

/ Descriptions

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

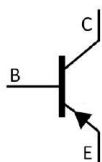
/ Features

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

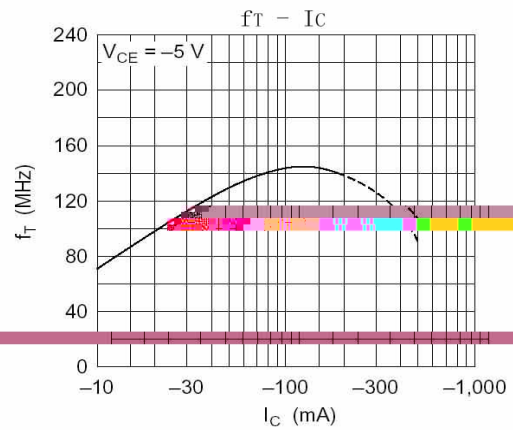
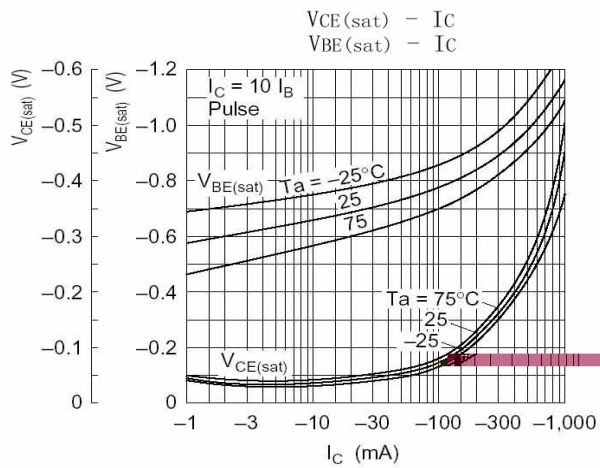
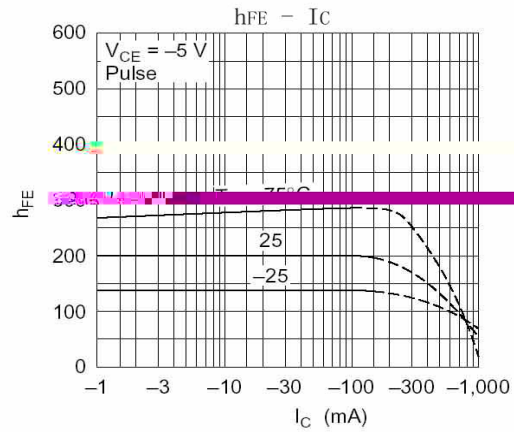
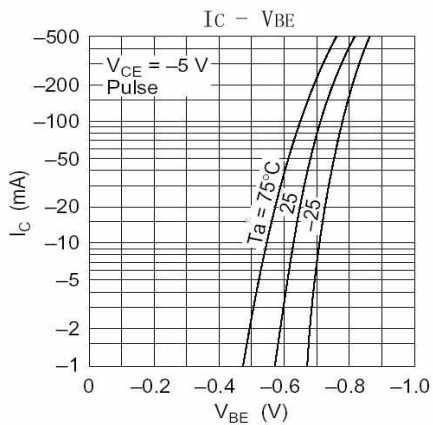
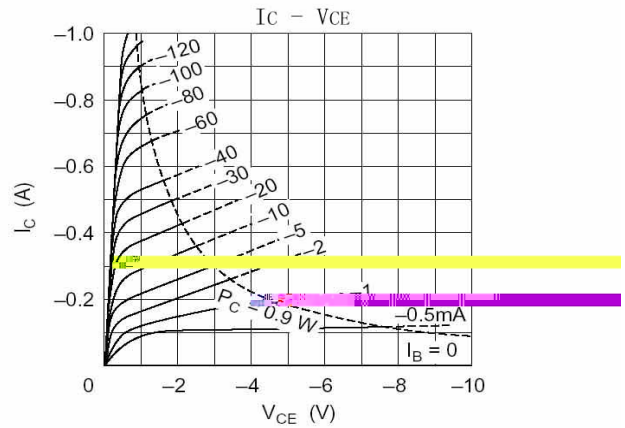
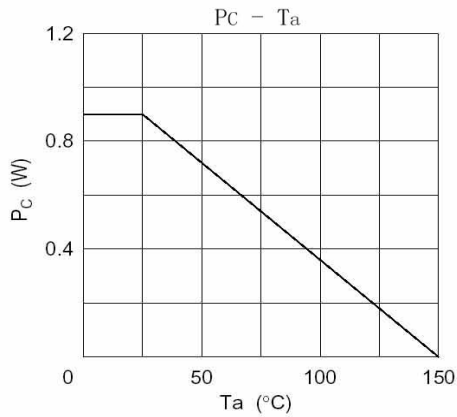
/ Absolute Maximum Ratings(Ta=25)

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}	$I_C=-10\mu A$ $I_E=0$	-120			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=-1.0mA$ $R_{BE}=\infty$	-80			V
			-100			
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=-10\mu A$ $I_C=0$	-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

