

	No.1245C	2SB986/2SD1348 PNP/NPN Epitaxial Planar Silicon Darlington Transistors 50V/4A Switching Applications

Applications

- Power supplies, relay drivers, lamp drivers, electrical equipment.

Features

- Adoption of FBET and MBIT processes.
- Low saturation voltage.
- High current capacity and wide ASO.

(): 2SB986

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

			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	(-)4	A
Collector Current (Pulse)	I_{CP}	(-)6	A
Collector Dissipation	P_C	1.2	W
		10	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

$T_c = 25^\circ\text{C}$

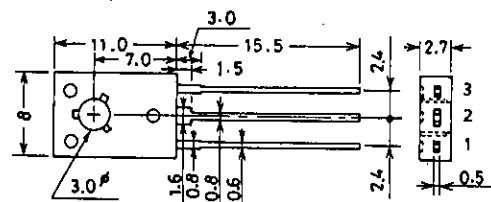
Electrical Characteristics at $T_a = 25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)40\text{V}, I_E = 0$			(-)1.0	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4\text{V}, I_C = 0$			(-)1.0	mA
DC Current Gain	$h_{FE}(1)$	$V_{CE} = (-)2\text{V}, I_C = (-)100\text{mA}$	100※		560※	
	$h_{FE}(2)$	$V_{CE} = (-)2\text{V}, I_C = (-)3\text{A}$	40			
Gain Bandwidth Product	f_T	$V_{CE} = (-)10\text{V}, I_C = (-)50\text{mA}$		150		MHz
Output Capacitance	C_{ob}	$V_{CB} = (-)10\text{V}$		25		pF
				(39)		
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)2\text{A}, I_B = (-)100\text{mA}, \text{Pulse}$		0.19	0.5	V
				(-0.35)	(-0.7)	
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)2\text{A}, I_B = (-)100\text{mA}, \text{Pulse}$		(-)0.94	(-)1.2	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu\text{A}, I_E = 0$	(-)60			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1\text{mA}, R_{BE} = \infty$	(-)50			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)10\mu\text{A}, I_C = 0$	(-)6			V

※ : The 2SB986/2SD1348 are classified by 100mA h_{FE} as follows :

100	R	200	140	S	280	200	T	400	280	U	560
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Package Dimensions 2009B (unit : mm)



