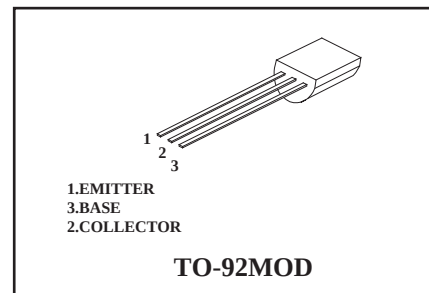


PNP General Purpose Transistors

 Lead(Pb)-Free



MAXIMUM RATINGS(Ta=25°C)

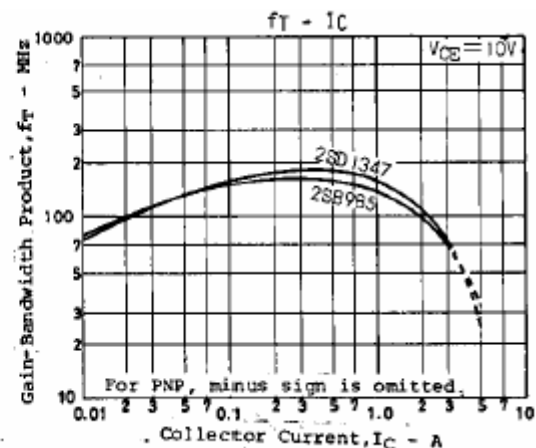
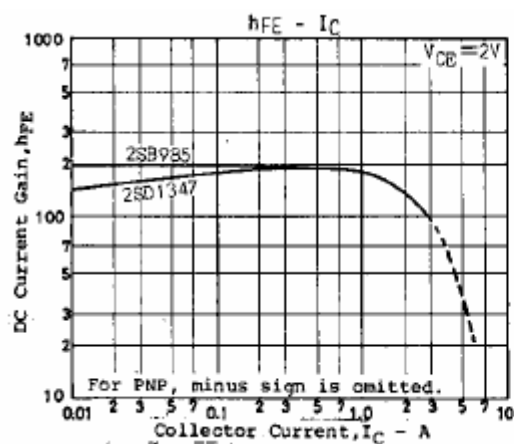
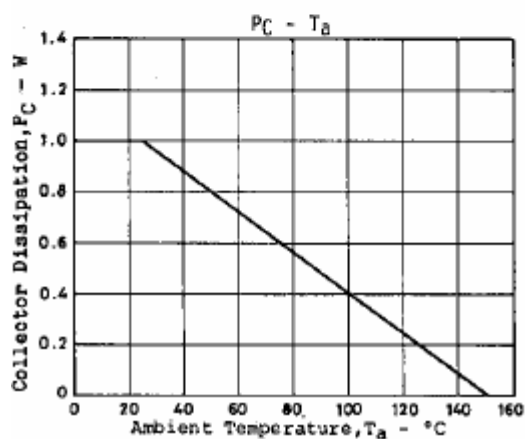
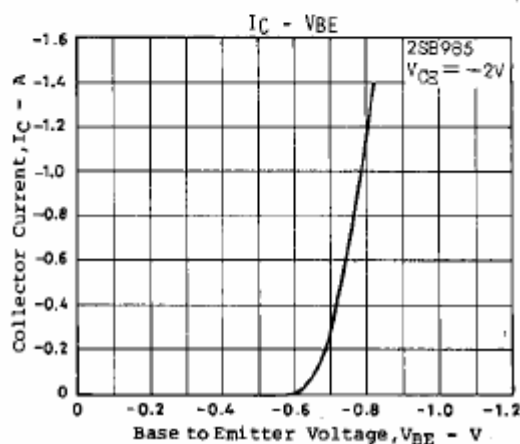
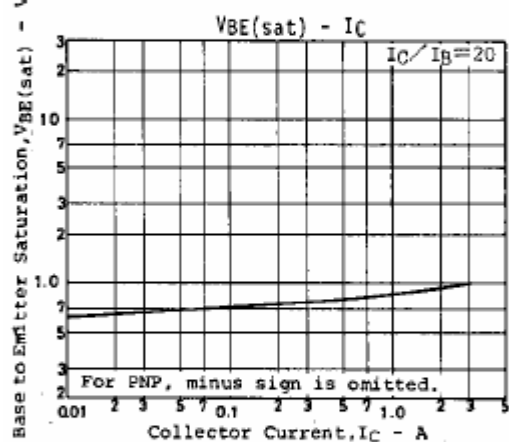
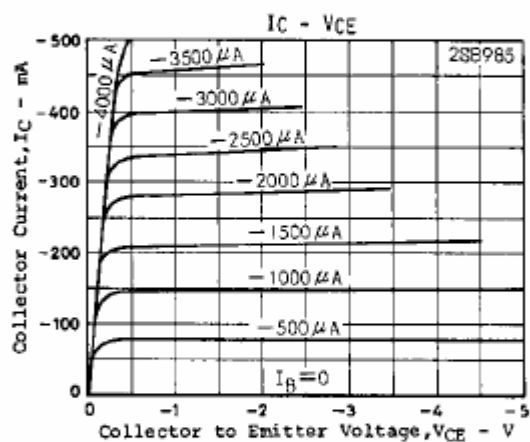
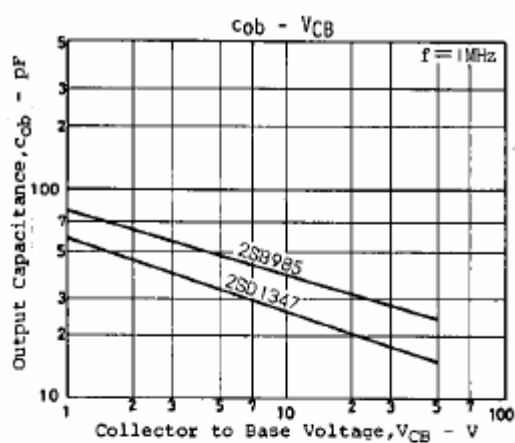
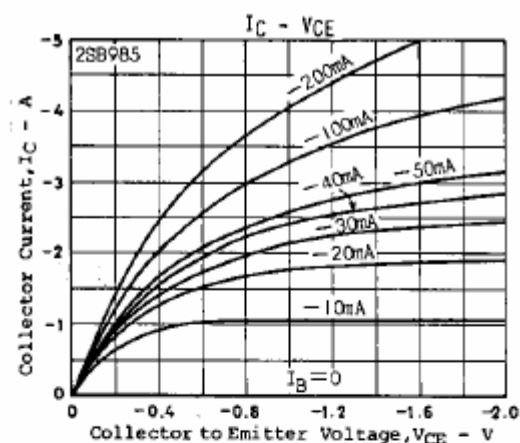
Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	-50	V
Collector-Base Voltage	V_{CBO}	-60	V
Emitter-Base Voltage	V_{EBO}	-6.0	V
Collector Current - Continuous	I_C	-3.0	mA
Total Device Dissipation $T_A=25^\circ\text{C}$	P_D	0.9	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 to 150	°C

