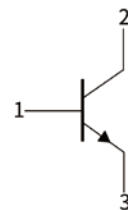


Features

- High collector to emitter voltage: V_{CEO} 120V.



SOT-89-3L



Equivalent Circuit

Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	120	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	0.7	A
$I_{C(pu)}$	Collector current (pulse)	1.2	A
P_C	Collector Power Dissipation	2	W
T_J	Junction temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage temperature	-55 ~ +150	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

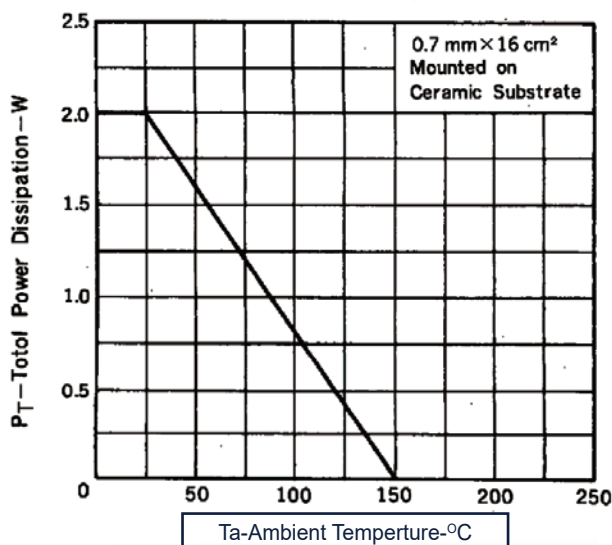
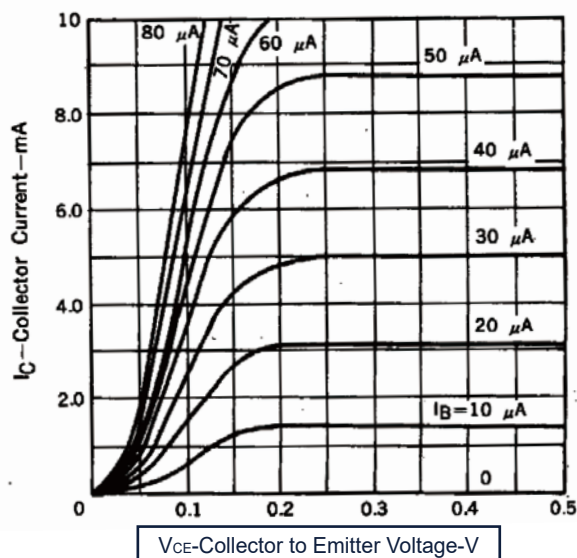
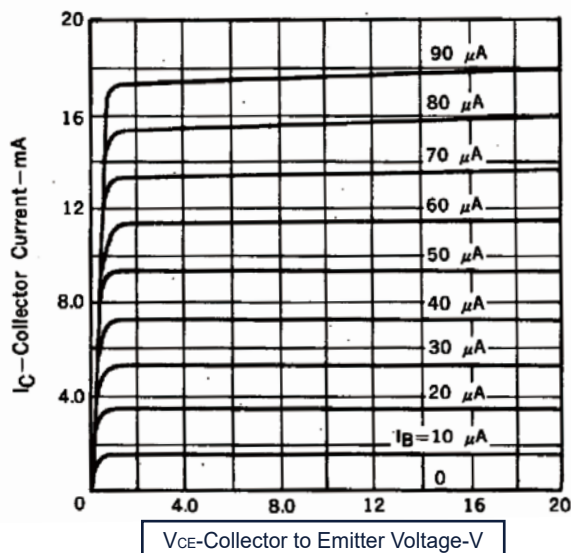
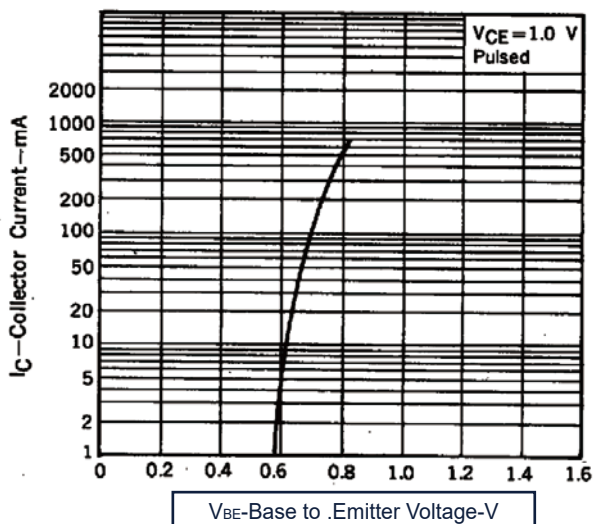
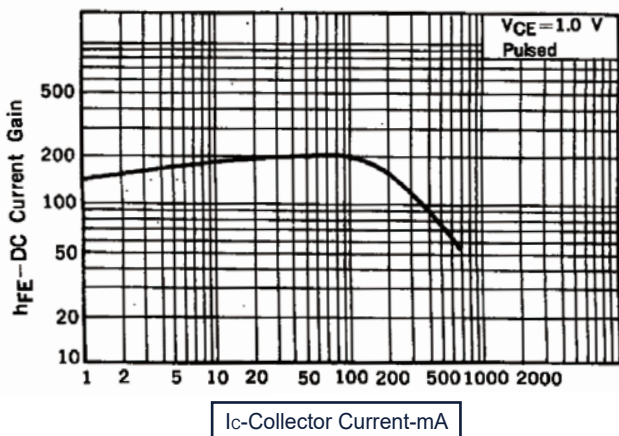
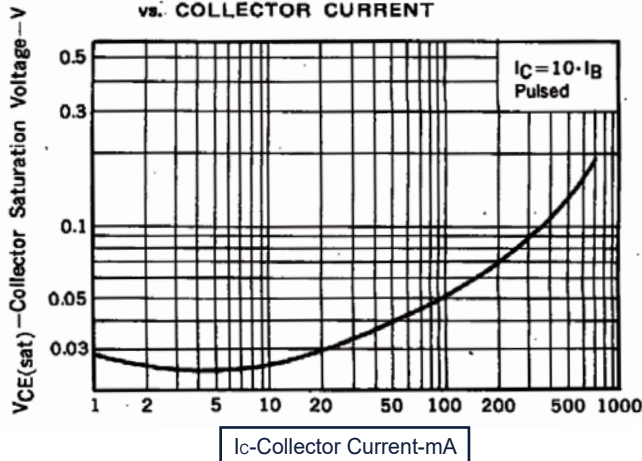
Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
V_{CBO}	Collector-base breakdown voltage	$I_C=100\mu\text{A}$, $I_E=0$	120			V
V_{CEO}	Collector-emitter breakdown voltage	$I_C=1\text{mA}$, $I_B=0$	120			V
V_{EBO}	Emitter-base breakdown voltage	$I_E=100\mu\text{A}$, $I_C=0$	5			V
I_{CBO}	Collector cut-off current	$V_{CB}=120\text{V}$, $I_E=0$			0.1	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=5\text{V}$, $I_C=0$			0.1	μA
$h_{FE(1)}$	DC current gain	$V_{CE}=1\text{V}$, $I_C=5\text{mA}$	45	200		
$h_{FE(2)}$		$V_{CE}=1\text{V}$, $I_C=100\text{mA}$	90	200	400	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=500\text{mA}$, $I_B=50\text{mA}$			0.6	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=500\text{mA}$, $I_B=50\text{mA}$			1.5	V
V_{BE}	Base-emitter voltage	$V_{CE}=10\text{V}$, $I_C=10\text{mA}$	0.55		0.68	V
C_{ob}	Collector capacitance	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$		10		pF
f_T	Transition frequency	$V_{CE}=10\text{V}$, $I_C=10\text{mA}$		90		MHz

