

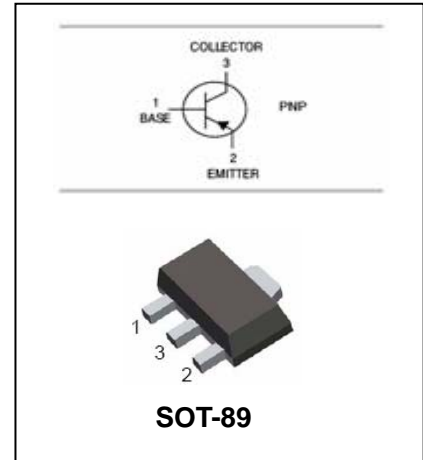


Medium power transistor(-32V,-2A)

2SB1188

FEATURES

- Low $V_{CE(SAT)} = -0.5V$ (Typ.)
($I_C/I_B = -2A/-0.2A$).
- Complementary the 2SD1766.



APPLICATIONS

- Epitaxial planar type.
- PNP silicon transistor.

ORDERING INFORMATION

Type No.	Marking	Package Code
2SB1188	BCP/BCQ/BCR	SOT-89

MAXIMUM RATING @ $T_a = 25^\circ C$ unless otherwise specified

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-40	V
V_{CEO}	Collector-Emitter Voltage	-32	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -DC -Pulse	-2 -3	A
P_C	Collector power dissipation	500	mW
T_j, T_{stg}	Junction and Storage Temperature	-55 to +150	$^\circ C$



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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -50\mu A$ $I_E = 0$	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1mA$ $I_B = 0$	-32			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -50\mu A$ $I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -20V$ $I_E = 0$			-1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -4V$, $I_C = 0$			-1	μA
DC current gain	h_{FE}	$V_{CE} = -3V$ $I_C = -0.5A$	82		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2A$ $I_B = -0.2A$		-0.5	-0.8	V
Transition frequency	f_T	$V_{CE} = -5V$, $I_C = -0.5A$, $f = 30MHz$		100		MHz
Output Capacitance	C_{obo}	$V_{CB} = -10V$ $f = 1.0MHz$ $I_E = 0$		50		pF

CLASSIFICATION H_{FE}

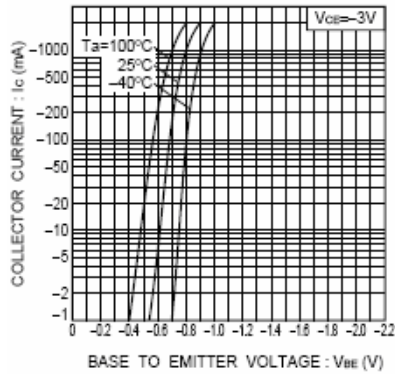
Rank	P	Q	R
Range	82-180	120-270	180-390
Marking	BCP	BCQ	BCR



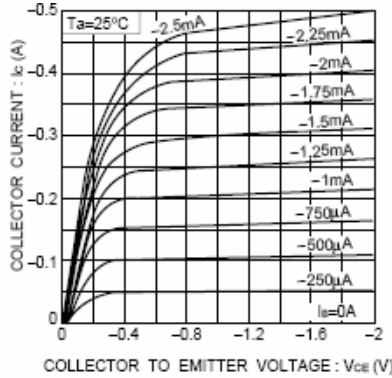
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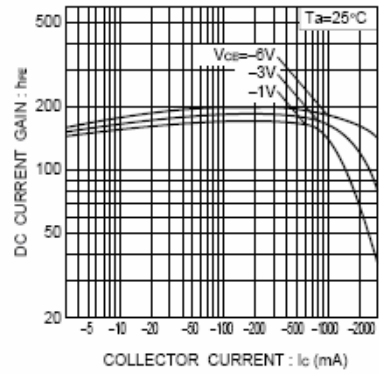
TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



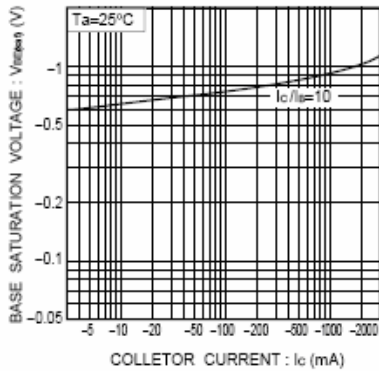
Grounded emitter propagation characteristics



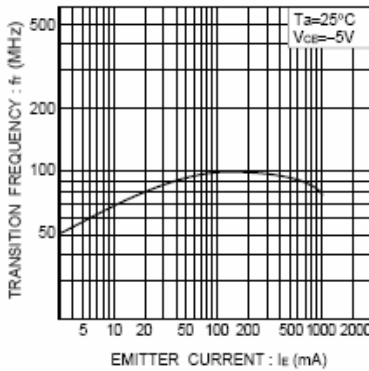
Grounded emitter output characteristics



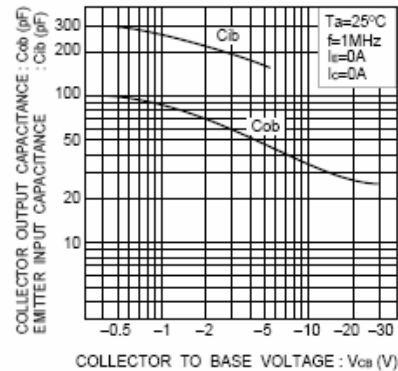
DC current gain vs. collector current (I)



