

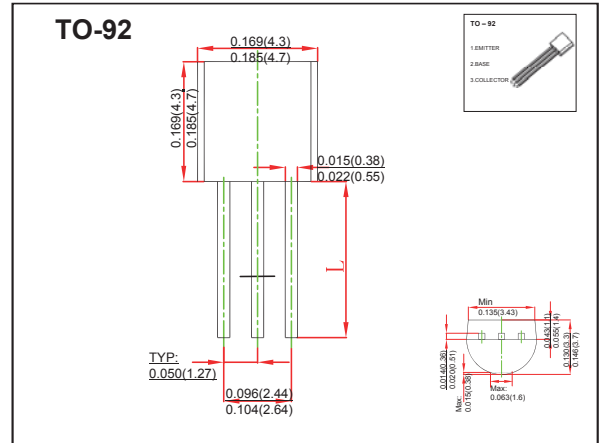
TO-92 Plastic-Encapsulate Transistors

FEATURES

- High Collector Power Dissipation .
- Complementary to 2SD1616/2SD1616A
- TRANSISTOR (PNP)

MECHANICAL DATA

- Case style:TO-92 molded plastic
- Mounting position:any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Symbol	Parameter	Value	Unit	
V_{CBO}	Collector-Base Voltage	2SB1116 2SB1116A	-60 -80	V
	Collector-Emitter Voltage	2SB1116 2SB1116A	-50 -60	V
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

ORDERING INFORMATION

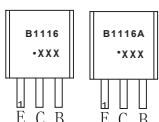
Part Number	Package	Packing Method	Pack Quantity
2SB1116	TO-92	Bulk	1000pcs/Bag
2SB1116-TA	TO-92	Tape	2000pcs/Box
2SB1116A	TO-92	Bulk	1000pcs/Bag
2SB1116A-TA	TO-92	Tape	2000pcs/Box

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E = 0$	2SB1116 2SB1116A	-60 -80		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1mA, I_B = 0$	2SB1116 2SB1116A	-50 -60		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100\mu A, I_C = 0$		-6		V
Collector cut-off current	I_{CBO}	$V_{CB} = -60V, I_E = 0$	2SB1116		-0.1	μA
		$V_{CB} = -60V, I_E = 0$	2SB1116A		-0.1	μA
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	
	$h_{FE(2)}$	$V_{CE} = -2V, I_C = -1A$		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 $h_{FE(1)}$

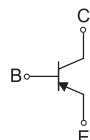
Rank	L	K	U
Range	135-270	200-400	300-600

