

/ Descriptions

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

/ Features

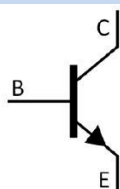
: $G_{pe}=33\text{dB}$ ()(f=45MHz), h_{FE}

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

/ Applications

TV final picture IF amplifier applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

See Marking Instructions.

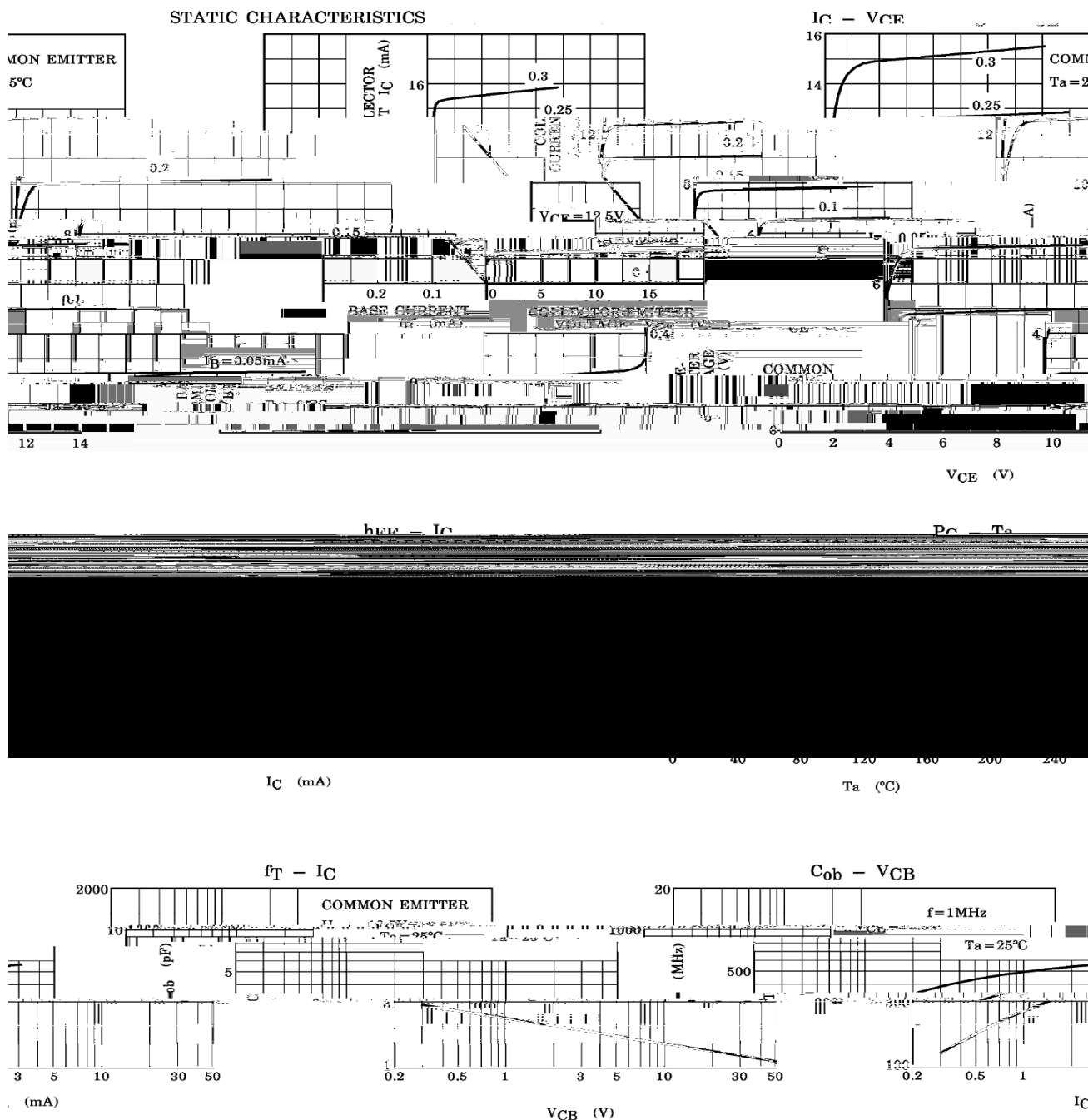
/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

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	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~150	$^\circ\text{C}$

