/ Descriptions

TO-92 NPN Silicon NPN transistor in a TO-92 Plastic Package.

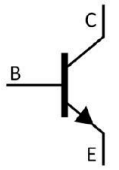
/ Features

Low frequency.

/ Applications

Low frequency power amplifier.

/ Equivalent Circuit



/ Pinning

PIN1 Base PIN 2 Collector PIN 3 Emitter

/ hFE Classifications & Marking

h_{FE} Classifications Symbol	D	E	F
h_{FE} Range	250~500	400~800	600~1200

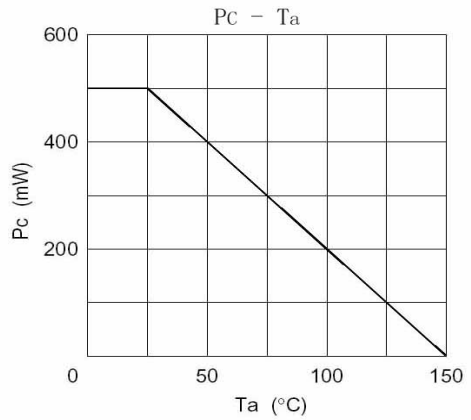
/ Absolute Maximum Ratings(Ta=25)

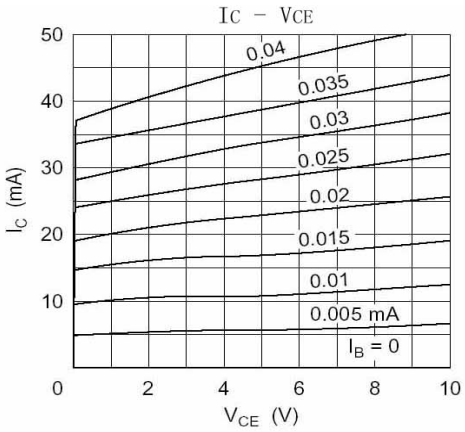
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CEO}	15	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	700	mA
Collector Current – Continuous(Pulse)	I_{CP}	1.0	A
Collector Power Dissipation	P_C	500	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

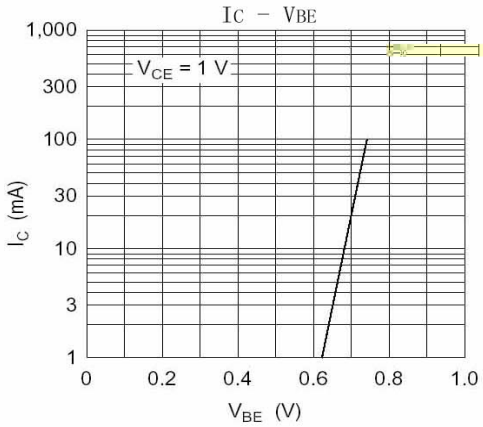
/ Electrical Characteristics(Ta=25)

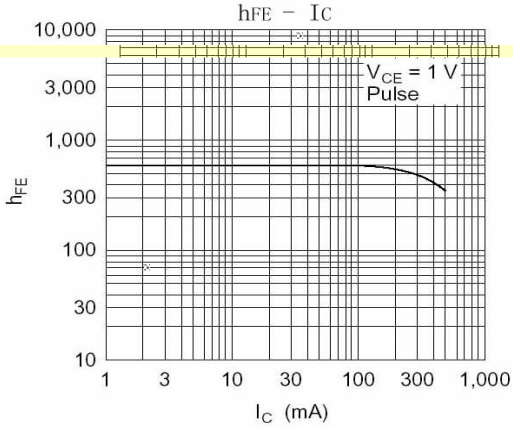
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	I_C=10μA I_E=0	30			V
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=1.0mA R_{BE}=∞	15			V
Emitter to Base Breakdown Voltage	V_{EBO}	I_E=10μA I_C=0	5.0			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=20V I_E=0			1.0	μA
Base to Emitter Voltage	V_{BE}	V_{CE}=1.0V I_C=150mA			1.0	V
DC Current Gain	h_{FE}	V_{CE}=1.0V I_C=150mA	250		1200	
Collector to Emitter Saturation Voltage	$V_{CE\ sat}$	I_C=500mA I_B=50mA		0.15	0.5	V
Transition Frequency	f_T	V_{CE}=1.0V I_C=150mA		250		MHz

