/ Descriptions

Silicon PNP transistor in a TO-92LM Plastic Package.

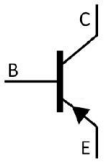
/ Features

Complementary pair with 2SD667(A).

/ Applications

Low frequency power amplifier.

/ Equivalent Circuit



/ Pinning

PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	B	C	D
h_{FE} Range	60 120	100 200	160 320

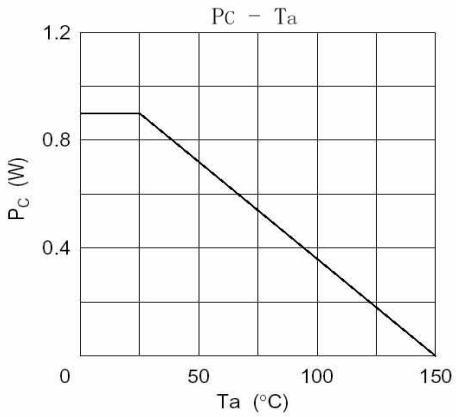
/ Absolute Maximum Ratings(Ta=25)

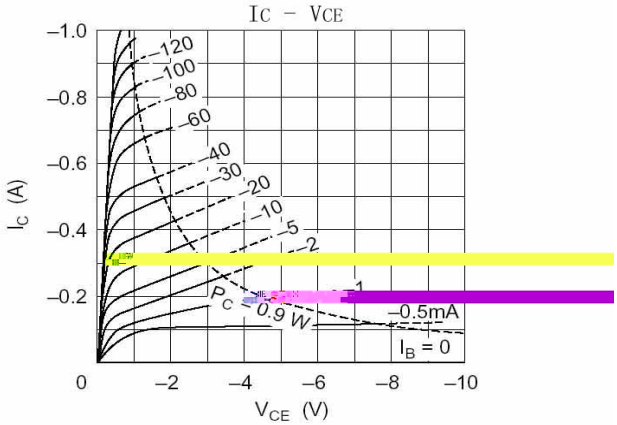
Parameter	Symbol		Rating	Unit
Collector to Base Voltage	V_{CBO}		-120	V
Collector to Emitter Voltage	V_{CEO}	2SB647	-80	V
		2SB647A	-100	
Emitter to Base Voltage	V_{EBO}		-5.0	V
Collector Current (DC)	I_C		-1.0	A
Collector Current(Pulse)	I_{CP}		-2.0	A
Collector Power Dissipation	P_C		900	mW
Junction Temperature	T_j		150	
Storage Temperature Range	T_{stg}		-55 150	

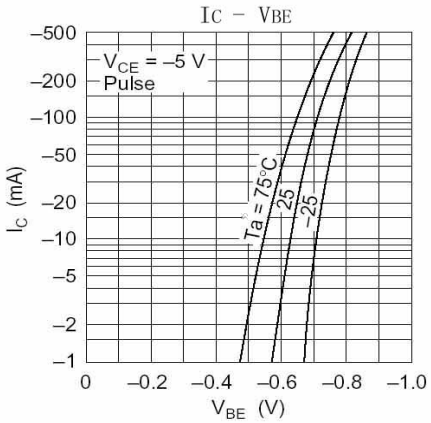
/ Electrical Characteristics(Ta=25)

