

	No.686I	<h1 style="margin: 0;">2SB824/2SD1060</h1> <p style="margin: 0;">PNP/NPN Epitaxial Planar Silicon Transistors</p> <p style="margin: 0;">50V/5A Switching Applications</p>
--	---------	---

APPLICATIONS

- Suitable for relay drivers, high-speed inverters, converters, and other general large-current switching

FEATURES

- Low collector-emitter saturation voltage: $V_{CE(sat)} = (-)0.4V \text{ max} / I_C = (-)3A, I_B = (-)0.3A$

Values for 2SB824 shown in ()

ABSOLUTE MAXIMUM RATINGS/ $T_a=25^\circ C$

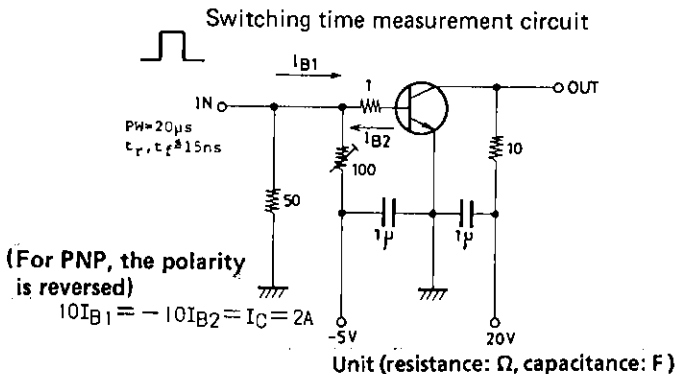
			unit
Collector-to-base voltage	V_{CBO}	(-)60	V
Collector-to-emitter voltage	V_{CEO}	(-)50	V
Emitter-to-base voltage	V_{EBO}	(-)6	V
Collector current	I_C	(-)5	A
Collector Current (Pulse)	I_{CP}	(-)9	A
Allowable collector dissipation	P_C	$T_c=25^\circ C$ 30	W
Junction temperature	T_j	150	$^\circ C$
Storage ambient temperature	T_{stg}	-55~+150	$^\circ C$

ELECTRICAL CHARACTERISTICS/ $T_a=25^\circ C$

			min	typ	max	unit
Collector cut-off current	I_{CBO}	$V_{CB} = (-)40V, I_E = 0$			(-)0.1	mA
Emitter cut-off 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*	
	$h_{FE(2)}$	$V_{CE} = (-)2V, I_C = (-)3A$	30			
Gain bandwidth product	f_T	$V_{CE} = (-)5V, I_C = (-)1A$		30		MHz
Output capacitance	C_{ob}	$V_{CB} = (-)10V, f = 1MHz$		100		pF
				(160)		pF
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = (-)3A, I_B = (-)0.3A$			(-)0.4	V
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = (-)1mA, I_E = 0$	(-)60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = (-)1mA, R_{BE} = \infty$	(-)50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = (-)1mA, I_C = 0$	(-)6			V
Turn-on time	t_{on}	at the appointed circuit		0.1		μs
Storage time	t_{stg}	at the appointed circuit	(0.7)1.4			μs
Fall time	t_f	at the appointed circuit		0.2		μs

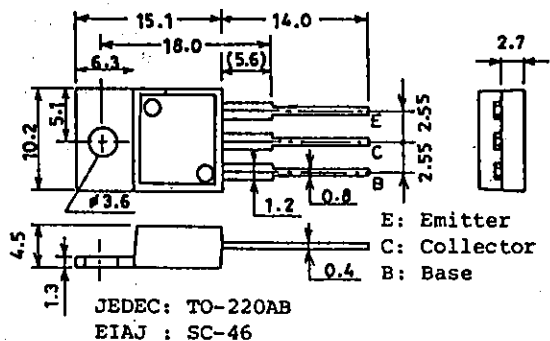
* 2SB824 and 2SD1060 are graded as follows by h_{FE} at 1A:

70	Q	140	100	R	200	140	S	280
----	---	-----	-----	---	-----	-----	---	-----

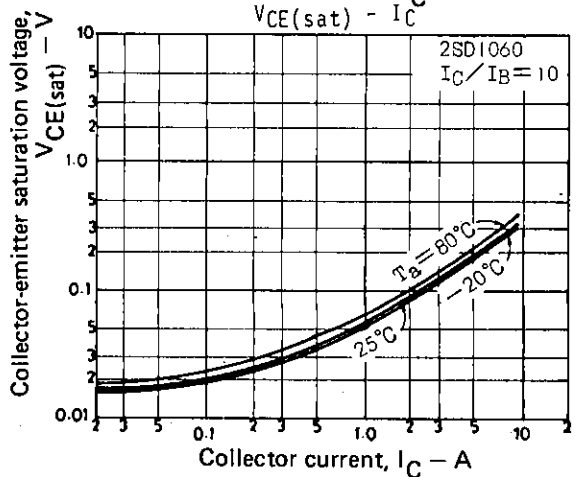
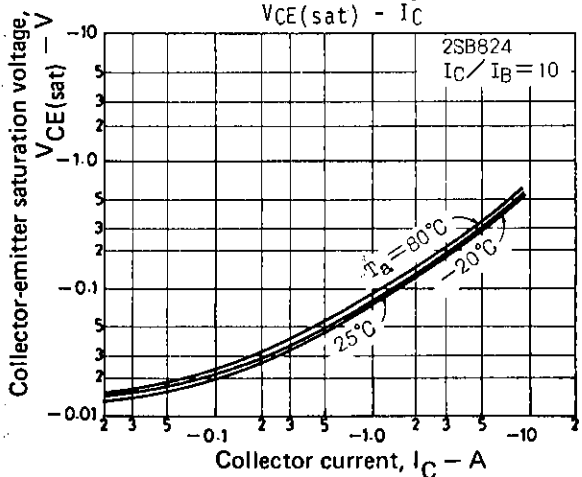
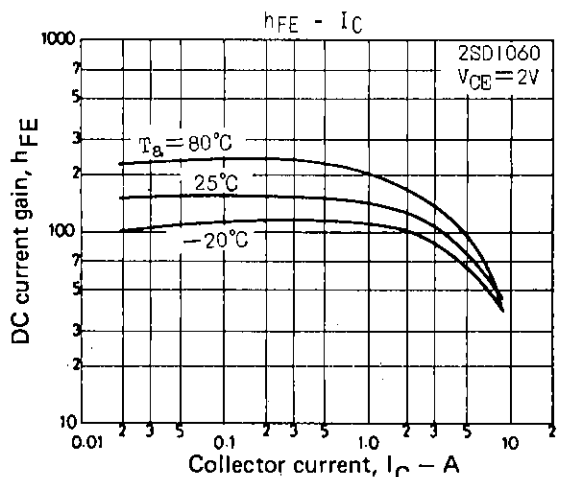
