

BR2SC2383TQ

Rev.A Feb.-2022

/ Descriptions

SOT-89

NPN

Silicon NPN transistor in a SOT-89 Plastic Package.

/ Features

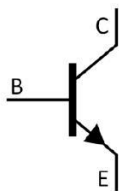
V_{CEO} , BR2SA1013TQ AEC-Q101

High V_{CEO} , complementary pair with BR2SA1013TQ, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

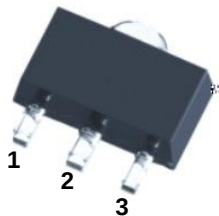
/ Applications

Color TV class B sound output applications, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base

PIN 2 Collector

PIN 3 Emitter

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	R	O	Y
h_{FE} Range	60 120	100 200	160 320
Marking	Q83R * *	Q83O * *	Q83Y * *

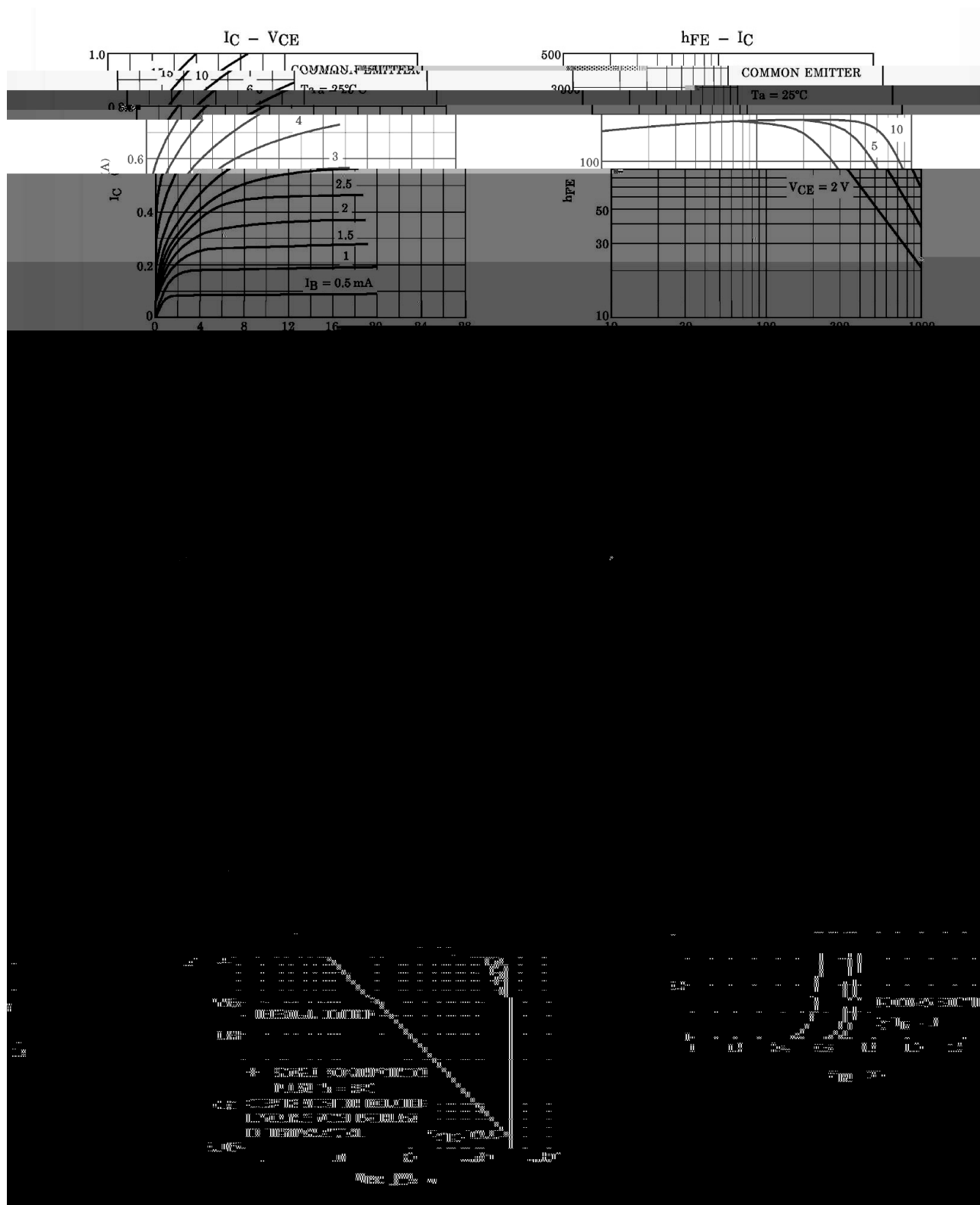
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	160	V
Collector to Emitter Voltage	V_{CEO}	160	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current-Continuous	I_C	1.0	A
Collector Base-Continuous	I_B	0.5	A
Collector Power Dissipation	P_C	500	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 150	°C

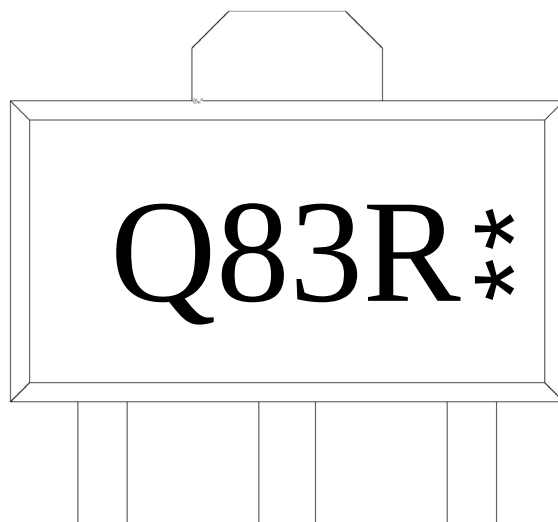
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=10mA$ $I_B=0$	160			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=150V$ $I_E=0$			1.0	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=6.0V$ $I_C=0$			1.0	μA
DC Current Gain	h_{FE}	$V_{CE}=5.0V$ $I_C=200mA$	60		320	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500mA$ $I_B=50mA$			1.5	V
Emitter to Base Saturation Voltage	V_{BE}	$V_{CE}=5.0V$ $I_C=5.0mA$	0.45		0.75	V
Transition Frequency	f_T	$V_{CE}=5.0V$ $I_C=200mA$	20	100		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$			20	pF

/ Electrical Characteristic Curve



/ Marking Instructions



Q

83

R:

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Note:

Q: Automobile halogen-free product Code

83: Product Type

R: h_{FE} Classifications Symbol

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