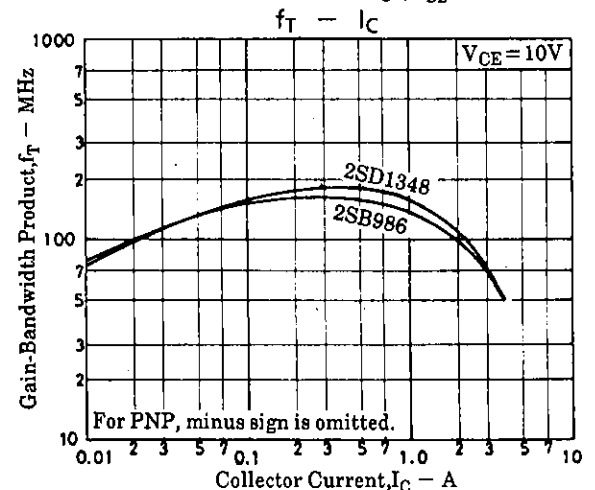
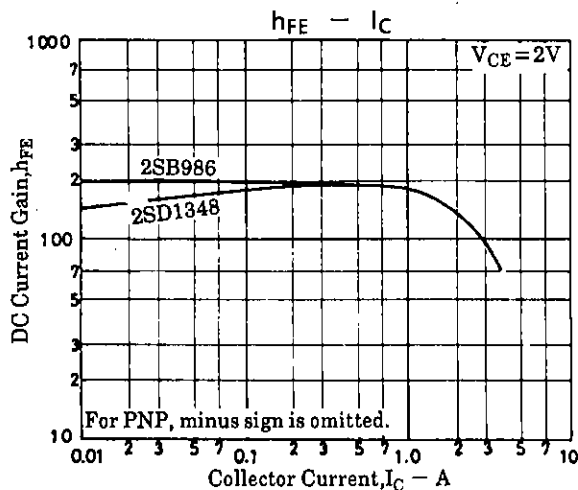
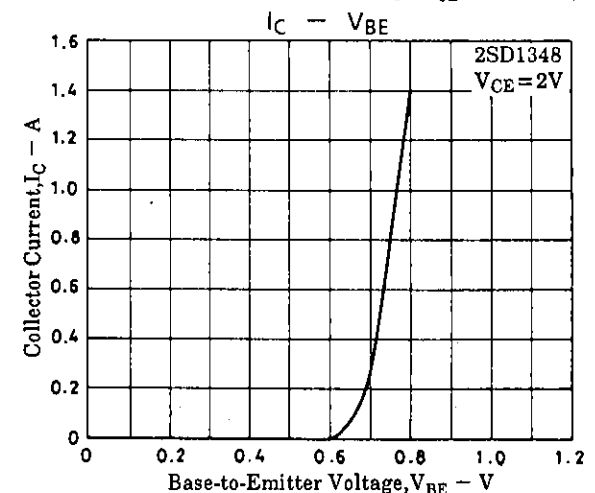
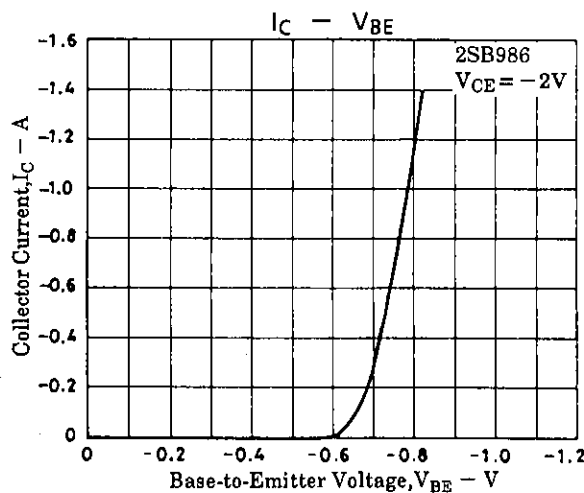
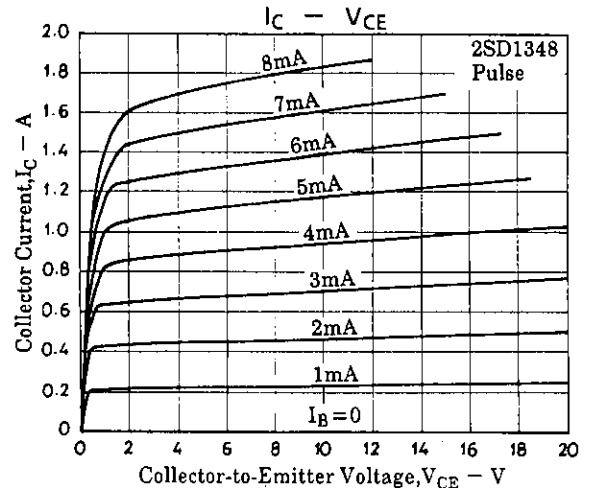