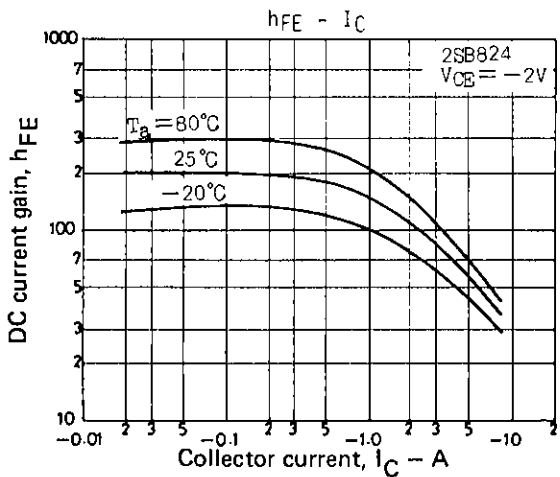
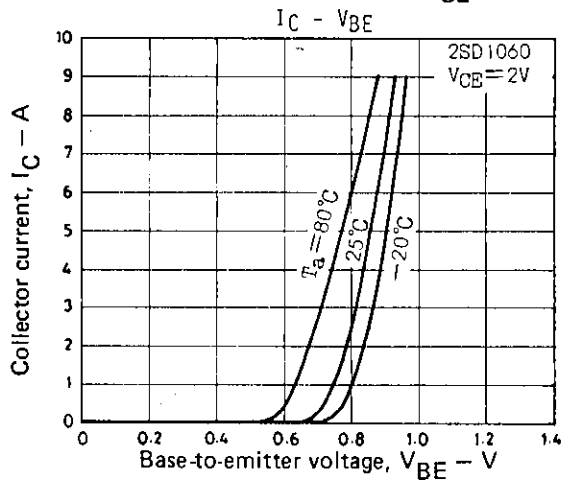
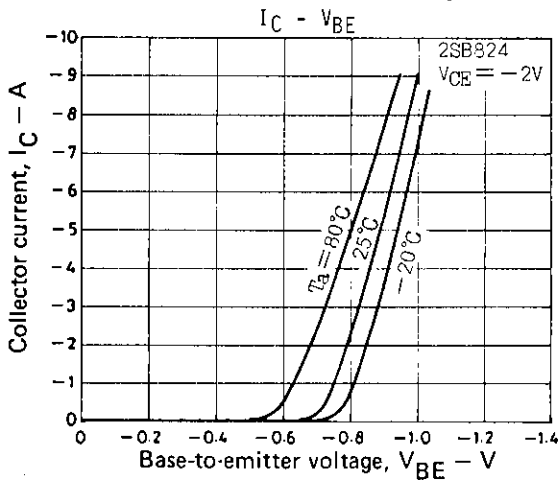
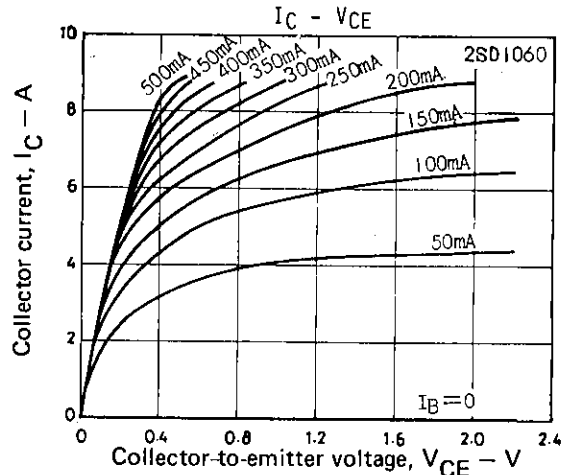
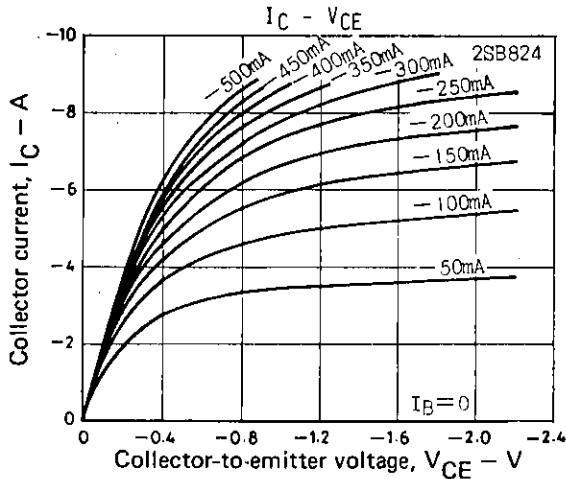


