

PNP Epitaxial Silicon Transistor

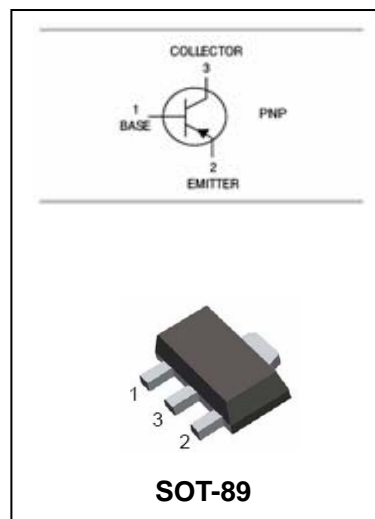
2SA1020

FEATURES

- Low saturation voltage:
VCE (sat) = -0.5 V (max) (IC = -1 A)
- High-speed switching: tstg = 1.0 μs (typ.)
- Complement to 2SC2655



Lead-free



APPLICATIONS

- Power and voltage amplifier application.

ORDERING INFORMATION

Type No.	Marking	Package Code
2SA1020	A1020	SOT-89

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
V _{CB0}	Collector-Base Voltage	-50	V
V _{CEO}	Collector-Emitter Voltage	-50	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current -Continuous	-2	A
I _B	Base current	0.5	A
P _C	Collector Power Dissipation	0.5	W
P _C *	Collector Power Dissipation	1	W
T _j , T _{stg}	Junction and Storage Temperature	-55 to +150	°C

* : Mounted on ceramic substrate(250mm² × 0.8t)



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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -1mA, I_E = 0$	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -1mA, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -50V, I_E = 0$			-1.0	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5V, I_C = 0$			-1.0	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = -2V, I_C = -0.5A$	70		240	
	$h_{FE(2)}$	$V_{CE} = -2V, I_C = -1.5A$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1A, I_B = -0.05A$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -1A, I_B = -0.05A$			-1.2	V
Transition frequency	f_T	$V_{CE} = -2V, I_C = -0.5A$		100		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$		40		pF