Ordering information

Product ID	Pack	Naming rule	Marking	$h_{FE(1)}$	Qty(PCS)
2SD1007	SOT-89-3L	2SD1007 ↓ 产品名称 product name	HP	200~400	3000

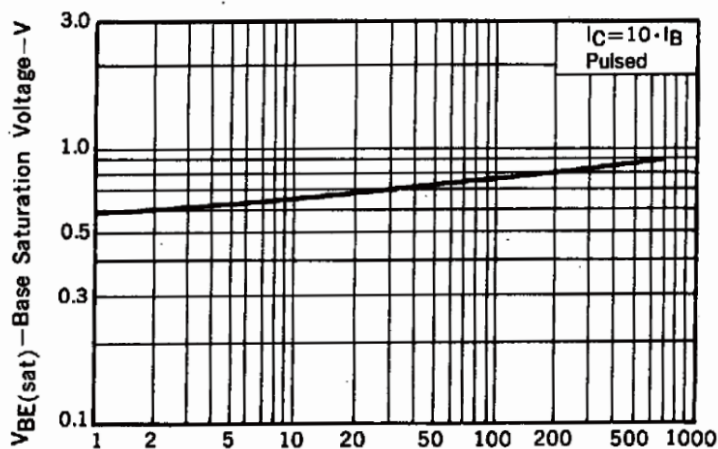
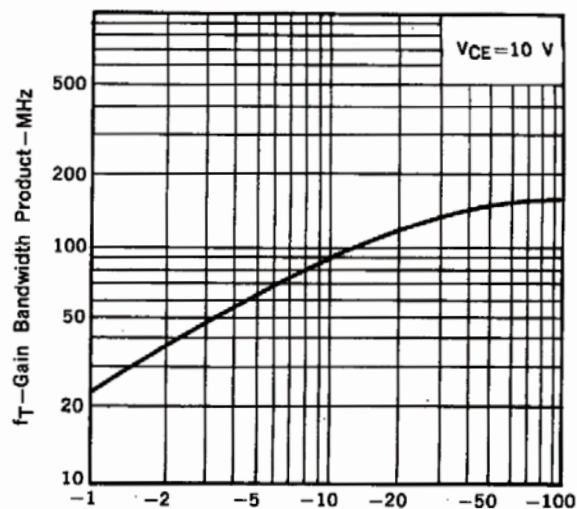
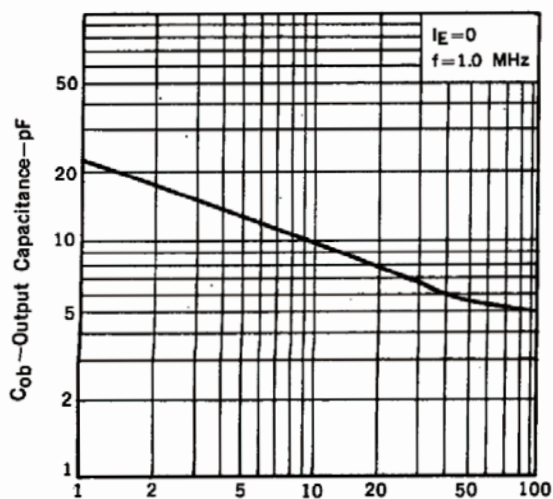