MARKING



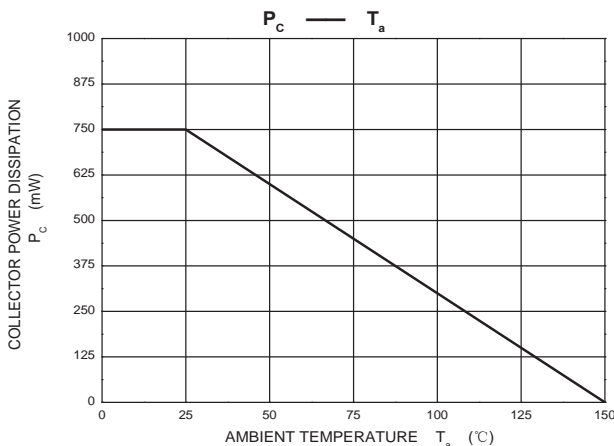
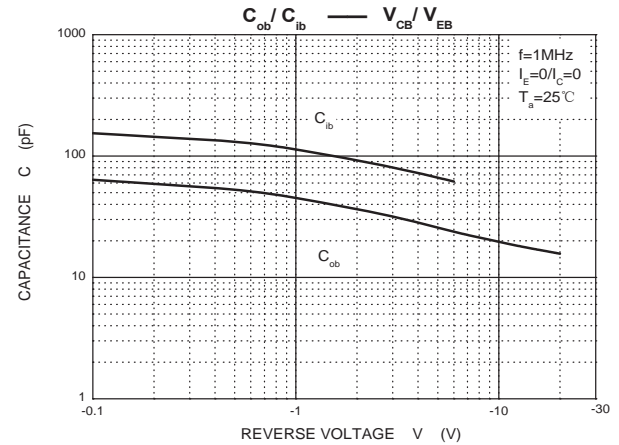
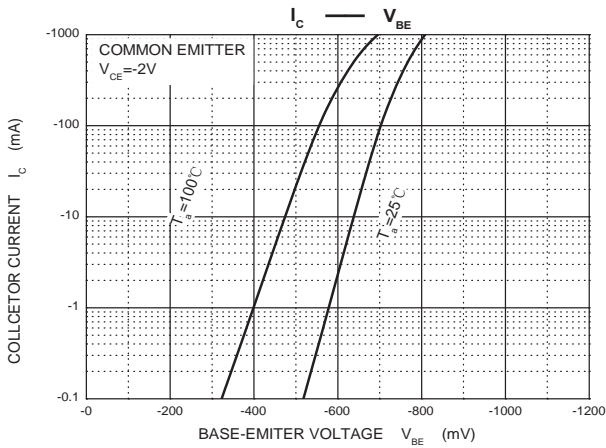
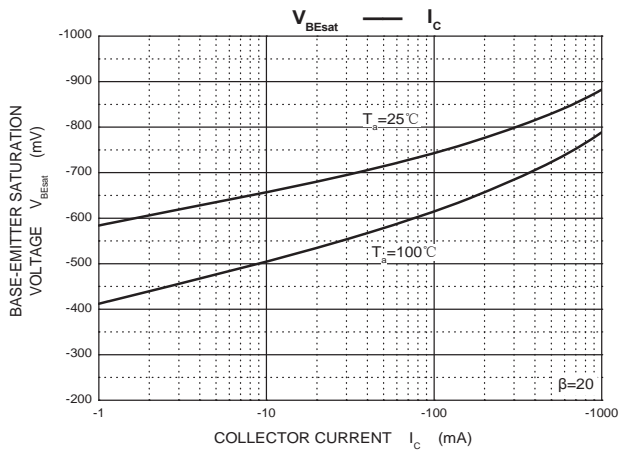
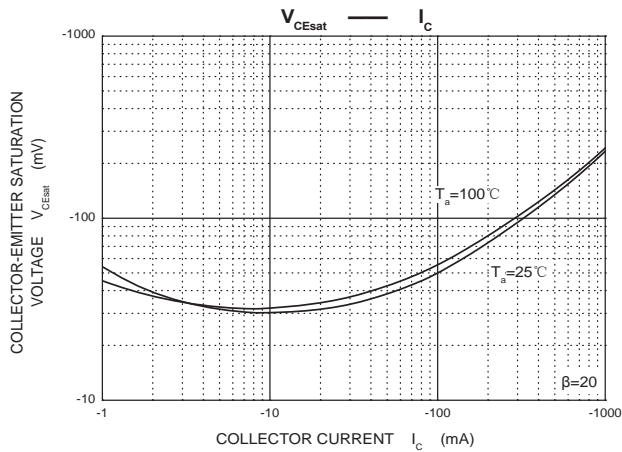
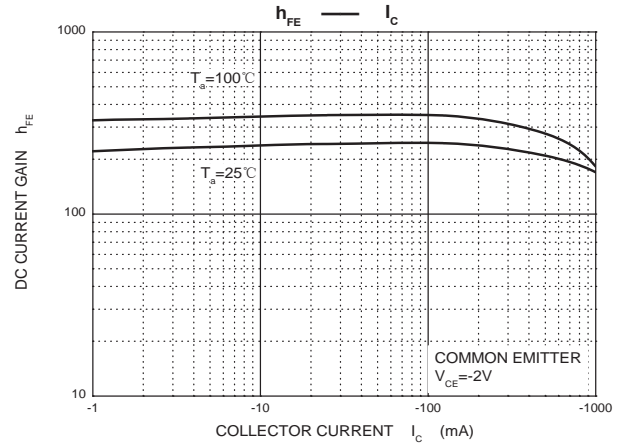
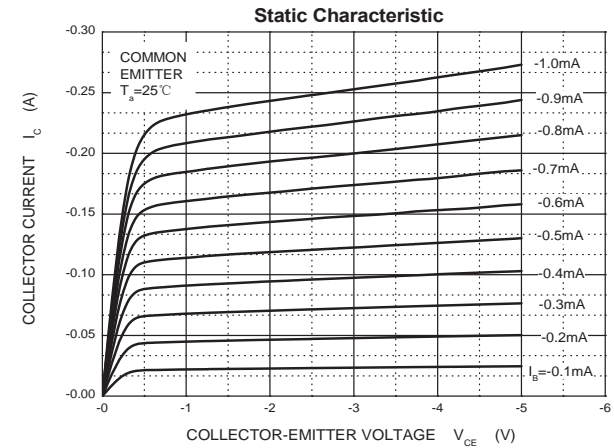
B1116, B1116A = Device code
 Solid dot = Green molding compound device,
 if none, the normal device
 XXX = Code

