

2SB922L/2SD1238L

80V/12A Switching Applications

Applications

· Suittable for relay drivers, high-speed inverters, converters, and other large-current switching appli-

Features

- \cdot Low collector-to-emitter saturation voltage : $V_{CE(sat)} = -0.5V$ (PNP), 0.4V (NPN) max.

· Wide ASO and highly resistant to breakdown.

(): 2SB922L

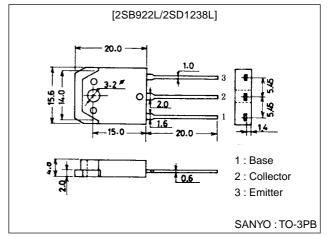
Specifications

Absolute Maximum Ratings at Ta = 25°C

Package Dimensions

unit:mm

2022A



Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		(–)90	V
Collector-to-Emitter Voltage	VCEO		(–)80	>
Emitter-to-Base Voltage	V _{EBO}		(–)6	V
Collector Current	IC		(–)12	Α
Collector Current (Pulse)	I _{CP}		(–)20	Α
Collector Dissipation	PC	Tc=25°C	80	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	Offic
Collector Cutoff Current	ICBO	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	fT	V _{CE} =(-)5V, I _C =(-)1A		20		MHz
Collector-to-Emitter Saturation Voltage	VCE(sat)	I _C =(-)6A, I _B =(-)0.6A			0.4	V
					(-0.5)	V

^{*}: The 2SB992L/2SD1238L are classified by 1A h_{FE} as follows:

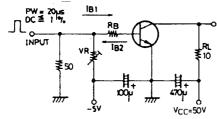
70 Q 140	100 R 200	140 S 280
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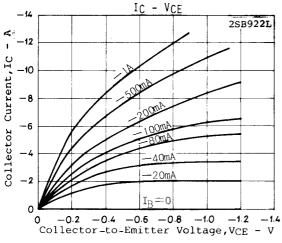
Parameter	Symbol	Conditions	Ratings			Unit
	Symbol		min	typ	max	UIIIL
Collector-to-Base Breakdown Voltage	V _(BR) CBO	I _C =(-)1mA, I _E =0	(-)90			V
Collector-to-Emitter Breakdown Voltage	V _(BR) CEO	$I_C=(-)1mA, R_{BE}=\infty$	(–)80			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E =(-)1mA I _C =0	(-)6			V
Turn-ON Time	ton	See specified Test Circuit		0.2		μs
Storage Time	t _{stg}	See specified Test Circuit		(0.7)		μs
				1.7		μs
Fall Time	t _f	See specified Test Circuit		(0.1)		μs
				0.2		μs

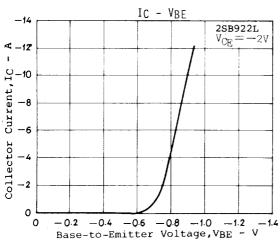
Switching Time Test Circuit

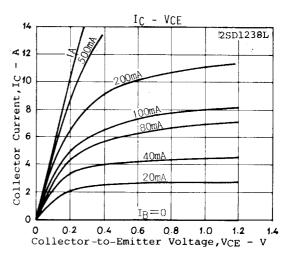


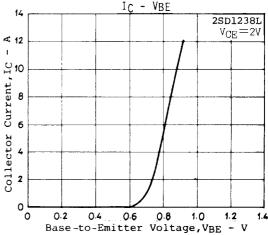
 $10I_{B1} = -10I_{B2} = I_{C} = 5A$

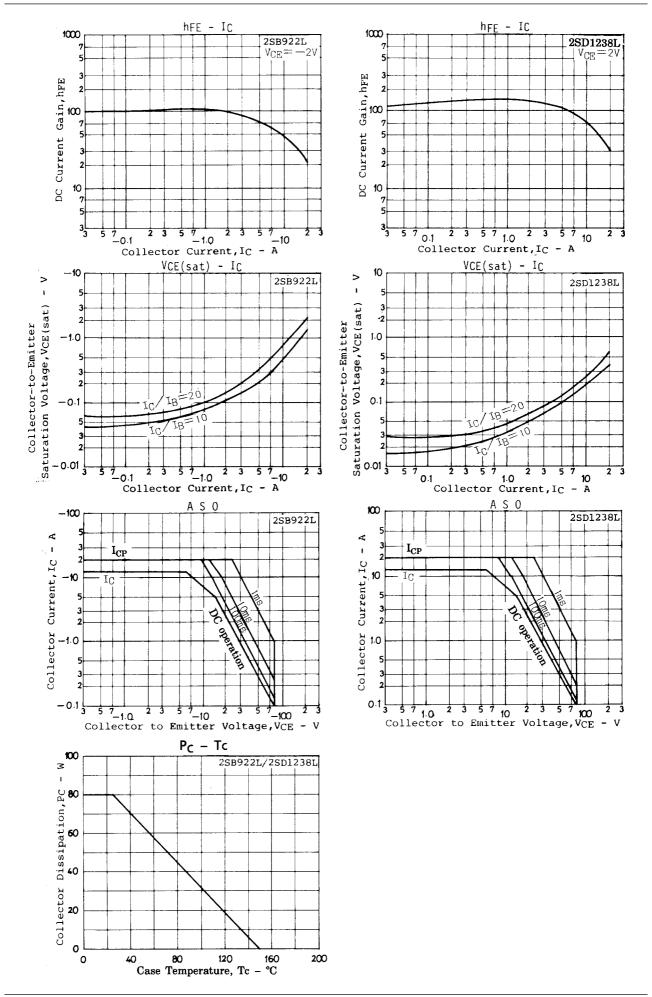
(For PNP, the polarity is reversed) Unit (resistance: Ω , capacitance: F)











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