

<b>SANYO</b>	No.1798A	<b>2SB922L / 2SD1238L</b>
		PNP/NPN Epitaxial Planar Silicon Transistors
<b>80V/12A Switching Applications</b>		

**Use**

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

**Features**

- Low collector-to-emitter saturation voltage:  $V_{CE(sat)} = -0.5V$  (PNP),  $0.4V$  (NPN) max.
- Wide ASO and highly resistant to breakdown
- ( ): 2SB922L

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

			unit
Collector-to-Base Voltage	$V_{CBO}$	(-)90	V
Collector-to-Emitter Voltage	$V_{CEO}$	(-)80	V
Emitter-to-Base Voltage	$V_{EBO}$	(-)6	V
Collector Current	$I_C$	(-)12	A
<b>Collector Current (Pulse)</b>	$I_{CP}$	(-)20	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	$^\circ C$

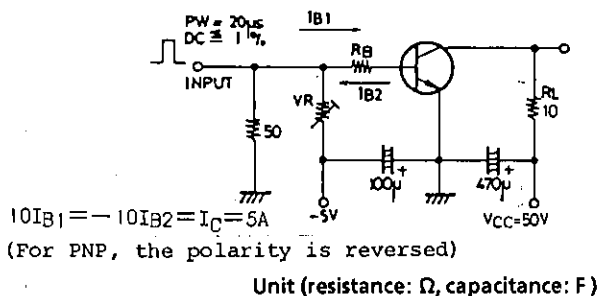
**Electrical Characteristics at  $T_a = 25^\circ C$**

			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = (-)80V, I_E = 0$			(-)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*	
	$h_{FE}(2)$	$V_{CE} = (-)2V, I_C = (-)6A$	30			
Gain Bandwidth Product	$f_T$	$V_{CE} = (-)5V, I_C = (-)1A$		20		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)6A, I_B = (-)0.6A$			0.4	V
					(-0.5)	
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)1mA, I_E = 0$	(-)90			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1mA, R_{BE} = \infty$	(-)80			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)1mA, I_C = 0$	(-)6			V
Turn-on Time	$t_{on}$	See specified Test Circuit.		0.2		$\mu s$
Storage Time	$t_{stg}$	"		1.7		$\mu s$
				(0.7)		
Fall Time	$t_f$	"		0.2		$\mu s$
				(0.1)		

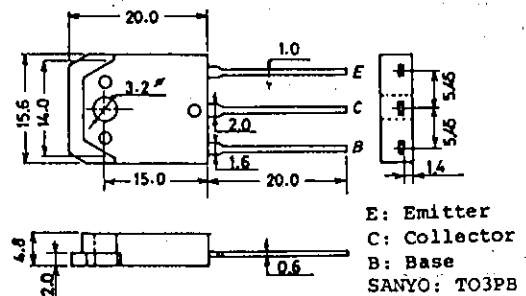
\*: The 2SB922L/2SD1238L are classified by 1A  $h_{FE}$  as follows:

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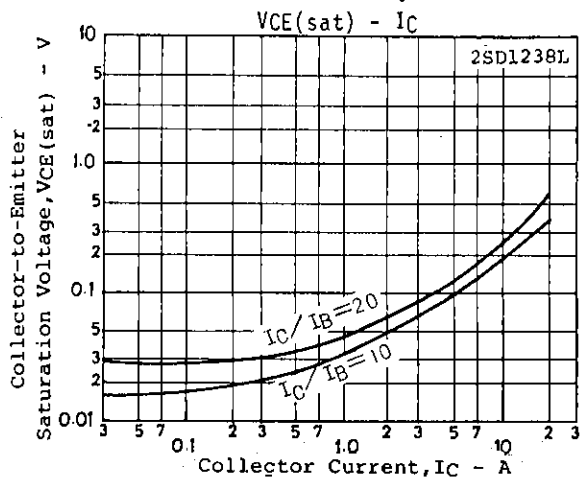
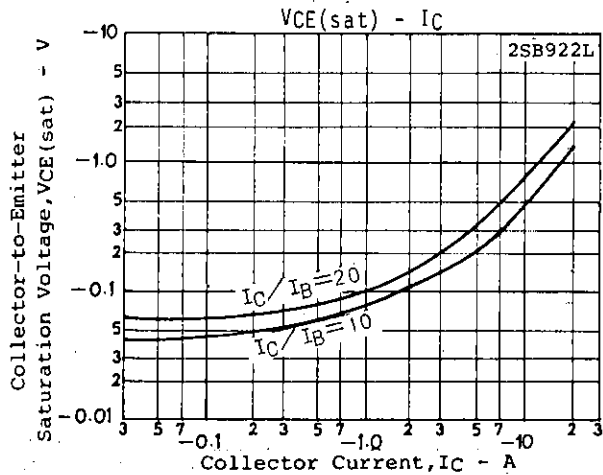
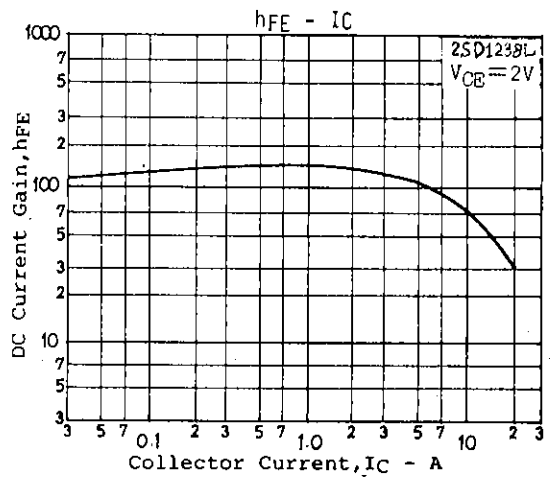
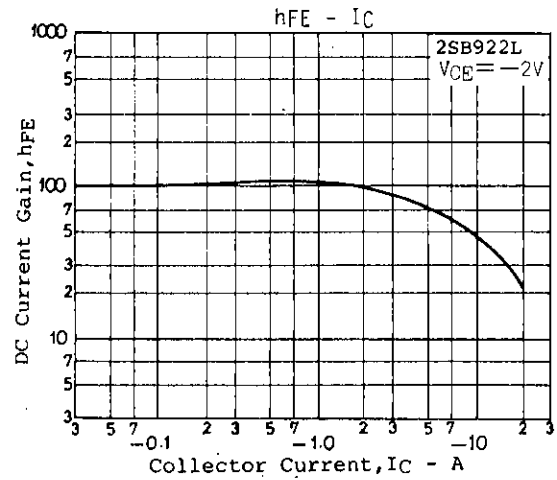
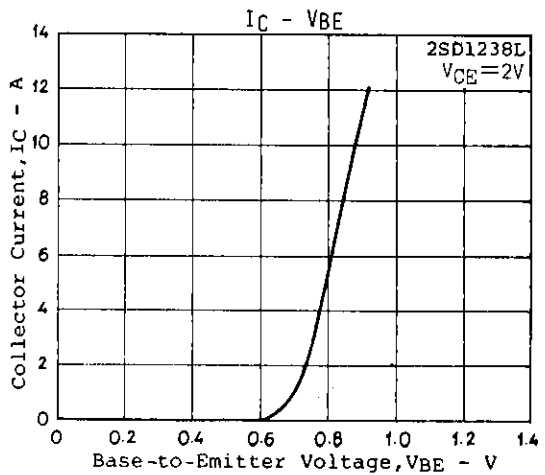
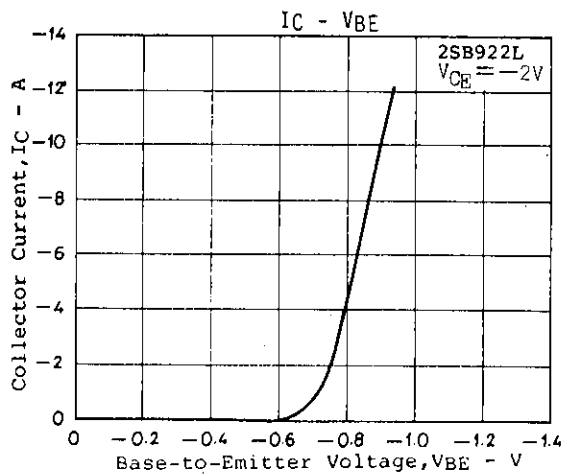
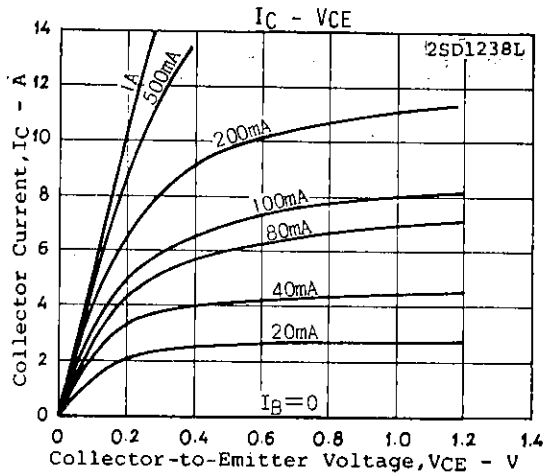
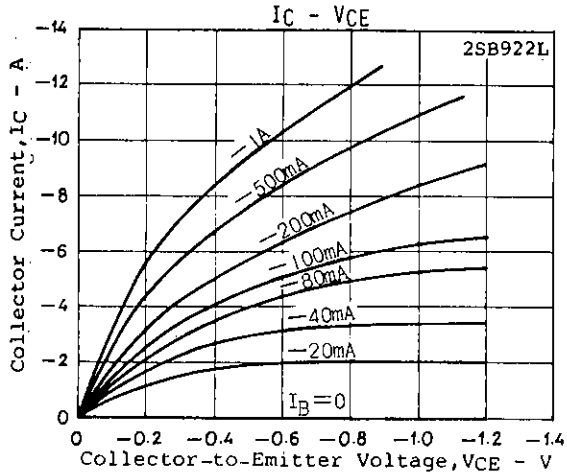
**Switching Time Test Circuit**