CLASSIFICATION OF $h_{FE(1)}$

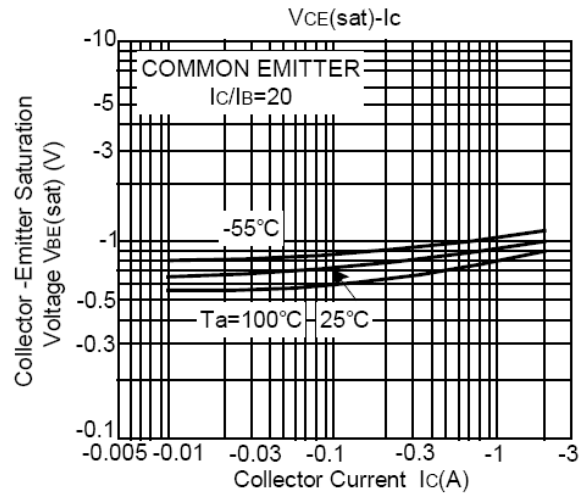
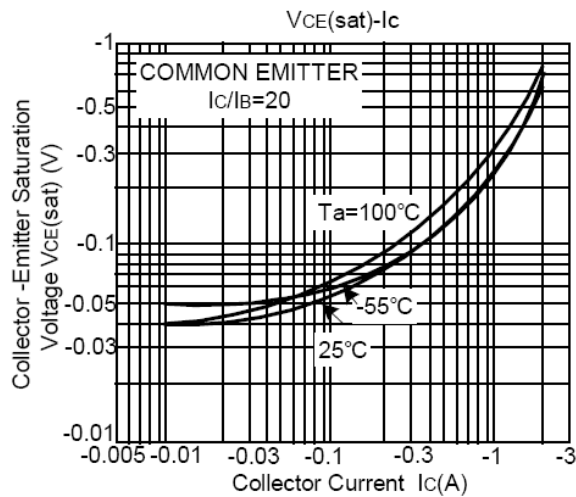
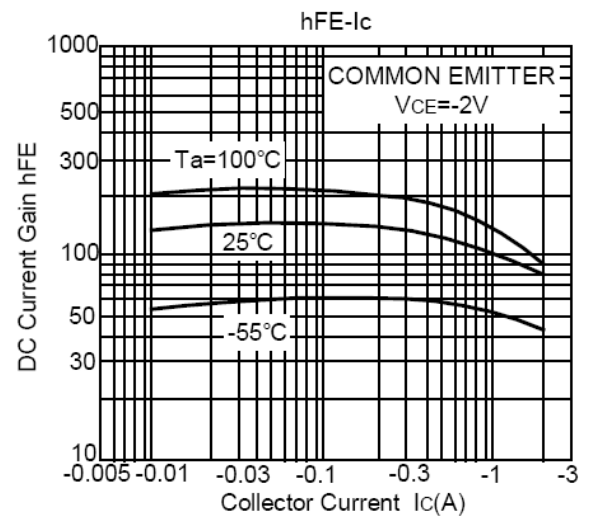
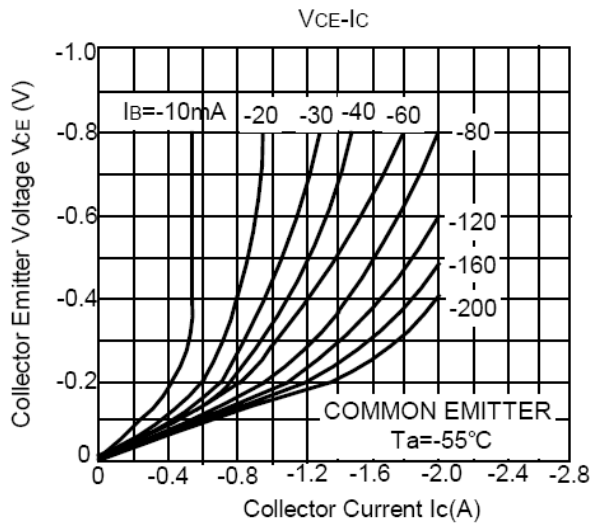
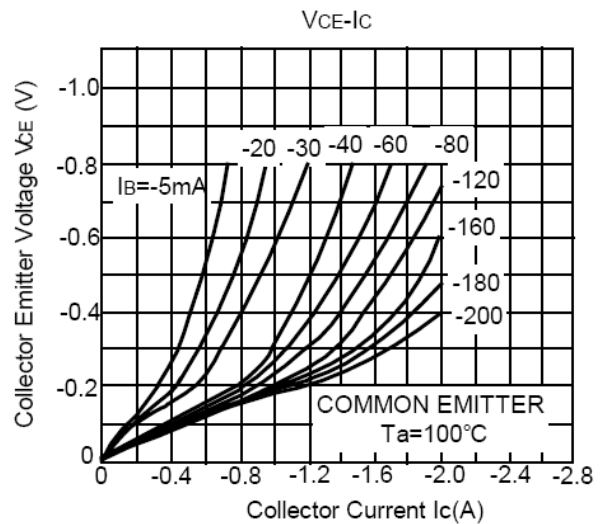
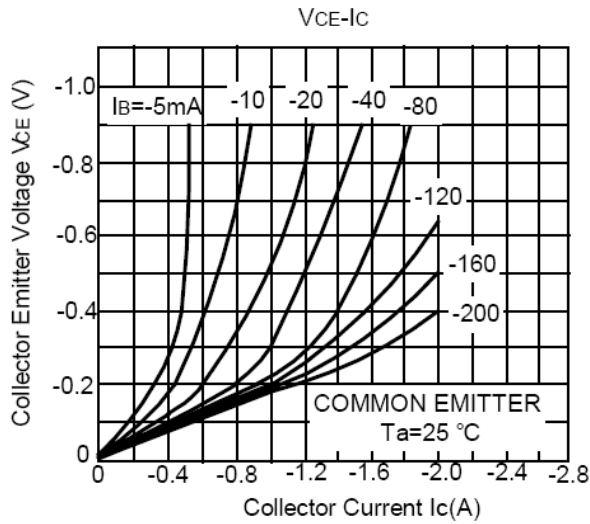
Rank	O	Y
Range	70-140	120-240



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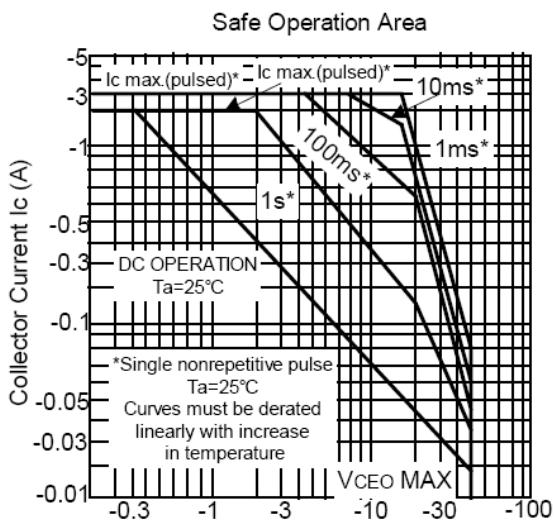
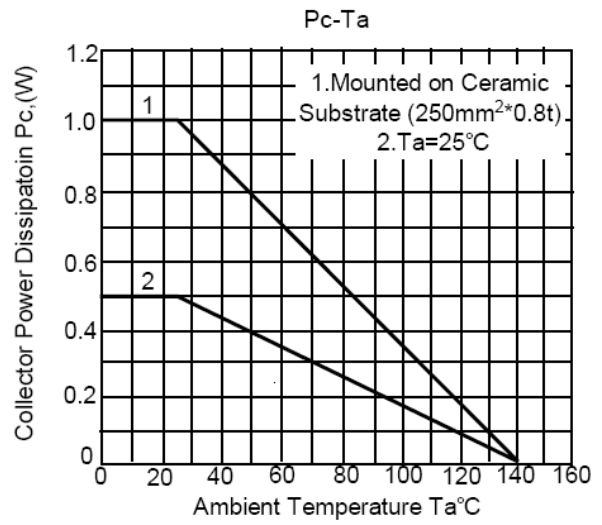
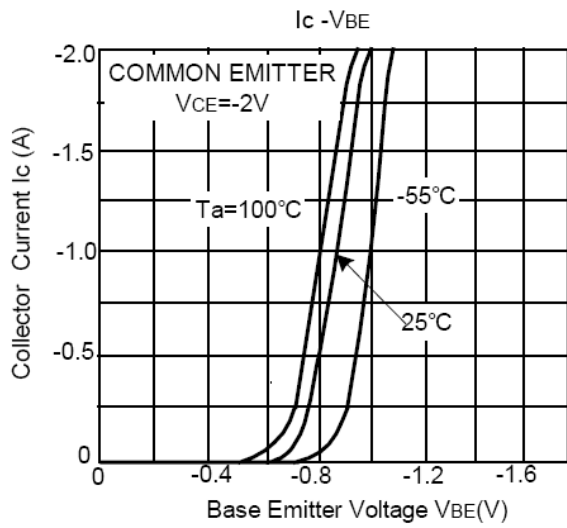
TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified





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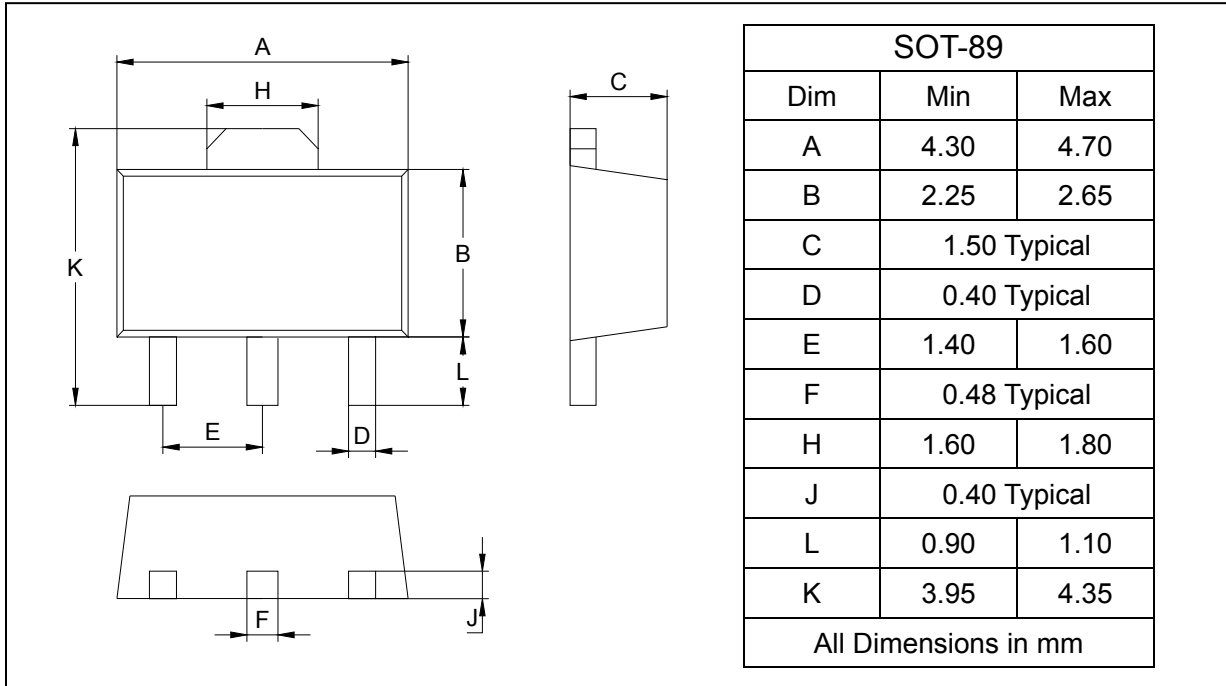
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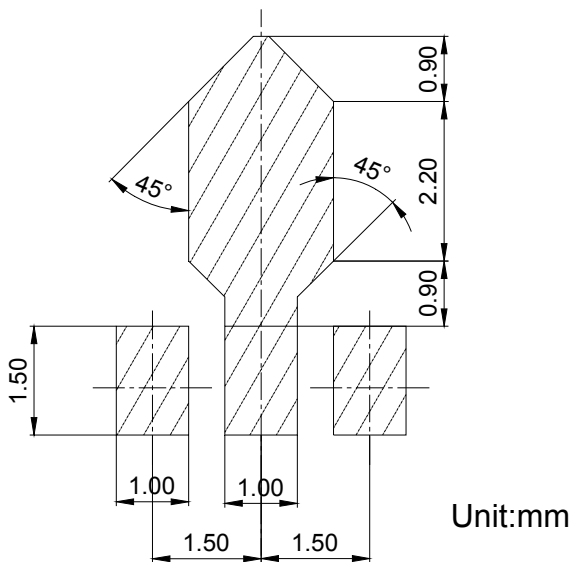
PACKAGE OUTLINE

Plastic surface mounted package

SOT-89



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
2SA1020	SOT-89	1000/Tape&Reel