Typical Characteristics

TOTAL POWER DISSIPATION vs.
AMBIENT TEMPERATURECOLLECTOR CURRENT vs.
COLLECTOR TO EMITTER VOLTAGECOLLECTOR CURRENT vs.
COLLECTOR TO EMITTER VOLTAGECOLLECTOR CURRENT vs.
BASE TO EMITTER VOLTAGEDC CURRENT GAIN vs.
COLLECTOR CURRENTCOLLECTOR SATURATION VOLTAGE
vs. COLLECTOR CURRENT

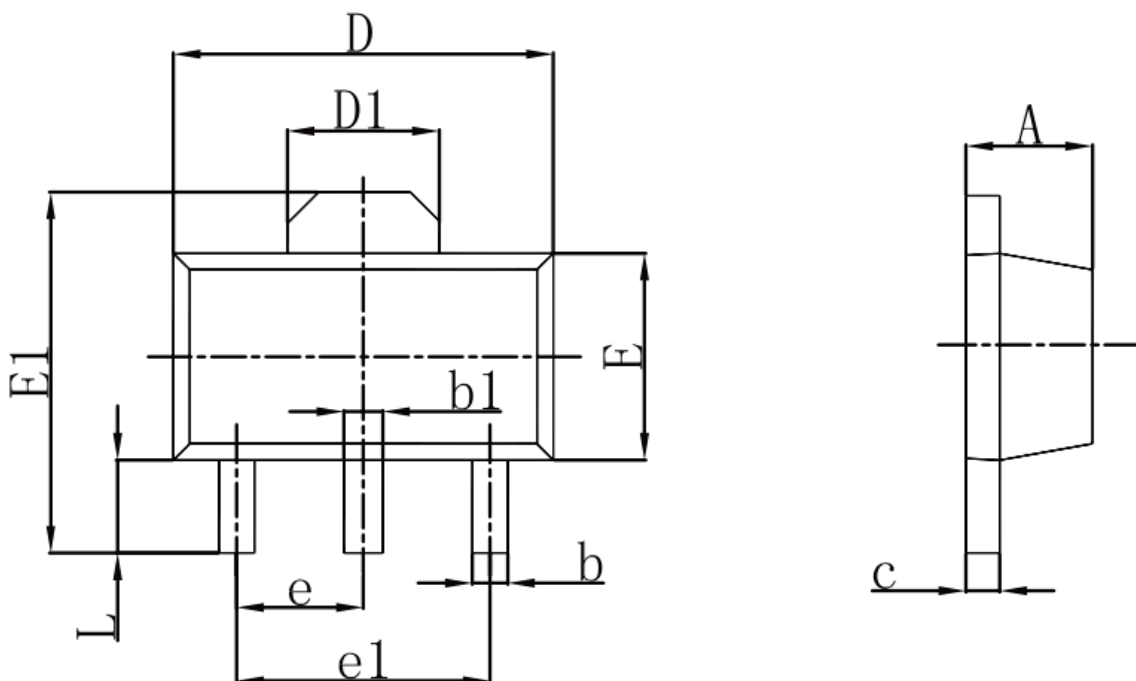


Typical Characteristics

BASE SATURATION VOLTAGE vs.
COLLECTOR CURRENT I_C -Collector Current-mAGAIN BANDWIDTH PRODUCT vs.
EMITTER CURRENT I_E -Emitter Current-mAOUTPUT CAPACITANCE vs.
REVERSE VOLTAGE V_{CB} -Collector to Base Voltage-V



SOT-89-3L Package Outline Dimensions



Symbol	Dimensions in Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047