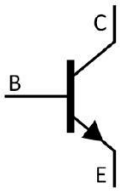
Silicon NPN transistor in a TO-92LM Plastic Package.

High transition frequency, small collector output capacitance complementary pair with 2SA1145.

Audio frequency amplifier applications.



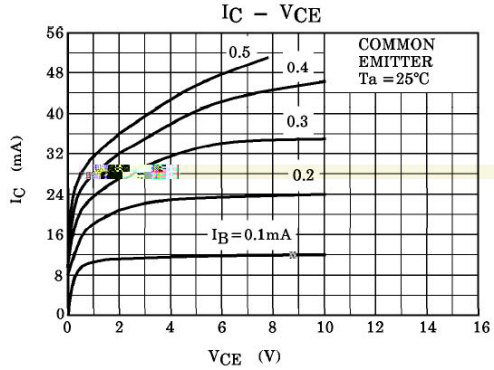
PIN1 Base PIN 2 Collector PIN 3 Emitter 6

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	150	V
Collector to Emitter Voltage	V_{CEO}	150	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current (DC)	I_C	50	mA
Base Current	I_B	5.0	mA
Collector Power Dissipation	P_C	800	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

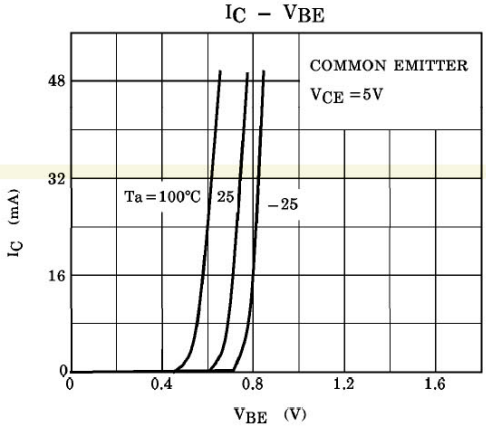
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=1.0mA I_B=0	150			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=150V I_E=0			0.1	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=5.0V I_C=0			0.1	μA
DC Current Gain	h_{FE}	V_{CE}=5.0V I_C=10mA	80		240	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=10mA I_B=1.0mA			1.0	V
Base to Emitter Voltage	V_{BE}	V_{CE}=5.0V I_C=10mA			0.8	V
Transition Frequency	f_T	V_{CE}=5.0V I_C=10mA		200		MHz
Collector output capacitance	C_{ob}	V_{CB}=10V I_E=0 f=1.0MHz		1.8		pF

