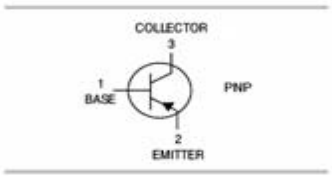
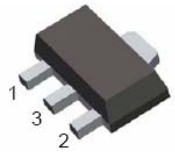
Medium power transistor(-32V,-2A) 2SB1188

FEATURES

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

Lead-free





SOT-89

APPLICATIONS

- Epitaxial planar type NPN silicon transistor.

ORDERING INFORMATION

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

MAXIMUM RATING @ Ta=25℃ 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	℃

Medium power transistor(-32V,-2A) 2SB1188

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN		MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-50μA 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=-50μA 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=-0.2mA		-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

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

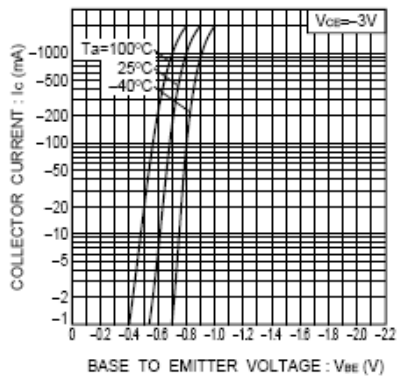


Fig.1 Grounded emitter propagation characteristics

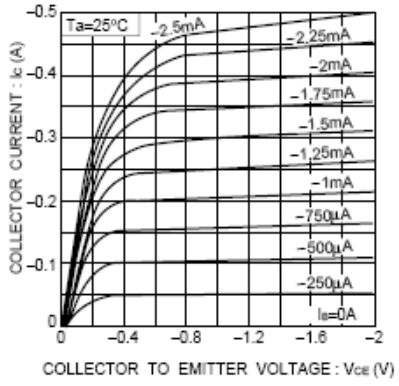


Fig.2 Grounded emitter output characteristics

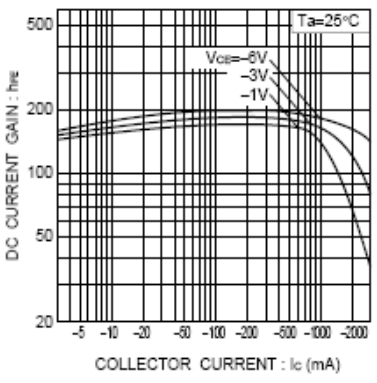


Fig.3 DC current gain vs. collector current (I)

Medium power transistor(-32V,-2A) 2SB1188

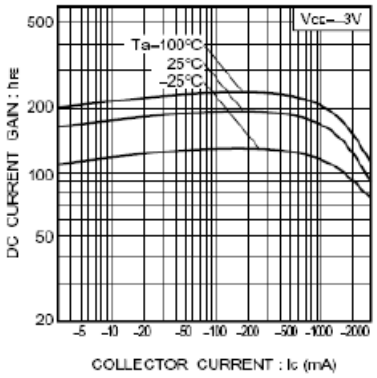


Fig.4 DC current gain vs. collector current (II)

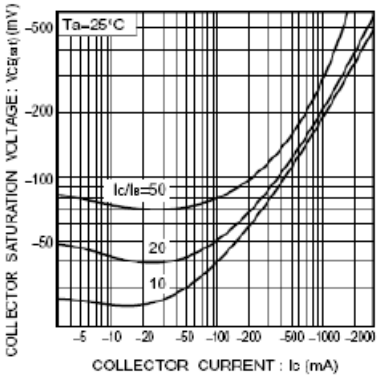


Fig.5 Collector-emitter saturation voltage vs. collector current (I)

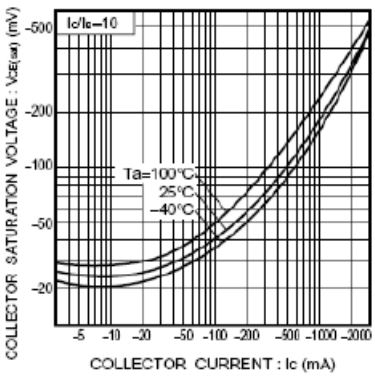


Fig.6 Collector-emitter saturation voltage vs. collector current (II)

