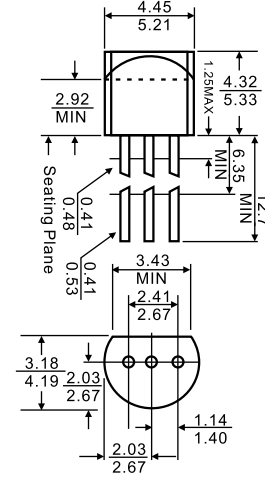




1. EMITTER
2. COLLECTOR
3. BASE

TO-92



Dimensions in inches and (millimeters)

Features

- ◇ High Collector Power Dissipation .
- ◇ Complementary to 2SD1616/2SD1616A

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V _{CB0}	Collector-Base Voltage 2SB1116	-60	V
	2SB1116A	-80	
V _{CEO}	Collector-Emitter Voltage 2SB1116	-50	V
	2SB1116A	-60	
V _{EBO}	Emitter-Base Voltage	-6	V
I _C	Collector Current -Continuous	-1	A
P _C	Collector Power Dissipation	0.75	W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C

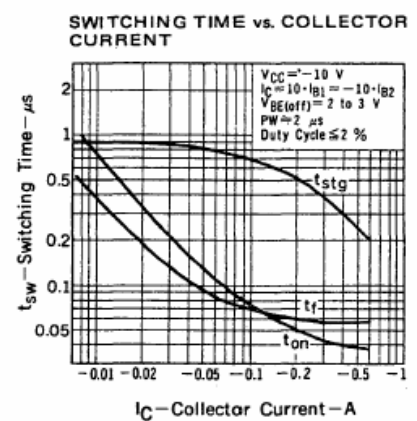
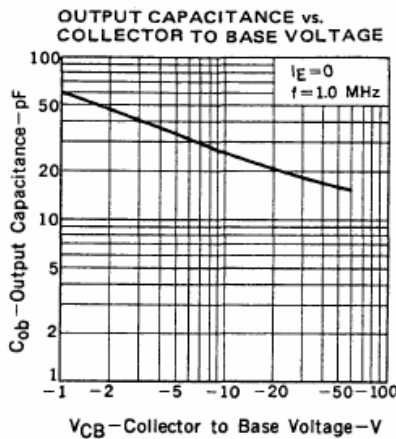
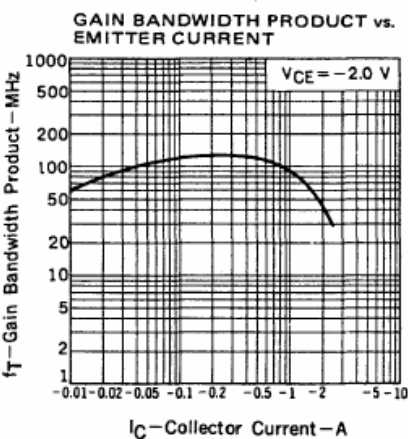
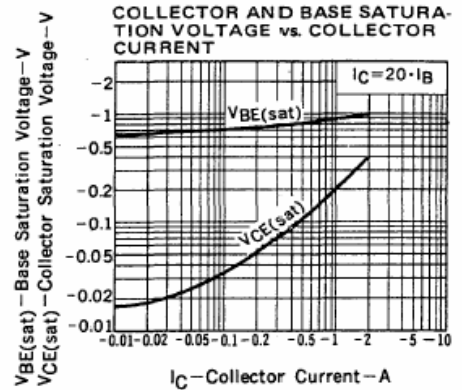
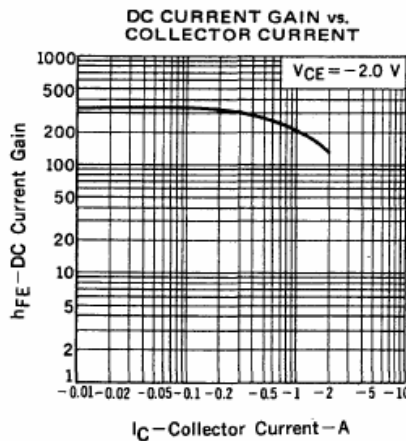
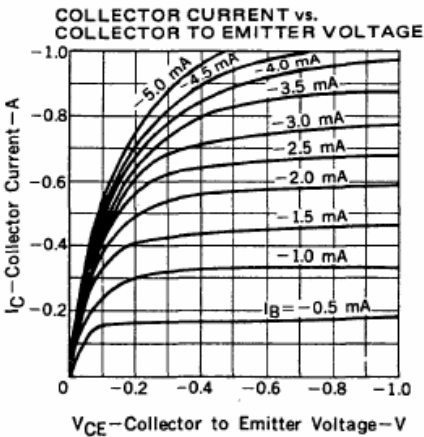
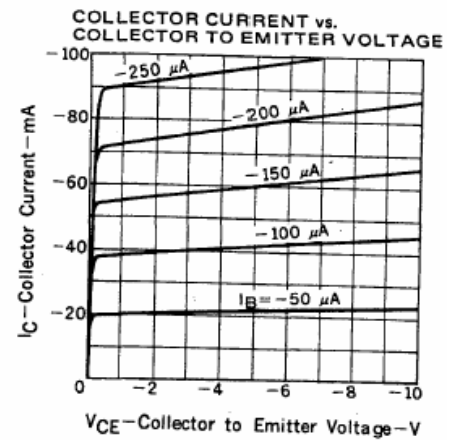
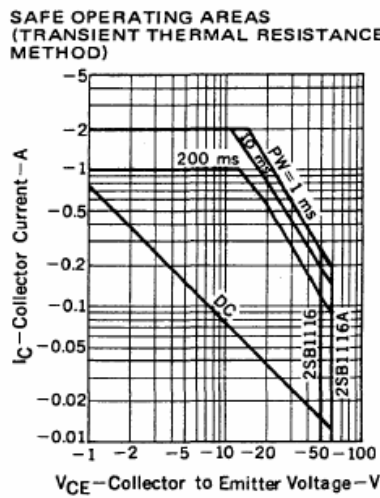
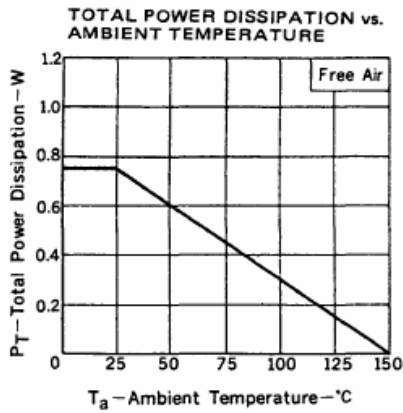
ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-100μA, I _E =0	2SB1116	-60		V
			2SB1116A	-80		
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =-1mA, I _B =0	2SB1116	-50		V
			2SB1116A	-60		