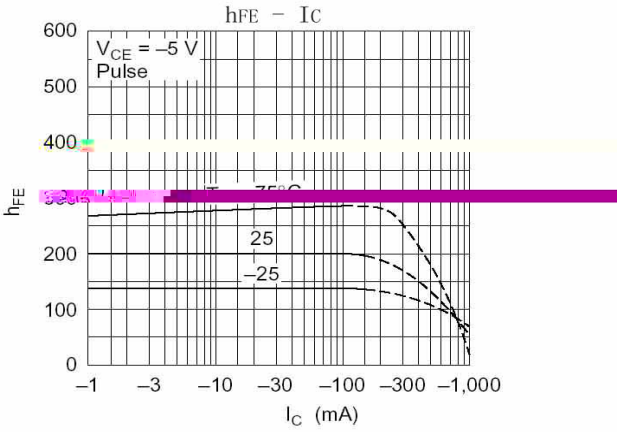
Parameter	Symbol		Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}		I_C=-10μA I_E=0	-120			V
Collector to Emitter Breakdown Voltage	V_{CEO}	2SB647	I_C=-1.0mA R_{BE}=∞	-80			V
		2SB647A		-100			
Emitter to Base Breakdown Voltage	V_{EBO}		I_E=-10μA I_C=0	-5.0			V
Collector Cut-Off Current	I_{CBO}		V_{CB}=-100V I_E=0			-10	μA
DC Current Gain	$h_{FE(1)}$		V_{CE}=-5.0V I_C=-150mA	60		320	
	$h_{FE(2)}$		V_{CE}=-5.0V I_C=-500mA	30			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$		I_C=-500mA I_B=-50mA			-1.0	V
Base to Emitter Voltage	V_{BE}		V_{CE}=-5.0V I_C=-150mA			-1.5	V
Transition Frequency	f_T		V_{CE}=-5.0V I_C=-150mA		140		MHz
Collector Output Capacitance	C_{ob}		V_{CB}=-10V I_E=0 f=1.0MHz		12		pF