/ Electrical Characteristic Curve

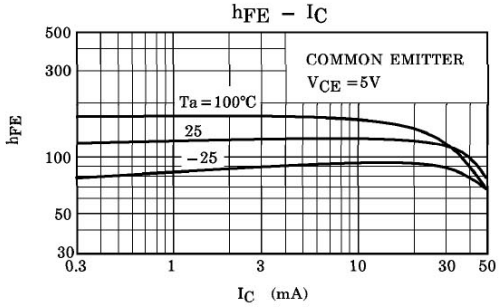
I_C – V_{CE}



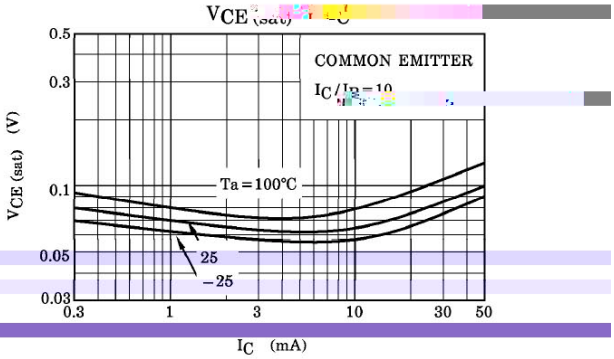
I_C – V_{BE}



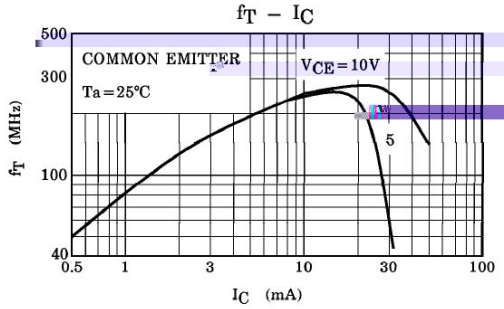
h_{FE} – I_C



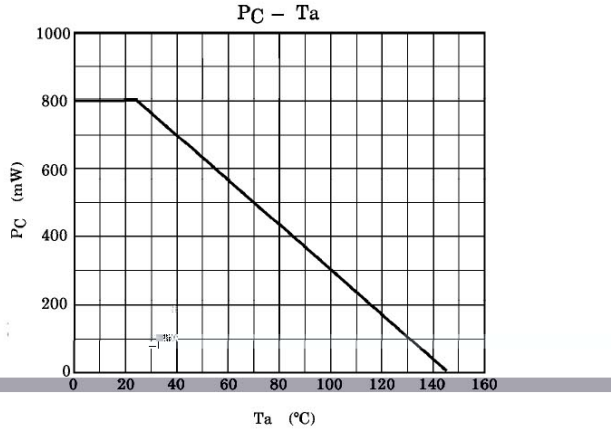
$V_{CE(sat)}$ – I_C



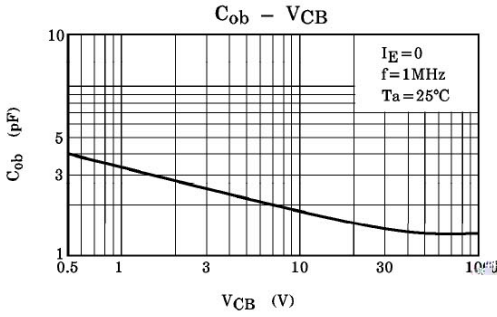
f_T – I_C



P_C – Ta

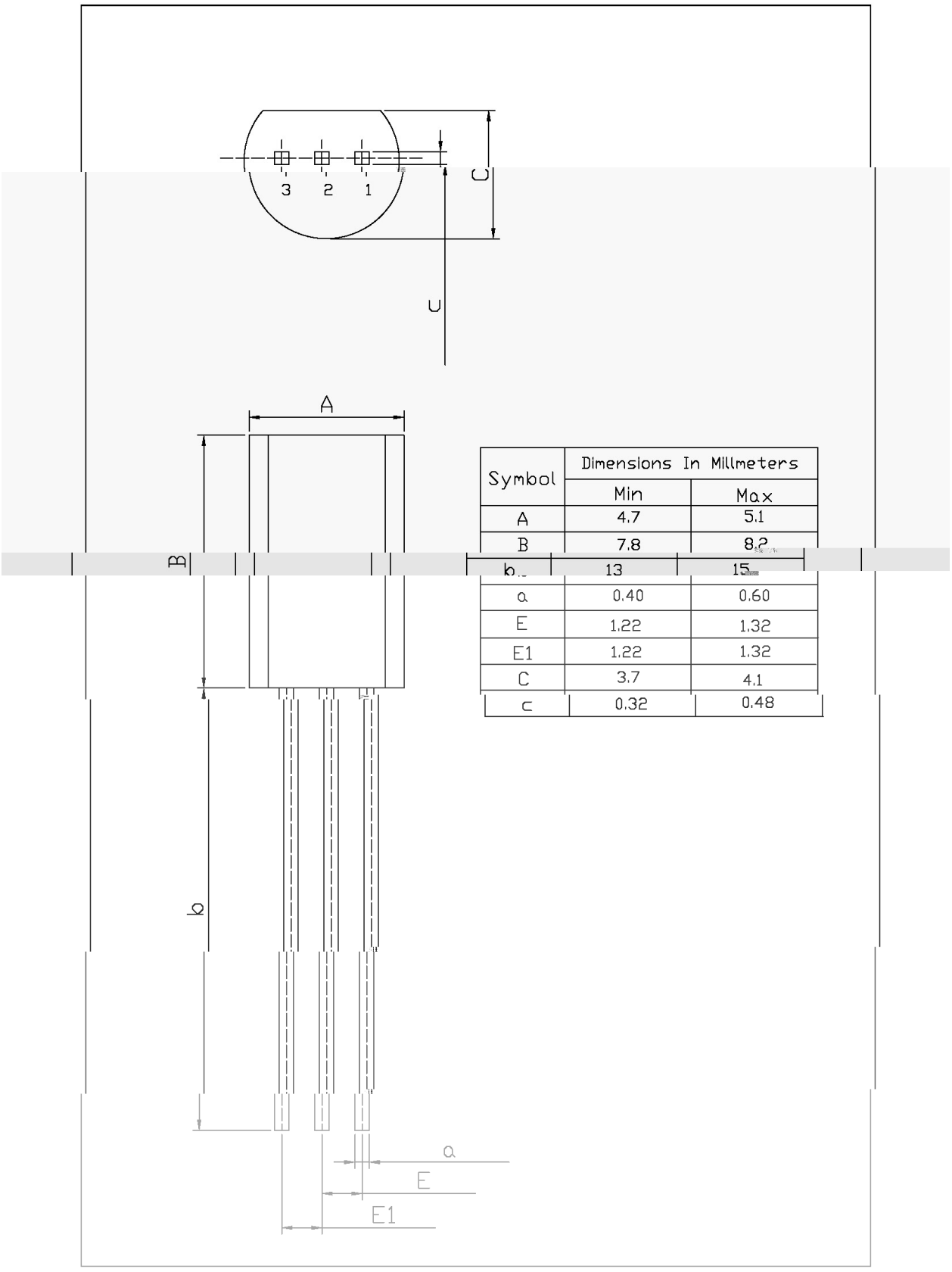


C_{ob} – V_{CB}

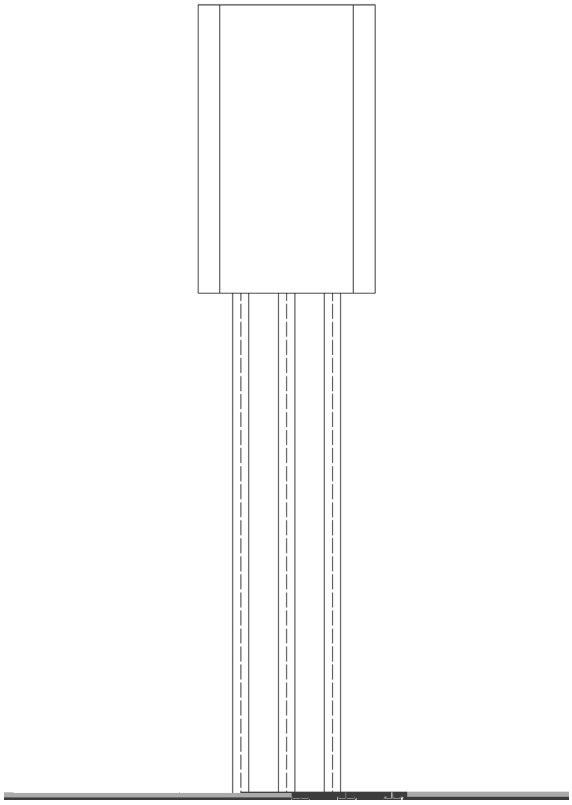


/ Package Dimensions

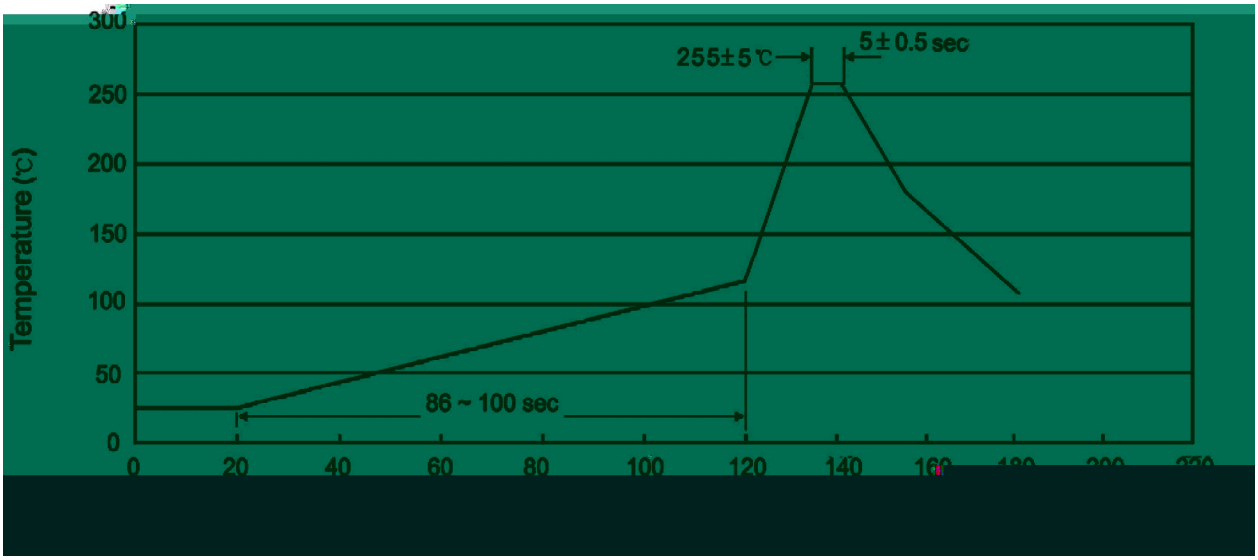
TO-92LM Unit: mm



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



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



					Note:	
1		25 150		60 90sec;	1.Preheating:25~150 , Time:60~90sec.	
2		255 5		5 0.5sec;	2.Peak Temp.:255 5 , Duration:5 0.5sec.	
3			2 10 /sec.		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	Units					Dimension		(unit mm3)
	Units/Bag /	Bags/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	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	480×346×235 547×407×268

/ Notices