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-100μA, I _C =0	-6			V
Collector cut-off current	I _{CBO}	V _{CB} =-60V, I _E =0	2SB1116		-0.1	μA
		V _{CB} =-80V, I _E =0	2SB1116A			
Emitter cut-off current	I _{EBO}	V _{EB} =-6V, I _C =0			-0.1	μA
DC current gain	h _{FE(1)}	V _{CE} =-2V, I _C =-0.1A		135	600	
		V _{CE} =-2V, I _C =-1A		81		
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-1A, I _B =-50mA			-0.3	V
Base -emitter saturation voltage	V _{BE(sat)}	I _C =-1A, I _B =-50mA			-1.2	V
Base -emitter voltage	V _{BE}	V _{CE} =-2V, I _C =-0.05A	-0.6		-0.7	V
Transition frequency	f _T	V _{CE} =-2V, I _C =-0.1A	70			MHz
Collector output capacitance	C _{ob}	V _{CB} =-10V, I _E =0, f=1MHz		25		pF
Turn-on time	t _{on}	V _{CC} =-10V, I _C =-0.1A, I _{B1} =-I _{B2} =-0.01A, V _{BE(Off)} =2to3V		0.07		us
Storage time	t _s			0.7		us
Fall time	t _f			0.07		us

CLASSIFICATION OF h_{FE(1)}

Rank	L	K	U
Range	135-270	200-400	300-600

Typical Characteristics



Package	Packing	Quantity	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92	Bulk	1000pcs/BP	10,000pcs	245×170×100	100,000pcs	525×375×270
TO-92	Tape	2000pcs/TP	2000pcs	333×162×43	20,000pcs	350×340×250