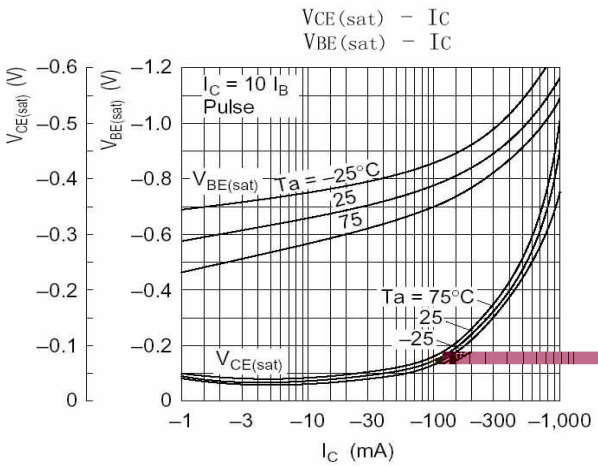
/ Electrical Characteristic Curve

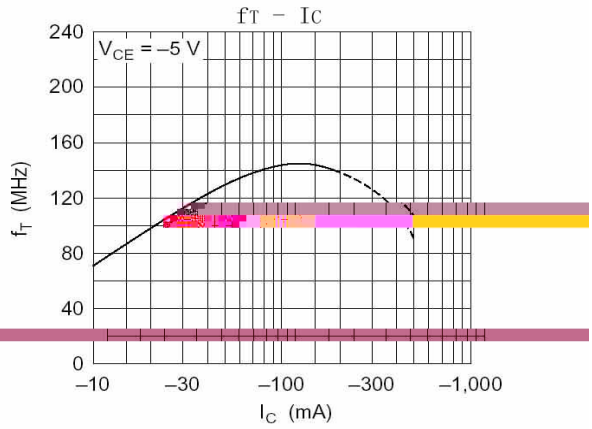






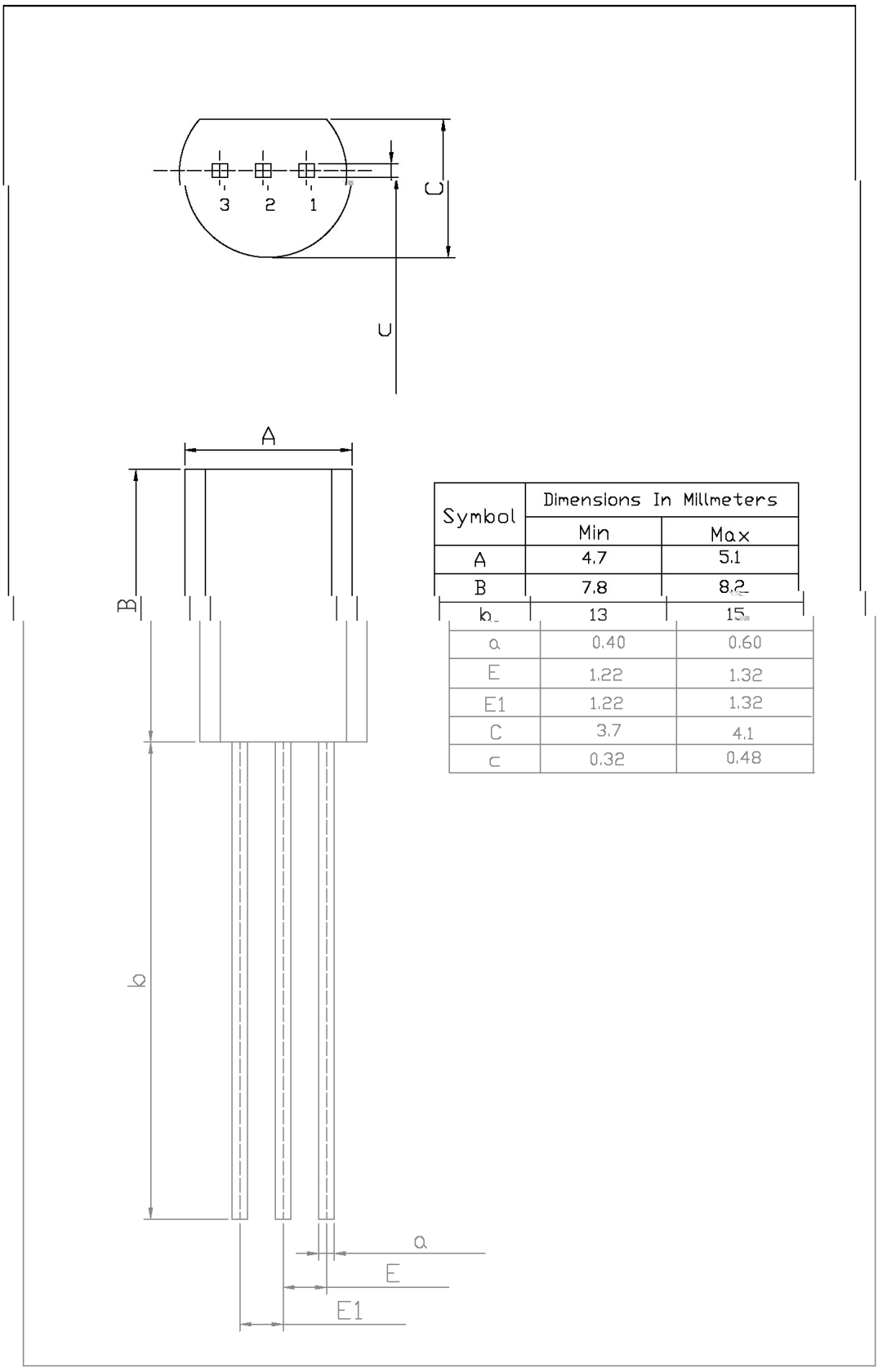






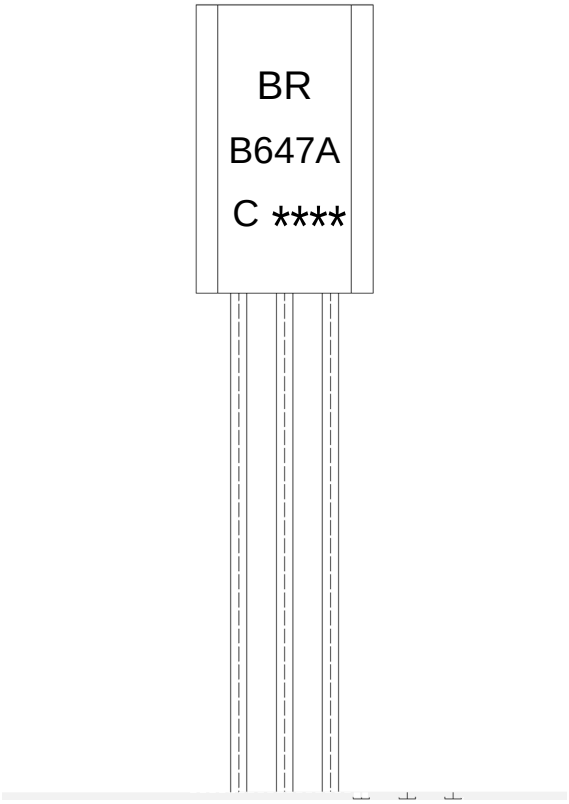
/ Package Dimensions

TO-92LM Unit: mm



Symbol	Dimensions In Millmeters	
	Min	Max
A	4.7	5.1
B	7.8	8.2
b	13	15
a	0.40	0.60
E	1.22	1.32