Equivalent Circuit

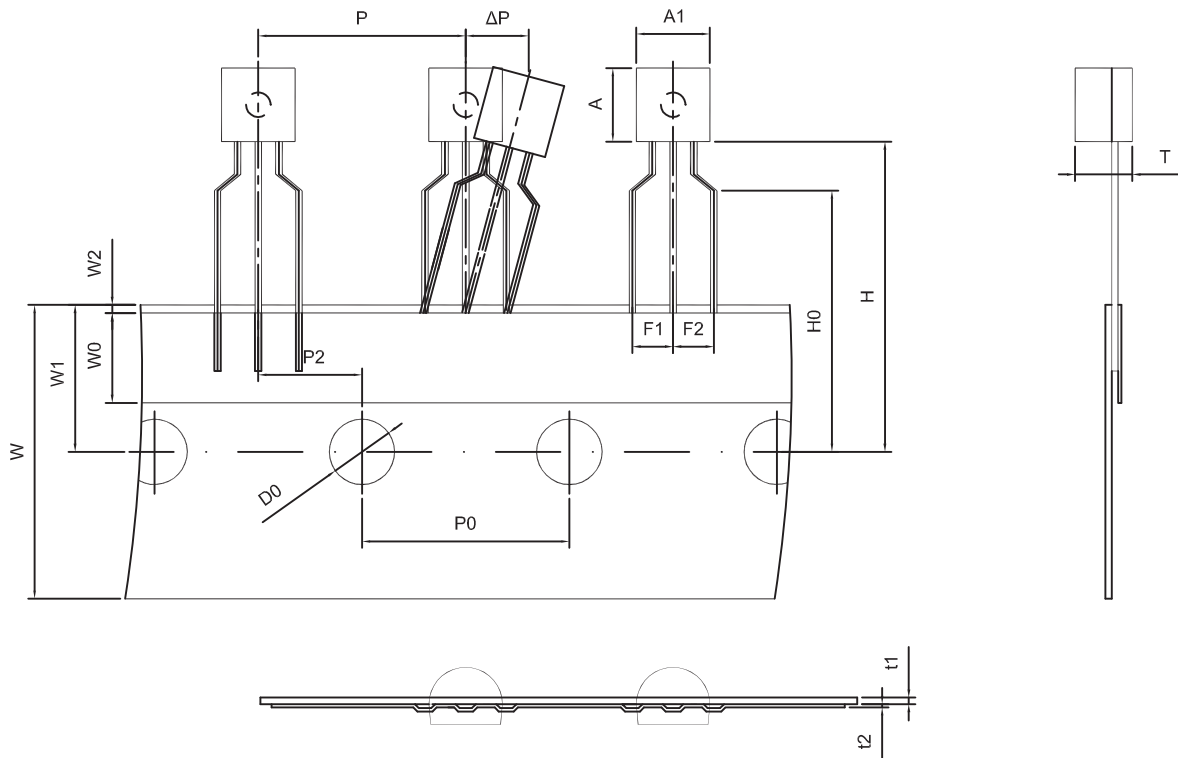


RATINGS AND CHARACTERISTIC CURVES

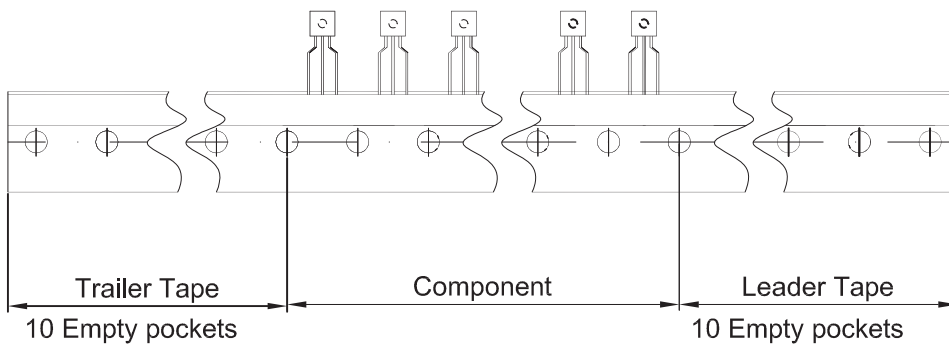
Typical Characteristics



TO-92 PACKAGE TAPEING DIMENSION



Dimensions are in millimeter								
A1	A	T	P	P0	P2	F1	F2	W
4.5	4.5	3.5	12.7	12.7	6.35	2.5	2.5	18.0
W0	W1	W2	H	H0	D0	t1	t2	ΔP
6.0	9.0	1.0 MAX.	19.0	16.0	4.0	0.4	0.2	0



Package	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92	2000 pcs	333×162×43	20,000 pcs	350×340×250