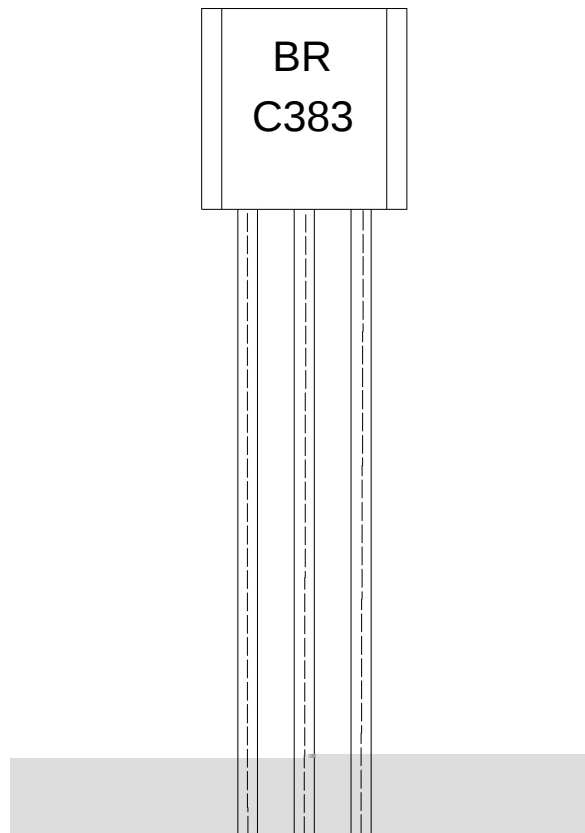
/ Electrical Characteristics($T_a=25^\circ\text{C}$)

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

/ Electrical Characteristic Curve



/ **Marking Instructions**



BR:

C383

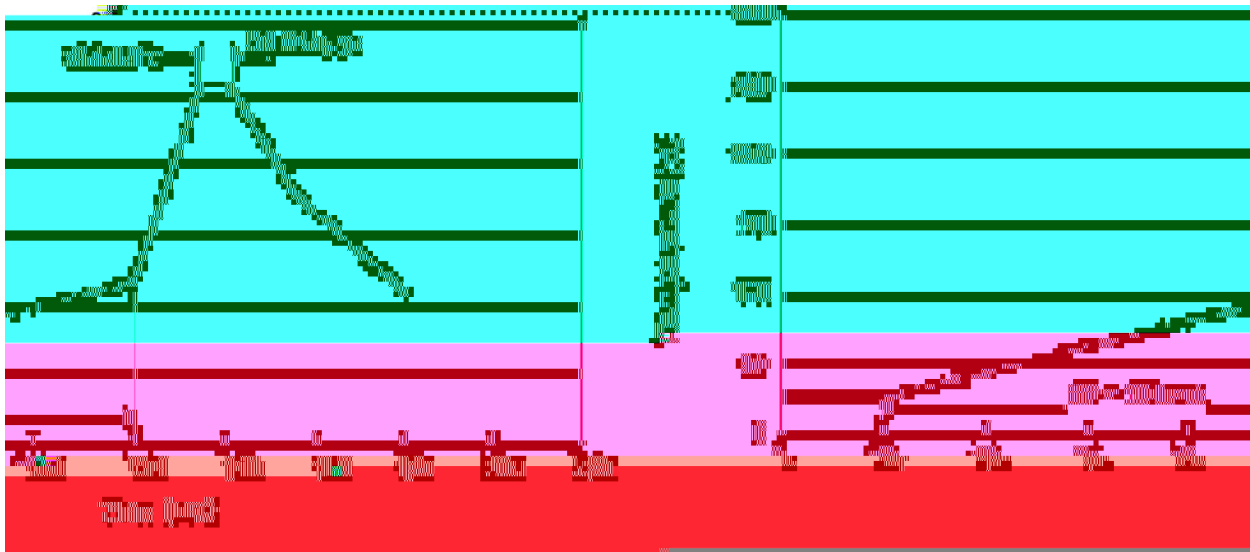
Note:

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)		
	只袋	袋盒	只盒	盒箱	只箱	袋	盒	箱

/ AMMO

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)		
	只纸带	纸带盒	纸带层盒	盒箱	只箱	盒	箱	
							小箱	大箱

/ Notices