

Descriptions

Silicon PNP transistor in a TO-92LM Plastic Package

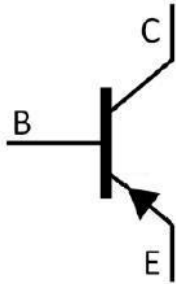
Features

- Low frequency power amplifier.

Applications

Low frequency power amplifier.

Equivalent Circuit



Pinning



PIN1: Base PIN 2: Collector PIN 3: Emitter

hFE Classifications & Marking

h _{FE} Classifications Symbol	B	C	D
h _{FE} Range	60~120	100~200	160~320

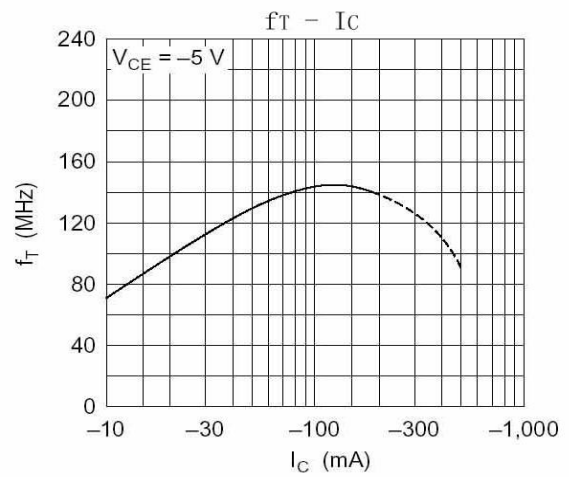
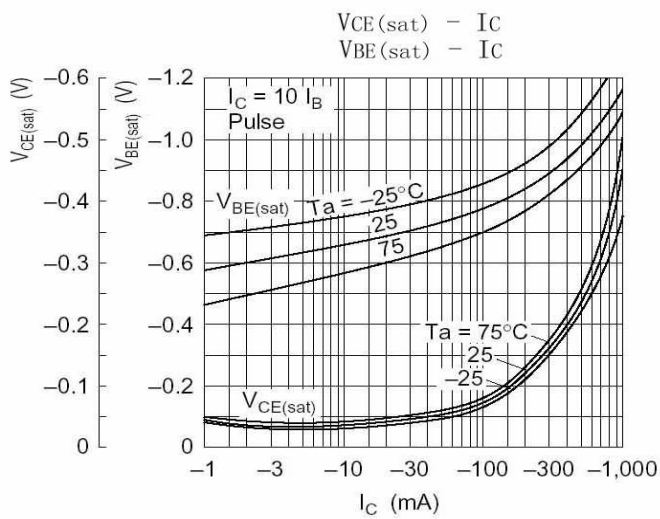
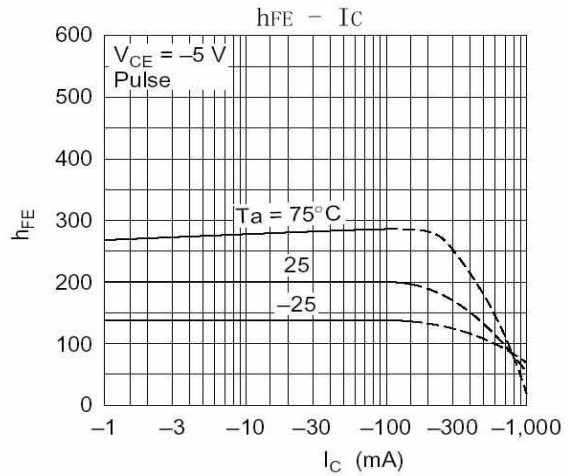
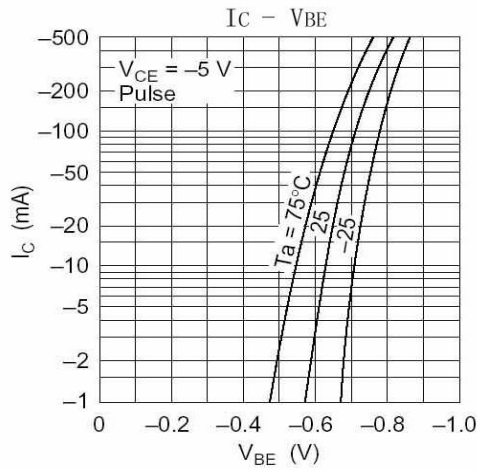
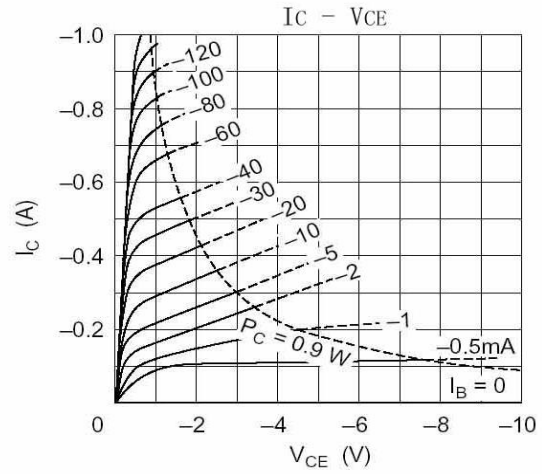
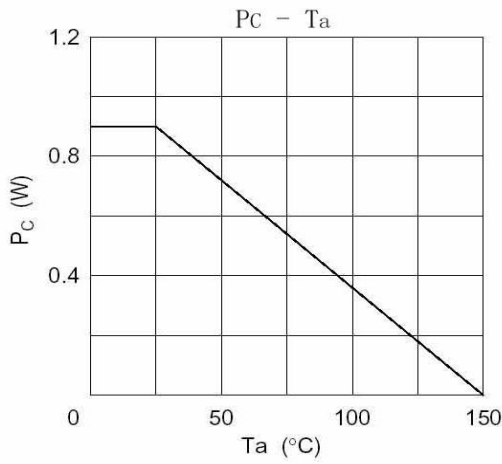
Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-120	V
Collector to Emitter Voltage	V_{CEO}	2SB647	-80
		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	°C
Storage Temperature Range	T_{stg}	-55~150	°C