Package Dimensions 2010B

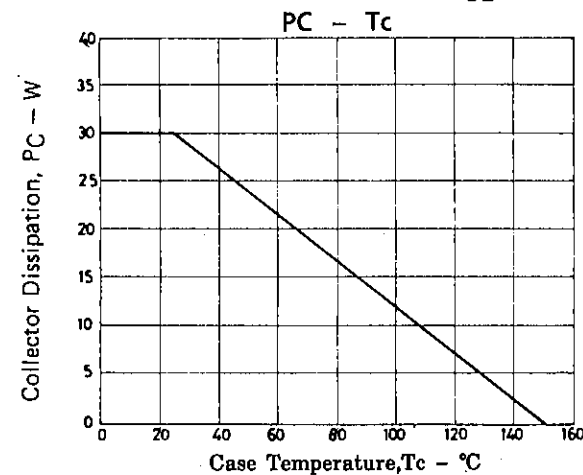
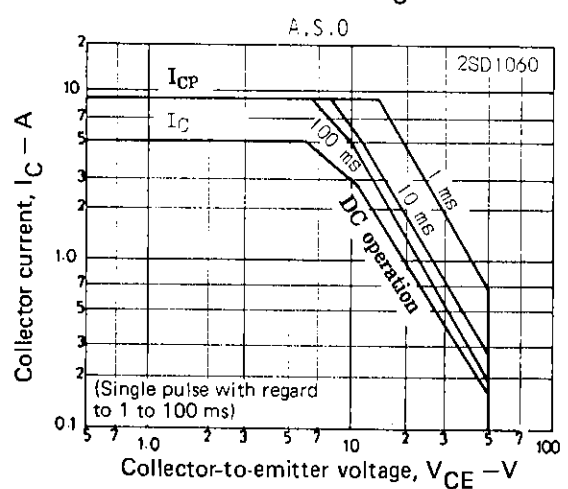
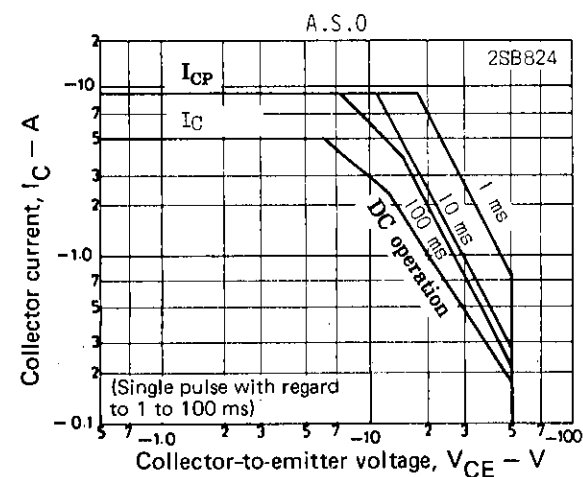
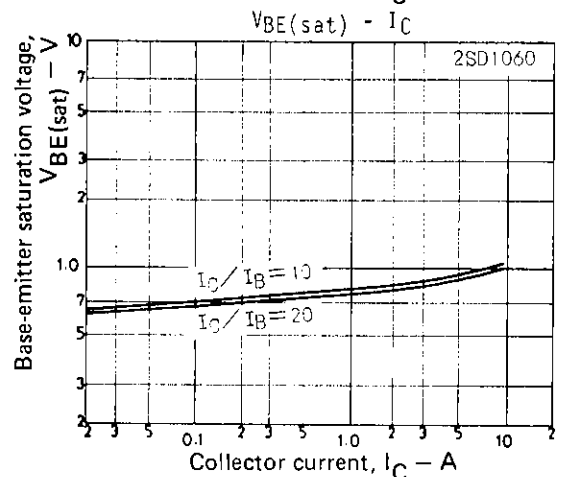
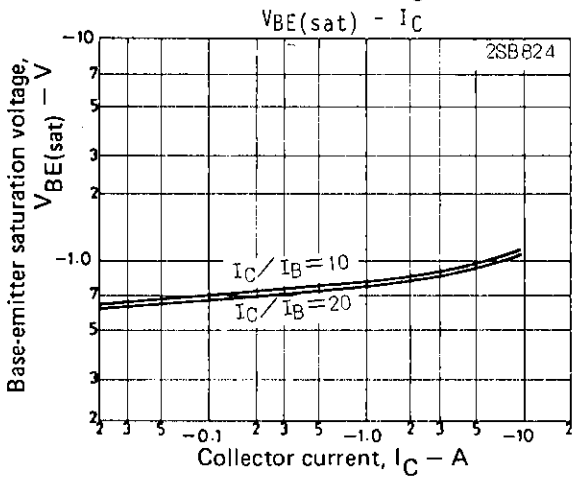
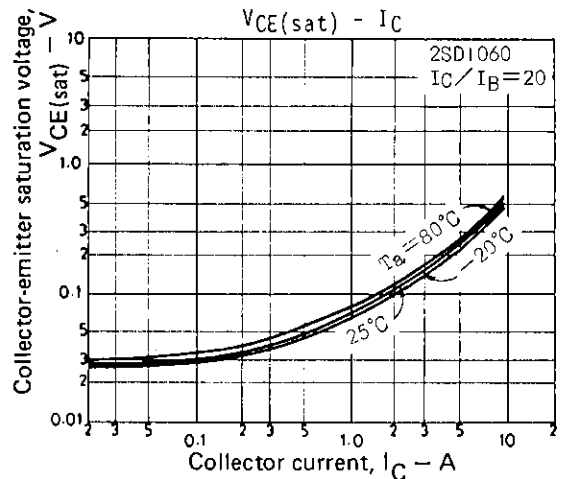
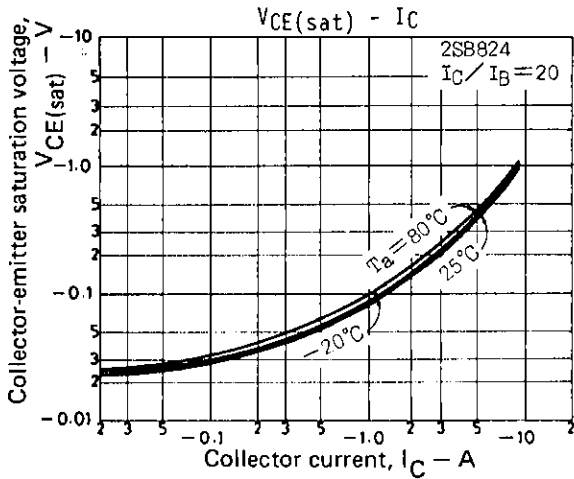
(unit: mm)



2SB824/2SD1060



2SB824/2SD1060



- No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.
- Anyone purchasing any products described or contained herein for an above-mentioned use shall:
 - ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use:
 - ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.
- Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.