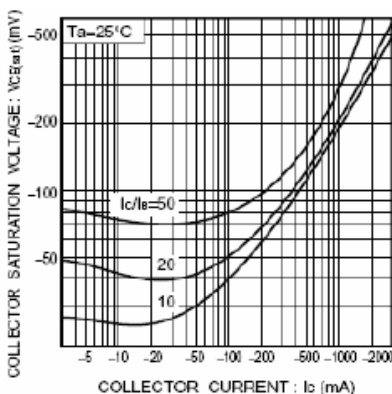
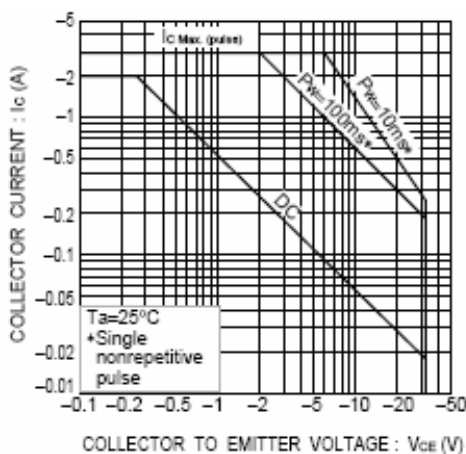
Base-emitter saturation voltage vs. collector current



Gain bandwidth product vs. emitter current



Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage



Collector-emitter saturation voltage vs. collector current (I)



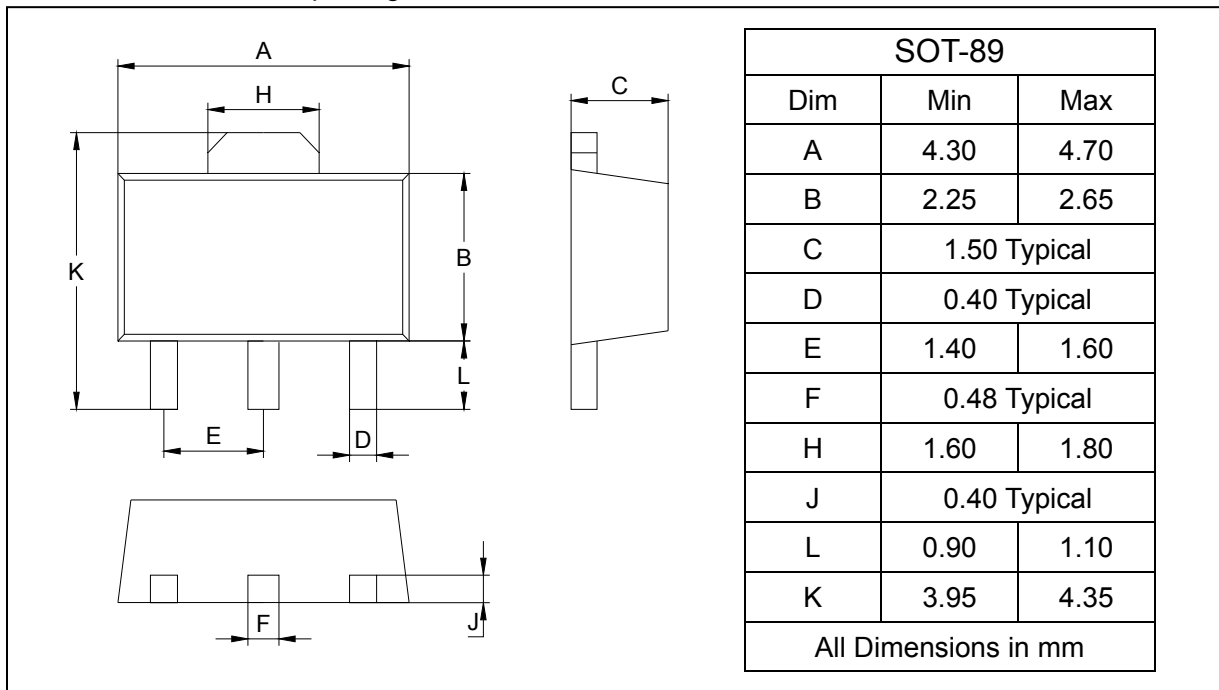
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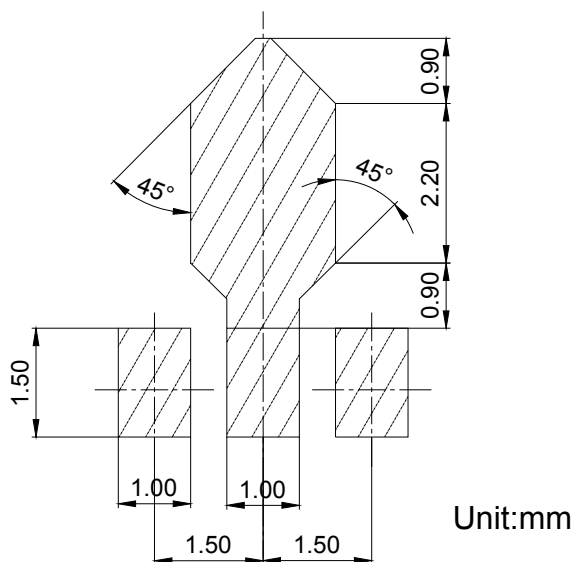
PACKAGE OUTLINE

Plastic surface mounted package

SOT-89



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
2SB1188	SOT-89	1000/Tape&Reel