E1	1.22	1.32
C	3.7	4.1
c	0.32	0.48

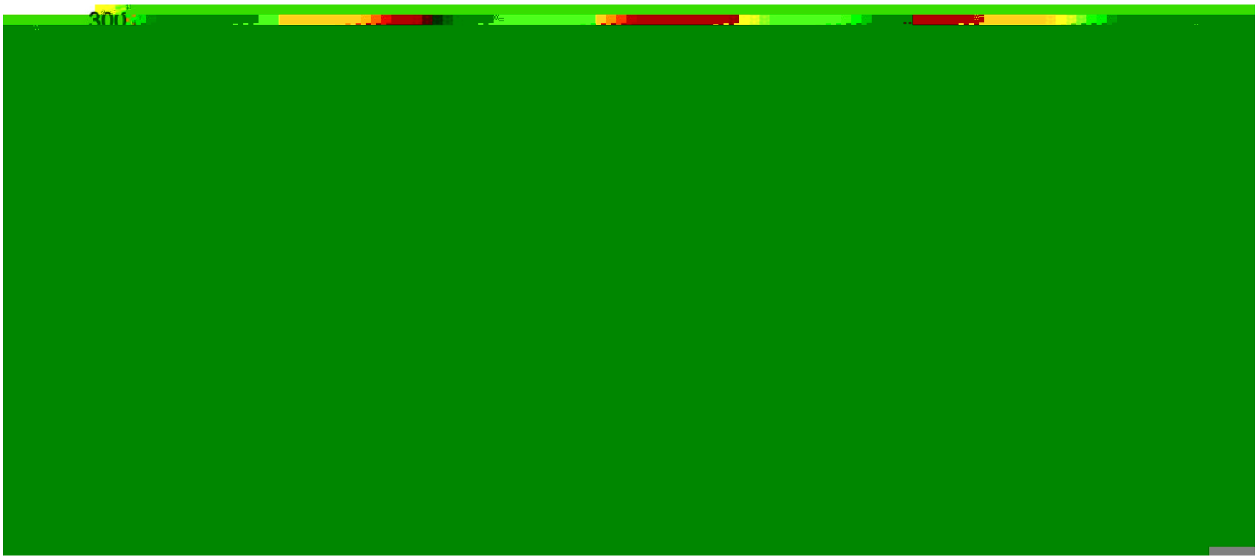
/ Marking Instructions



Note:

BR:	Company Code.
B647A:	Product Type.
C:	h_{FE} Classifications Symbol
****:	Lot No. Code,code change with Lot No.

( ) / Temperature Profile for Dip Soldering(Pb-Free)



Note:

1 25 150 60 90sec; 1.Preheating:25~150 , Time:60~90sec;