

# 2SC383TM

Rev.E Mar.-2016

## / Descriptions

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

## / Features

$G_{pe} = 33\text{dB}$  ( $f = 45\text{MHz}$ ),  $h_{FE}$   
High gain:  $G_{pe} = 33\text{dB}$  (Typ) ( $f = 45\text{MHz}$ ), good linearity of  $h_{FE}$ .

## / Applications

TV final picture IF amplifier applications.

## / Equivalent Circuit



## / Pinning



PIN1 Base          PIN 2 Collector          PIN 3 Emitter

## / hFE Classifications & Marking

See Marking Instructions.

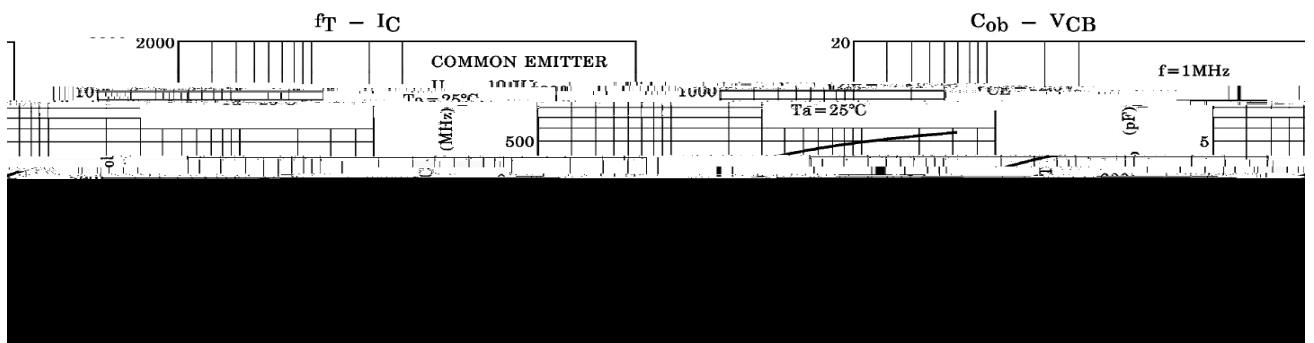
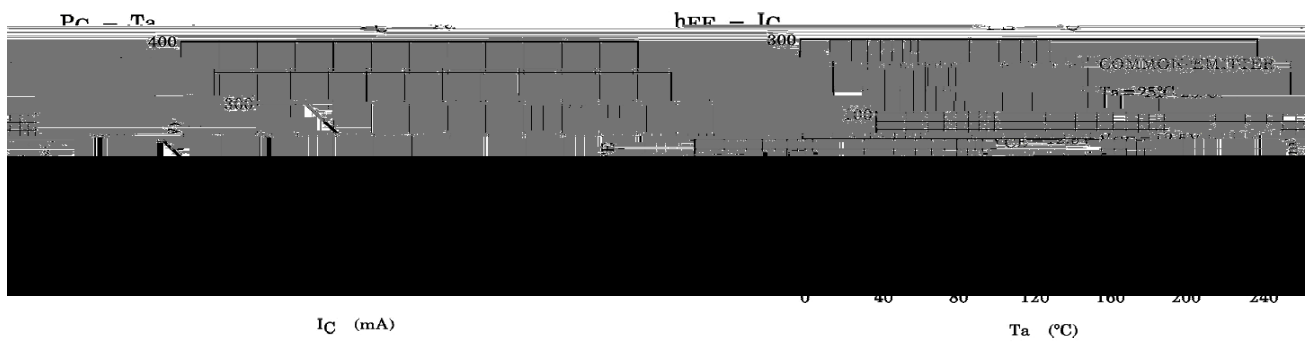
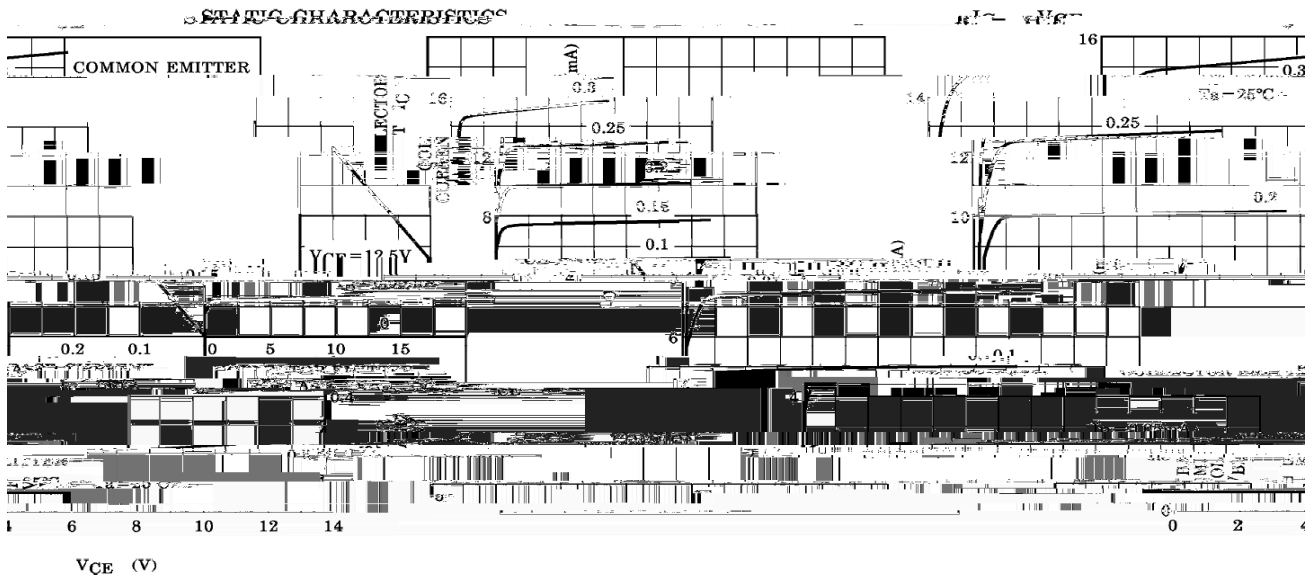
**/ Absolute Maximum Ratings(Ta=25 )**

