



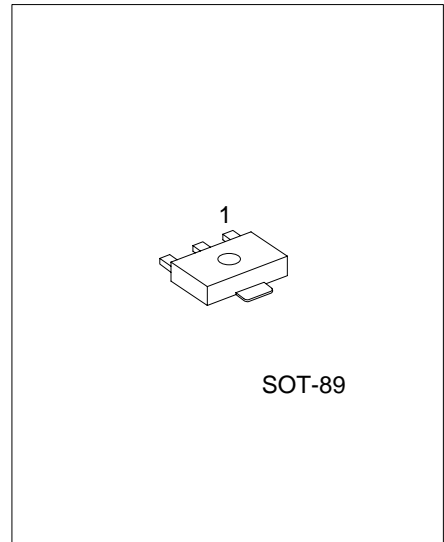
2SB824

PNP SILICON TRANSISTOR

PNP PLANAR SILICON TRANSISTOR

FEATURES

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



*Pb-free plating product number: 2SB824L

ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
2SB824-x-AB3-R	2SB824L-x-AB3-R	SOT-89	B	C	E	Tape Reel

<p>2SB824L-x-AB3-R</p>	<ul style="list-style-type: none"> (1) R: Tape Reel (2) AB3: SOT-89 (3) x: refer to Classification of h_{FE1} (4) L: Lead Free Plating, Blank: Pb/Sn
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■ ABSOLUTE MAXIMUM RATINGS (Ta=25)

PARAMETER	SYMBOL	RATINGS	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
Collector Dissipation	P_C	500	mW
Junction Temperature	T_J	+150	
Storage Temperature	T_{STG}	-40 ~ +150	

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

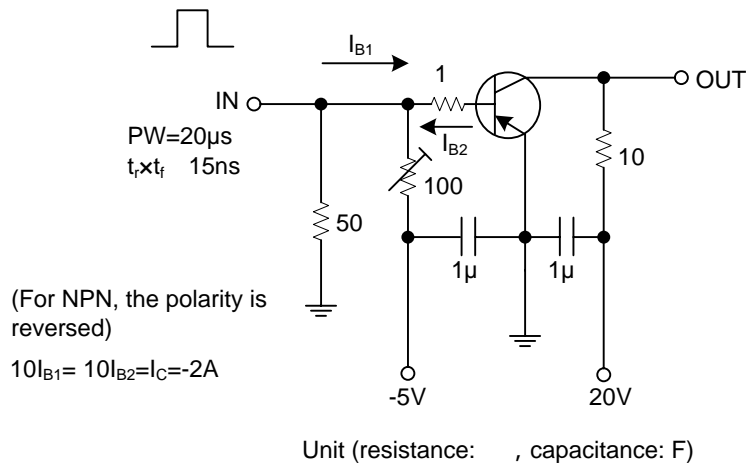
■ ELECTRICAL CHARACTERISTICS (Ta=25)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-to-Base Breakdown Voltage	BV_{CBO}	$I_C = -1mA, I_E = 0$	-60			V
Collector-to-Emitter Breakdown Voltage	BV_{CEO}	$I_C = -1mA, R_{BE} = \infty$	-50			V
Emitter-to-Base Breakdown Voltage	BV_{EBO}	$I_C = 0, I_E = -1mA$	-6			V
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_{FE1}	$V_{CE} = -2V, I_C = -1A$	70		360	
	h_{FE2}	$V_{CE} = -2V, I_C = -3A$	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
Collector-to-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C = -3A, I_B = -0.3A$			-0.4	V
Turn-ON Time	t_{ON}	See specified test circuit		0.1		μs
Storage Time	t_{STG}	See specified test circuit		1.4		μs
Fall Time	t_F	See specified test circuit		0.2		μs