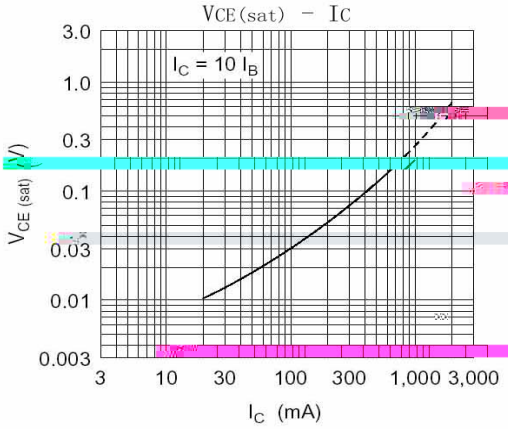
/ Electrical Characteristic Curve

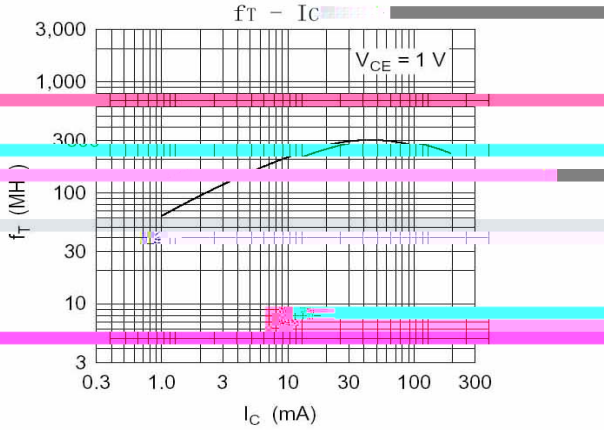




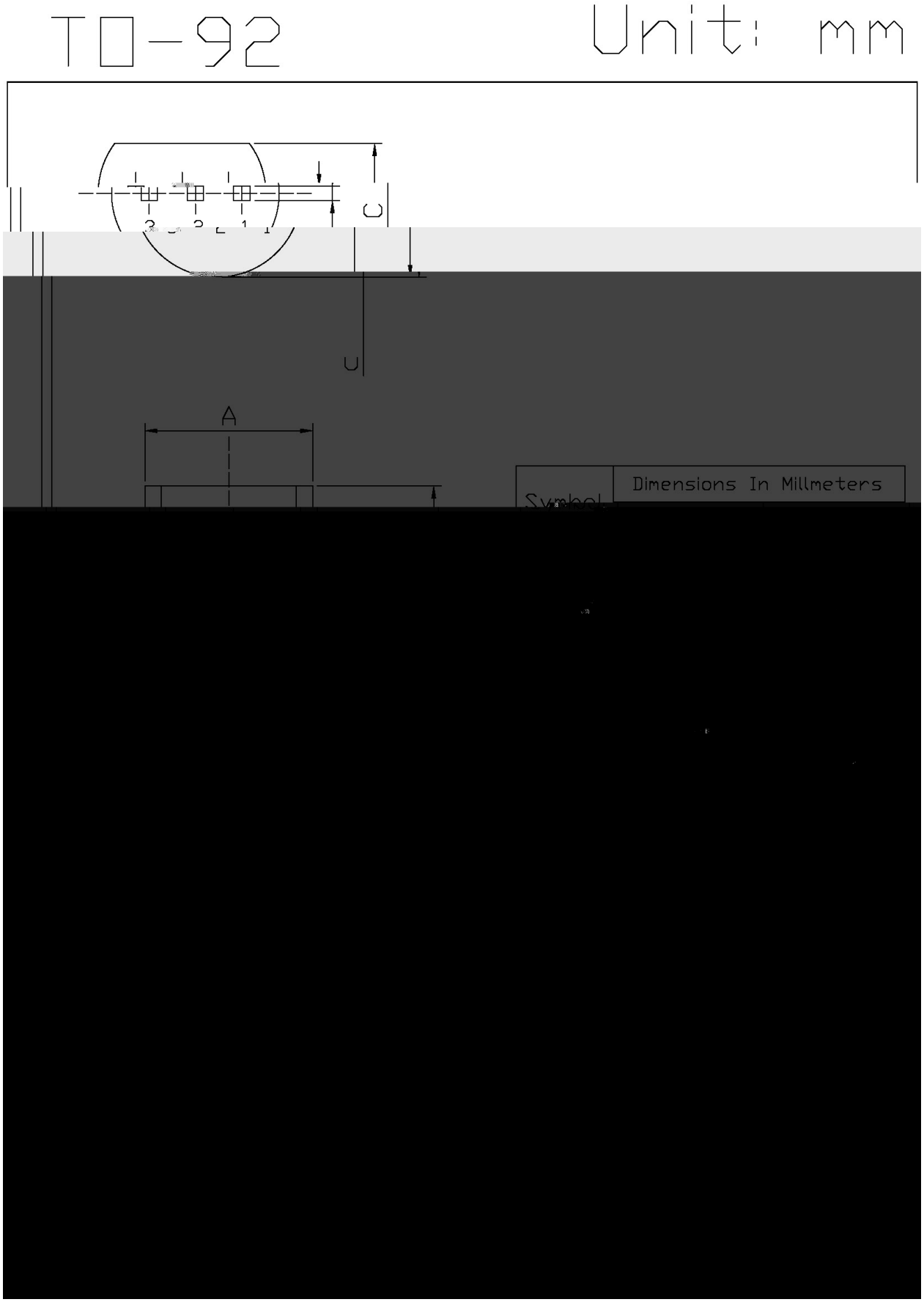




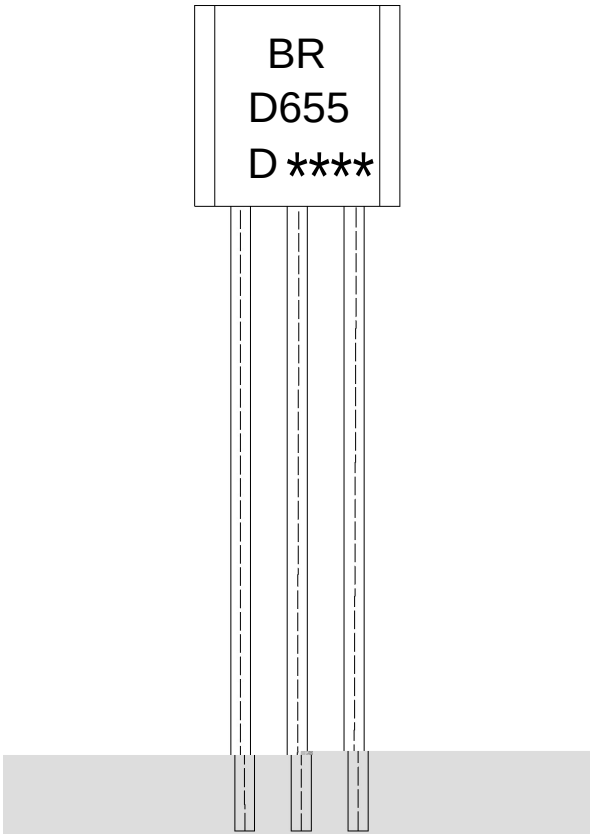




/ Package Dimensions



/ Marking Instructions



BR:

D655

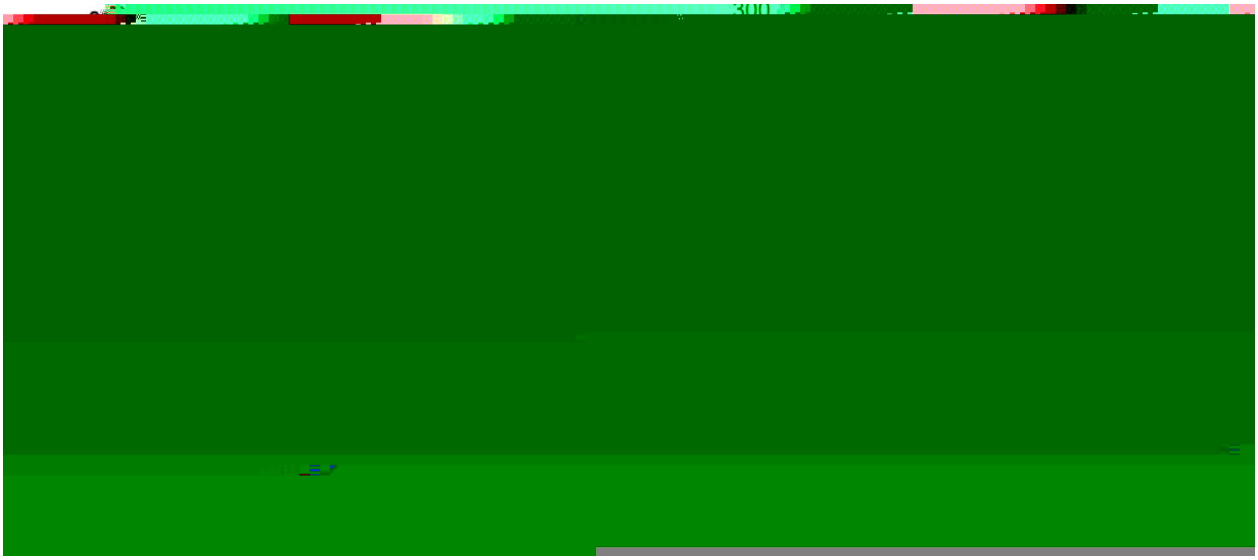
D: h_{FE}

****

Note:

BR:	Company Code.
D655:	Product Type.
D:	h_{FE} Classifications Symbol
****:	Lot No. Code,code change with Lot No.

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



1	25 150	60 90sec;		
2	255±5	5±0.5sec;		
3	2 10 /sec.			

Note:
1.Preheating:25~150 , Time:60~90sec.
2.Peak Temp.:255±5 , Duration:5±0.5sec.
3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

270±5 10±1 sec. Temp:270±5 Time:10±1 sec

/ Packaging SPEC.

/ BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (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 袋	Inner Box 盒	Outer Box 箱
TO-92	1,000	10	10,000	5	50,000	135×190	237×172×102	560×245×195
	1,000	10	10,000	10	100,000	135×190	237×172×102	560×245×375

/ AMMO

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)	
	Units/tape 只/纸带	Tape/Inner Box 纸带/盒	Rows/Inner Box 纸带层/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Inner Box 盒	Outer Box 箱
TO-92	3,000	1	120	10	30,000	328×230×42	小箱 480×346×235，大箱 547×407×268

/ Notices