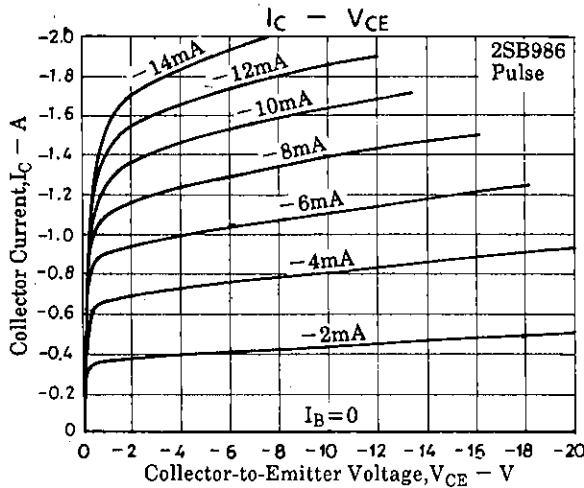
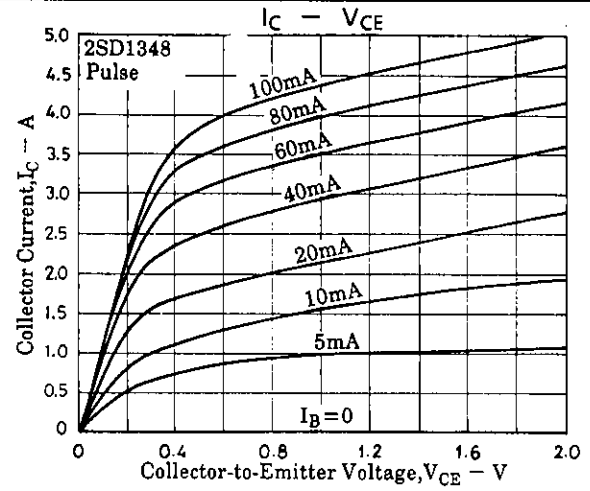
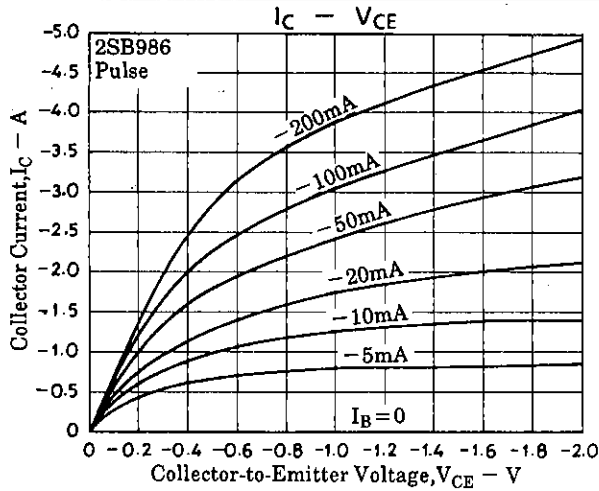
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1: Emitter
2: Collector
3: Base