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	50	V
Collector to Emitter Voltage	$V_{CEO}$	45	V
Emitter to Base Voltage	$V_{EBO}$	4.0	V
Collector Current - Continuous	$I_C$	50	mA
Emitter Current - Continuous	$I_E$	-50	mA
Collector Power Dissipation	$P_C$	300	mW
Junction Temperature	$T_j$	150	
Storage Temperature Range	$T_{stg}$	-55 150	

**/ Electrical Characteristics(Ta=25 )**

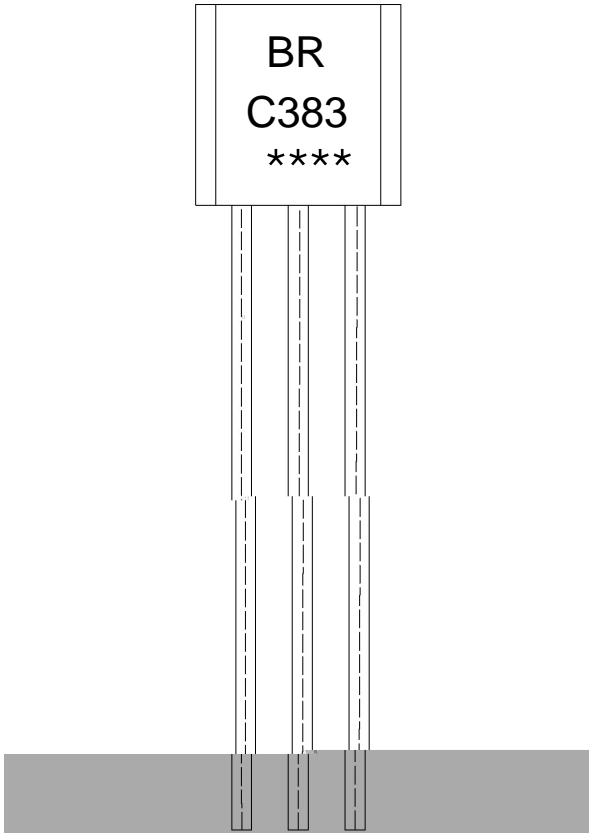
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	$V_{CEO}$	$I_C=10mA$ $I_B=0$	45			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=50V$ $I_E=0$			0.1	$\mu A$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=3.0V$ $I_C=0$			0.1	$\mu A$
DC Current Gain	$h_{FE}$	$V_{CE}=12.5V$ $I_C=12.5mA$	20		100	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=15mA$ $I_B=1.5mA$			0.2	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=15mA$ $I_B=1.5mA$			1.5	V
Transition Frequency	$f_T$	$V_{CE}=12.5V$ $I_C=12.5mA$	300			MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10V$ $f=1MHz$ $I_E=0$	0.8		2.0	pF
Power Gain	$G_{pe}$	$V_{CC}=12.5V$ $f=45MHz$ $I_E=-12.5mA$	29		36	dB
Collector to Base Time Constant	$C_C.rbb$	$V_{CB}=10V$ $f=30MHz$ $I_E=-1.0mA$			25	pS

/ Electrical Characteristic Curve



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/ Marking Instructions



BR:

C383

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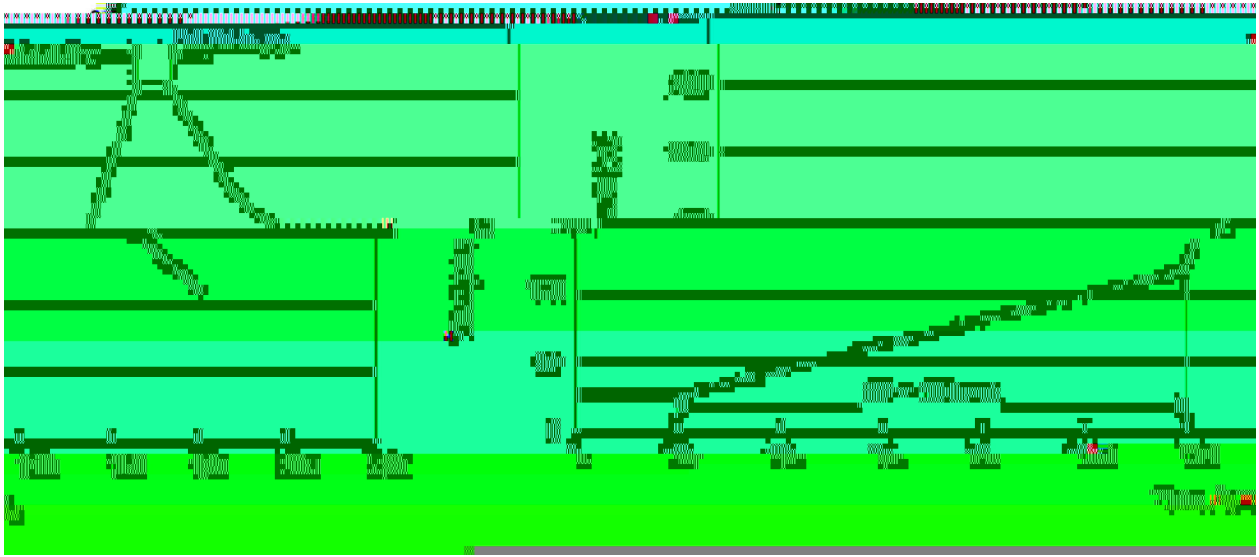
Note:

BR: Company Code.

C383: Product Type.

\*\*\*\*: 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.    |
| 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 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

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