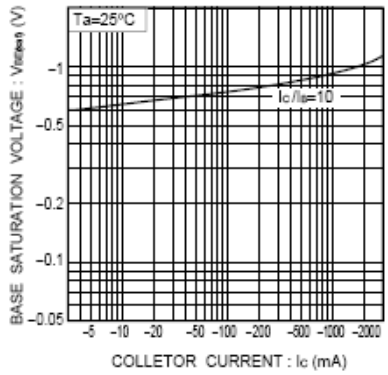


Fig.7 Base-emitter saturation voltage vs. collector current

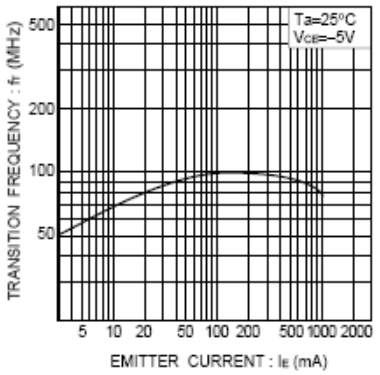


Fig.8 Gain bandwidth product vs. emitter current

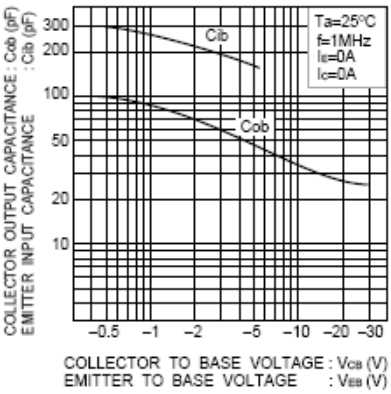


Fig.9 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

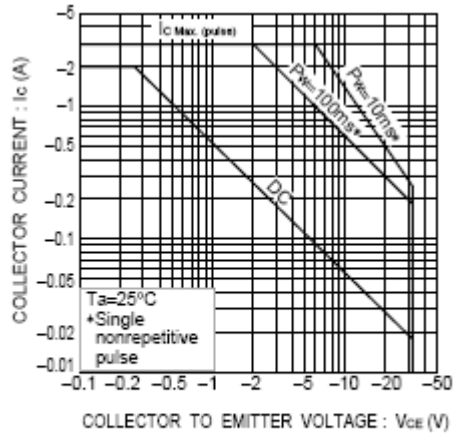
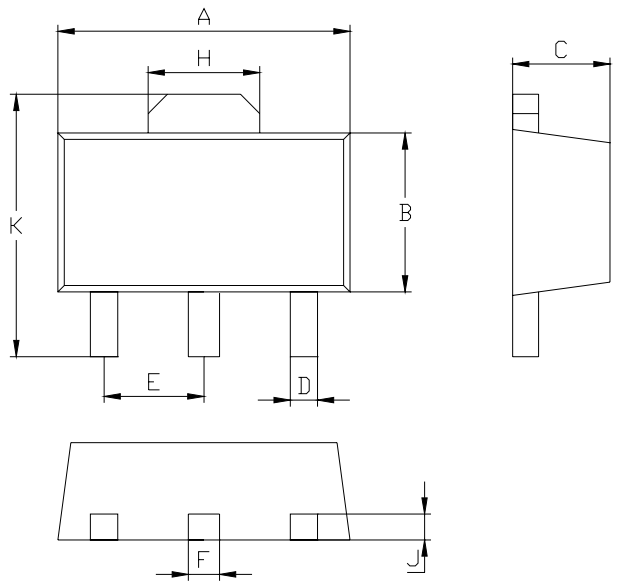


Fig.10 Safe operation area (2SB1188)

Medium power transistor(-32V,-2A) 2SB1188

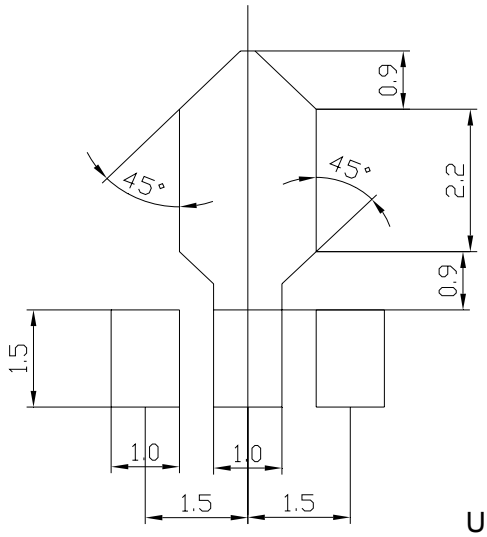
PACKAGE OUTLINE

Plastic surface mounted package SOT-89



SOT-89		
Dim	Min	Max
A	4.5	4.7
B	2.3	2.7
C	1.5Typical	
D	0.35	0.55
E	1.4	1.6
F	0.4	0.6
H	1.55	1.75
J	0.4Typical	
K	4.15	4.25
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit:mm

PACKAGE INFORMATION

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