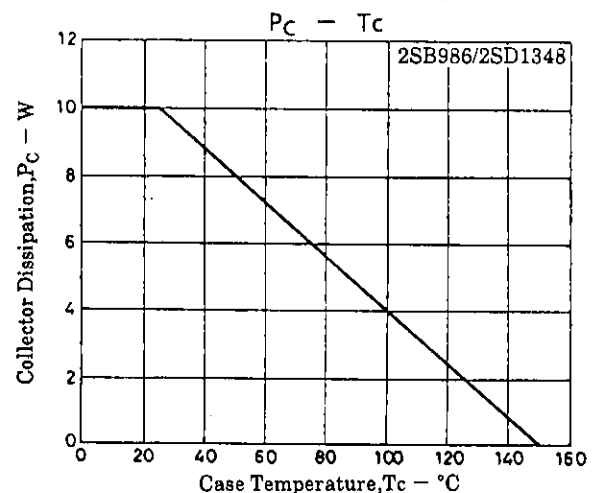
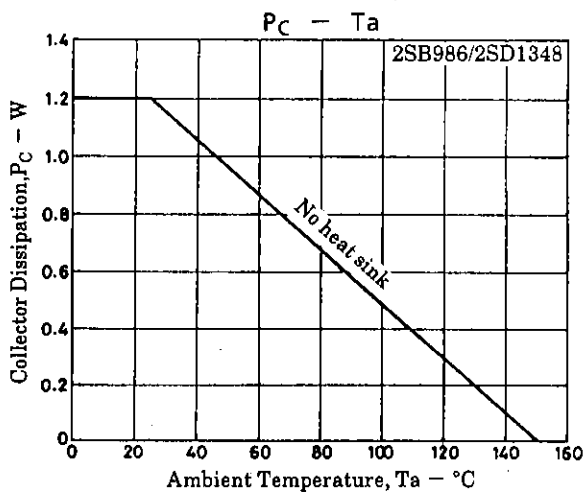
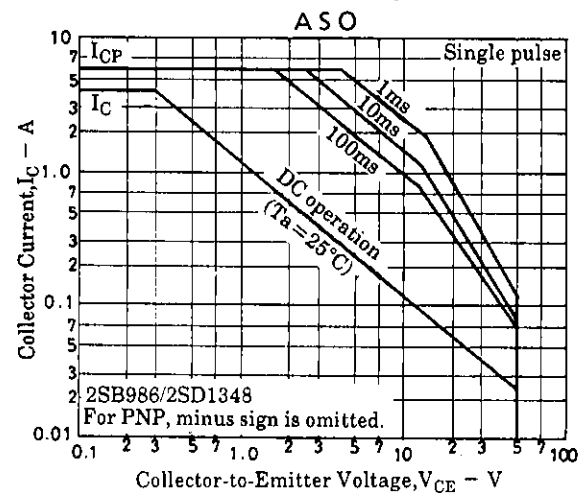
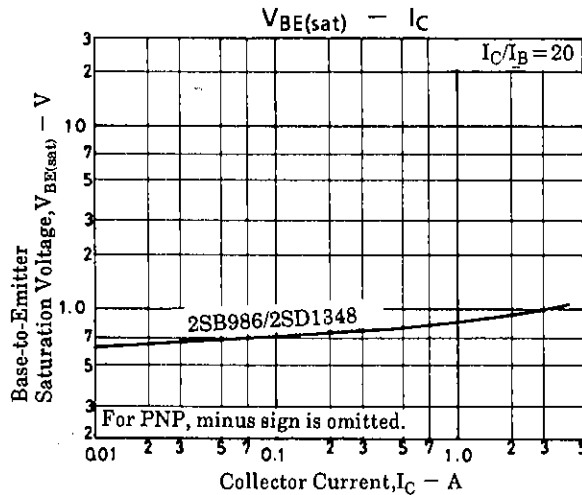
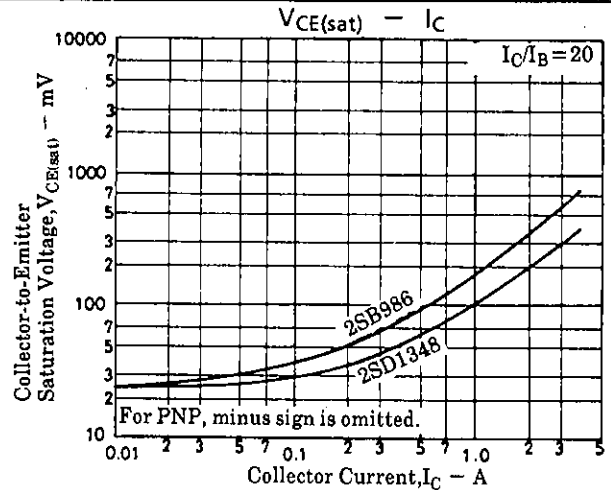
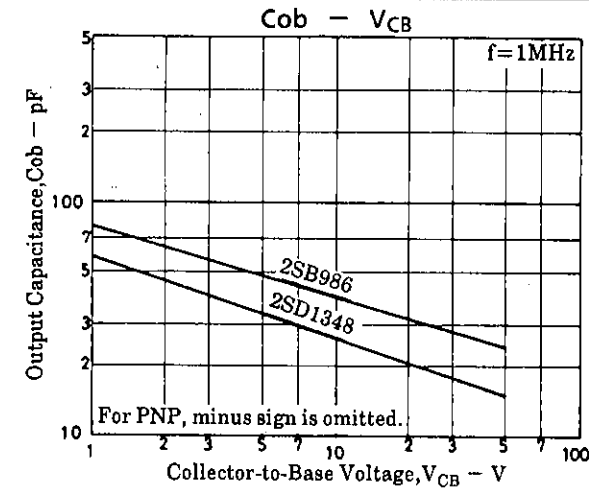
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