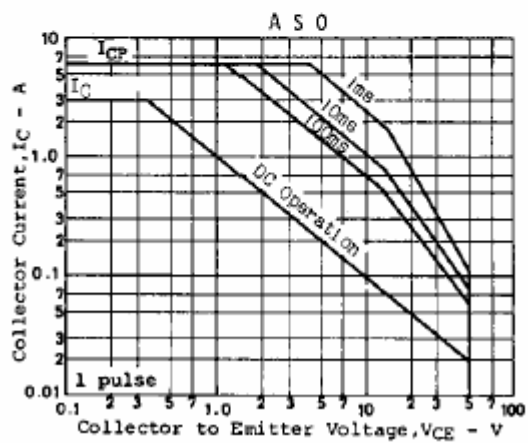
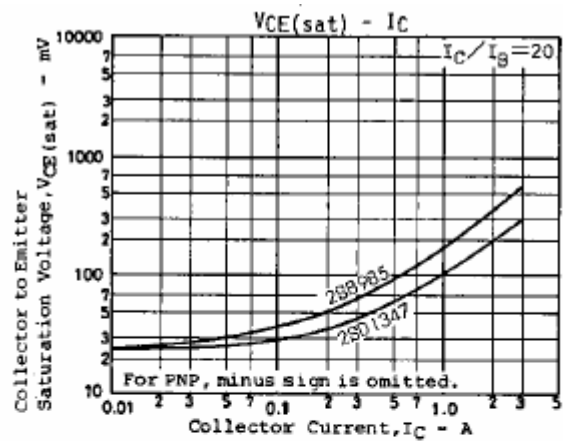
ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1mA, I_B = 0$	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-6			V
Collector cut-off current	I_{CBO}	$V_{CB} = -40V, I_E = 0$			-1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -4V, I_C = 0$			-1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = -2V, I_C = -100mA$	100		560	
	$h_{FE(2)}$	$V_{CE} = -2V, I_C = -3A$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2A, I_B = -100mA$			-0.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -2A, I_B = -100mA$			-1.2	V
Transition frequency	f_T	$V_{CE} = -10V, I_C = -50mA$		150		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$		39		pF

CLASSIFICATION OF $h_{FE(1)}$

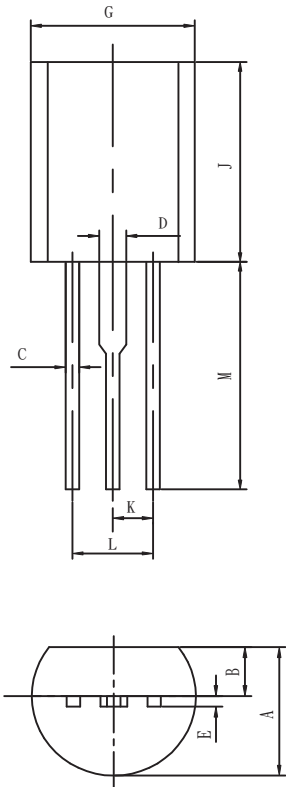
Rank	R	S	T	U
Range	100-200	140-280	200-400	280-560





TO-92MOD Outline Dimensions

unit:mm



TO-92MOD		
Dim	Min	Max
A	4.70	5.10
B	1.73	2.03
C	0.40	0.60
D	0.90	1.10
E	0.40	0.50
G	5.80	6.20
J	8.40	8.80
K	1.50Typ	
L	2.90	3.10
M	12.20	13.45