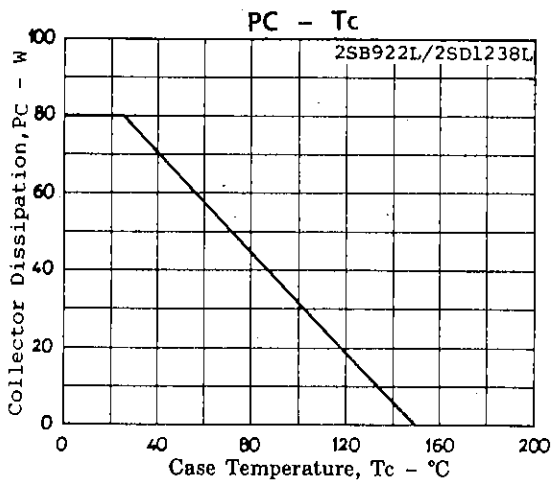
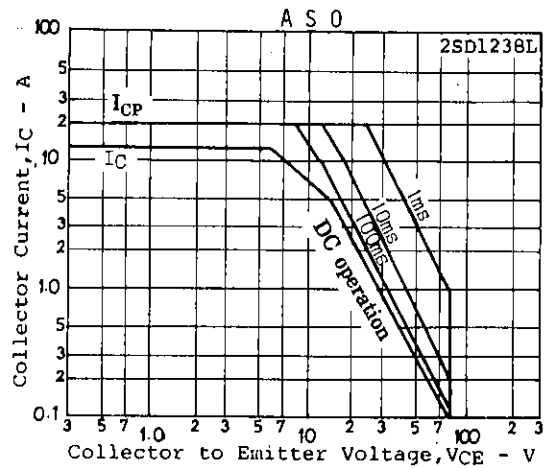
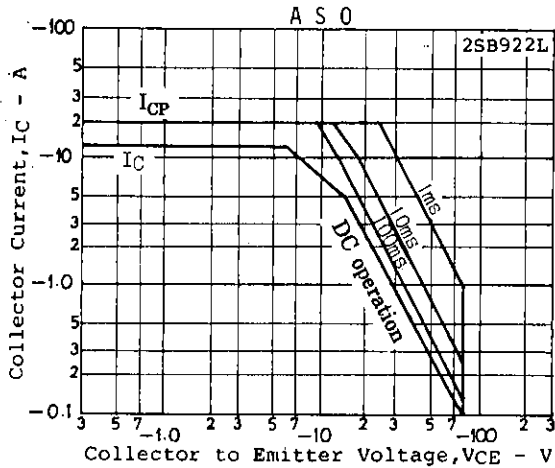


**Package Dimensions 2022**  
(unit:mm)



2SB922L/2SD1238L





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