■ CLASSIFICATION of h_{FE1}

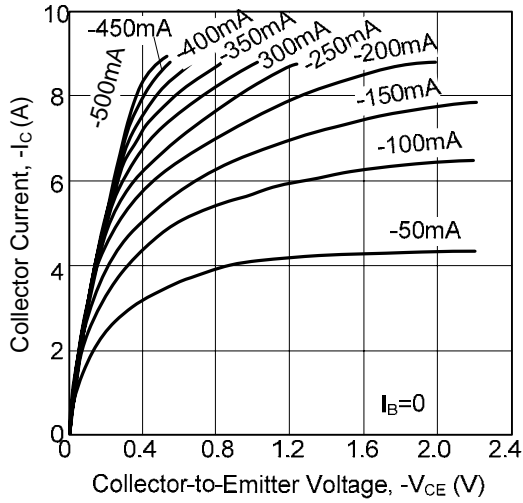
RANK	Q	R	S
RANGE	70-140	100-200	180-360

■ SWITCHING TIME TEST CIRCUIT

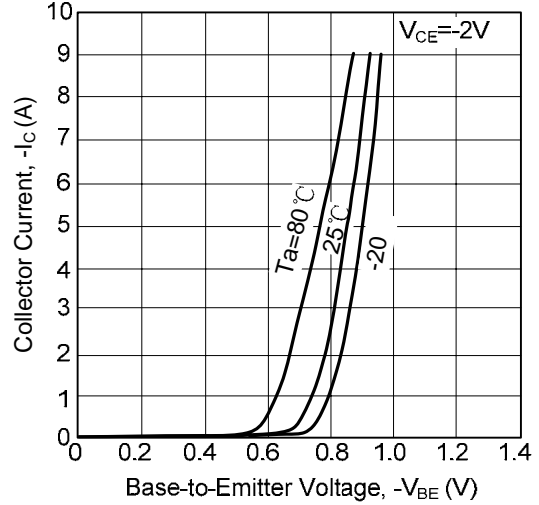


TYPICAL CHARACTERISTICS

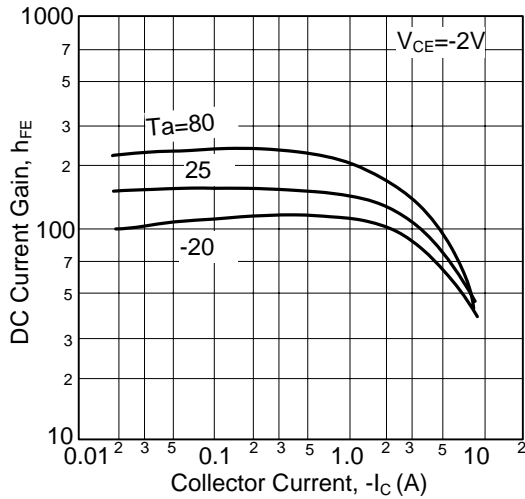
Collector Current vs. Collector-to-Emitter Voltage



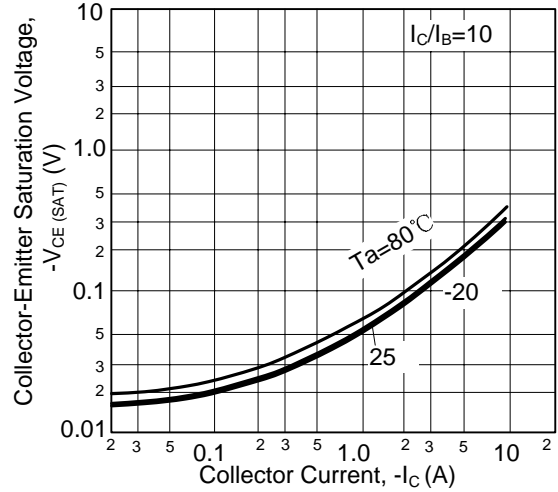
Collector Current vs. Base-to-Emitter Voltage



