) – IC
IC / IB=10
Collector-to-Emitter Saturation Voltage, VCE(sat) – V
2SB764
2SD863
(For PNP, minus sign is omitted.)
Collector Current, IC – mA
ITR08353


A S O
Single pulse
ICP=2A
IC=1A
1ms
10ms
1s
100ms
DC operation
Collector Current, IC – A
(For PNP, minus sign is omitted.)
Collector-to-Emitter Voltage, VCE – V
ITR08354


PC – Ta
2SB764 / 2SD863
Collector Dissipation, PC – mW
Ambient Temperature, Ta – °C
ITR08355

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