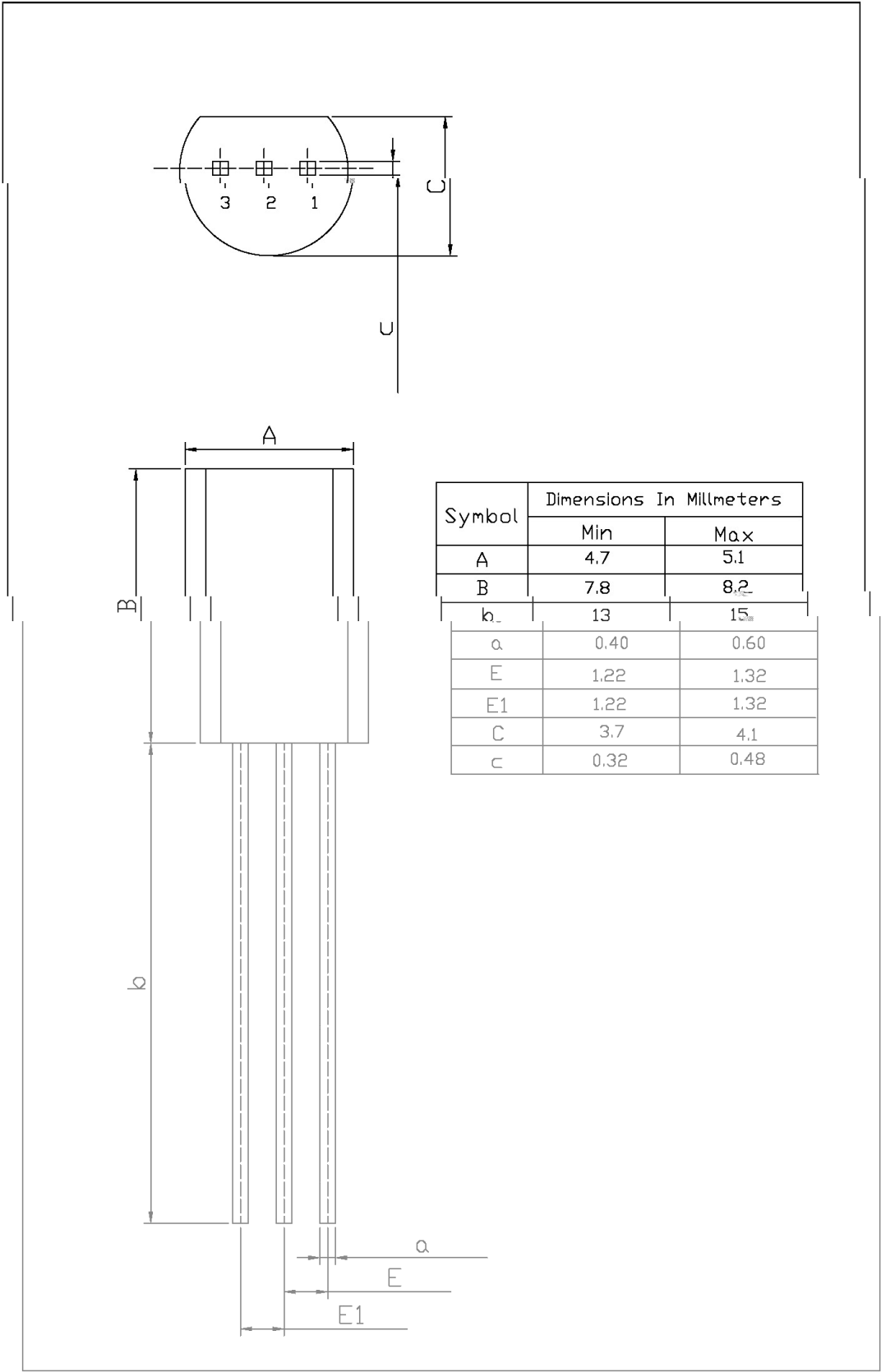
/ Electrical Characteristic Curve



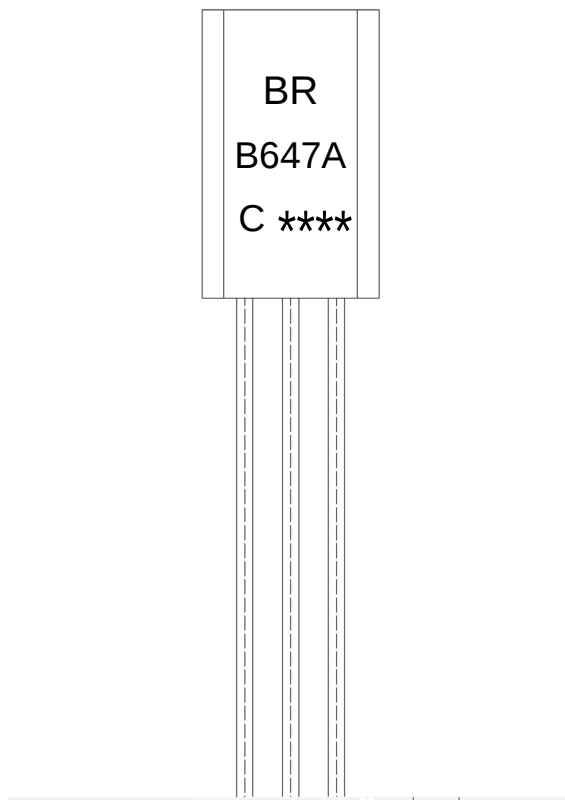
/ Package Dimensions

TO-92LM

Unit: mm



/ 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)



1 25 150 60 90sec;

Note:
1.Preheating:25~150℃ , Time:20~60min
2.Heating:154~177℃ , Time:10~15sec