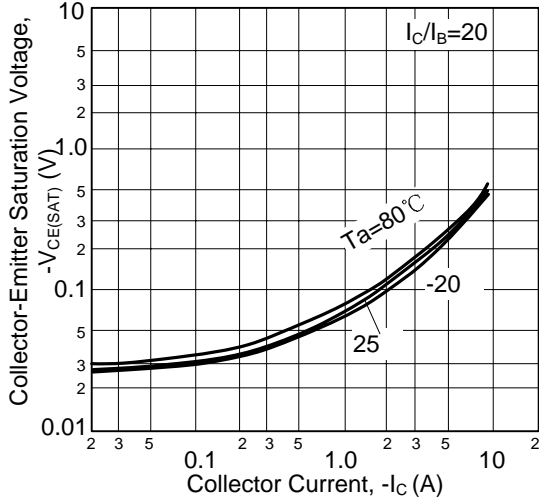
DC Current Gain vs. Collector Current



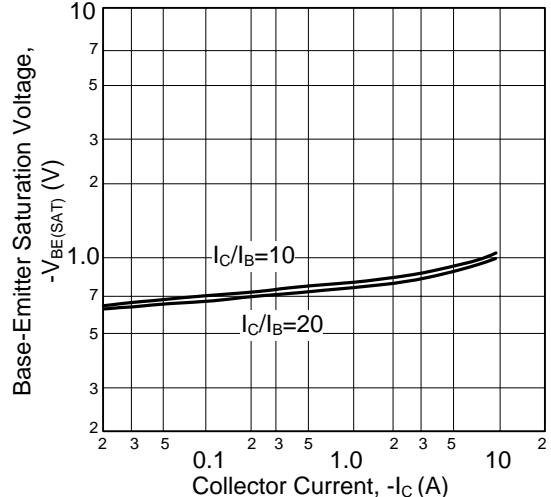
Collector-Emitter Saturation Voltage vs. Collector Current



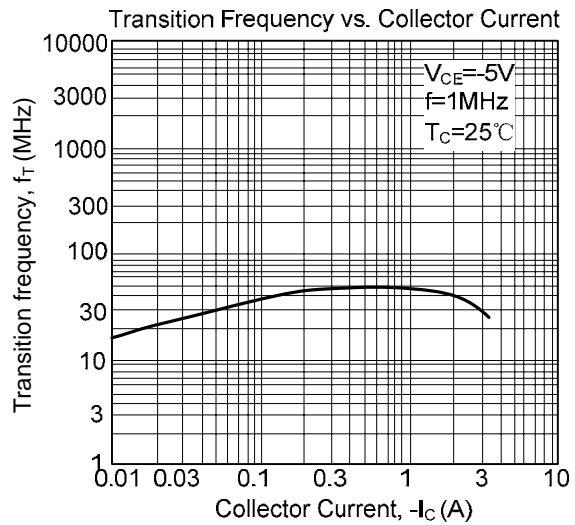
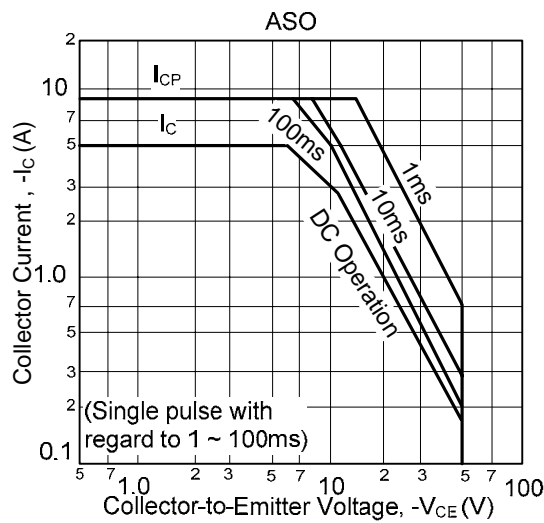
Collector-Emitter Saturation Voltage vs. Collector Current



Base-Emitter Saturation Voltage vs. Collector Current



■ TYPICAL CHARACTERISTICS(Cont.)



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