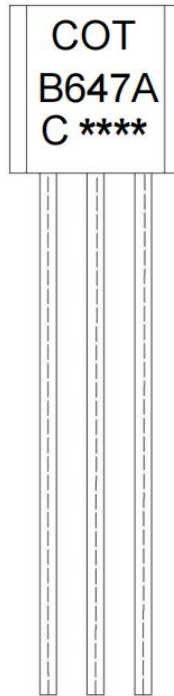
Electrical Characteristics(Ta=25°C)

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}	2SB647	-80			V
		2SB647A	-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}	$V_{CB}=-10V$ $f=1.0MHz$ $I_E=0$		12		pF

Electrical Characteristic Curve



Marking Instructions



Note:

COT: Company Code.

B647A: Product Type.

C: hFE Classifications Symbol.

****: Lot No. Code, code change with Lot No

h _{FE} Classifications Symbol	B	C	D
h _{FE} Range	60~120	100~200	160~320

Packaging SPEC

BULK

Package Type	Units					Dimension (unit: mm3)		
	Units/Bag 只/袋	Bags/Inner Box 袋/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Bag	Inner Box	Outer Box
TO-92LM	1,000	8	8,000	5	40,000	135×190	237×172×102	560×245×195

AMMO

Package Type	Units					Dimension (unit: mm3)	
	Units/tape	Tape/Inner Box	Rows/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Inner Box	Outer Box
TO-92LM	2,500	1	100	10	25,000	328×230×42	小箱 480×346×235 大箱 547×407×268

Package Outline Dimensions

TO-92LM

Unit: mm

