

BR2SC2383TQ

Rev.A Feb.-2022

/ Descriptions

SOT-89

NPN

Silicon NPN transistor in a SOT-89 Plastic Package.

/ Features

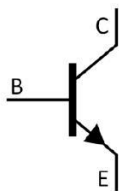
V_{CEO} , BR2SA1013TQ AEC-Q101

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

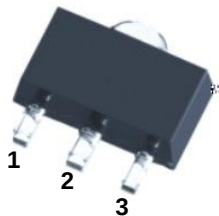
/ Applications

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 * *

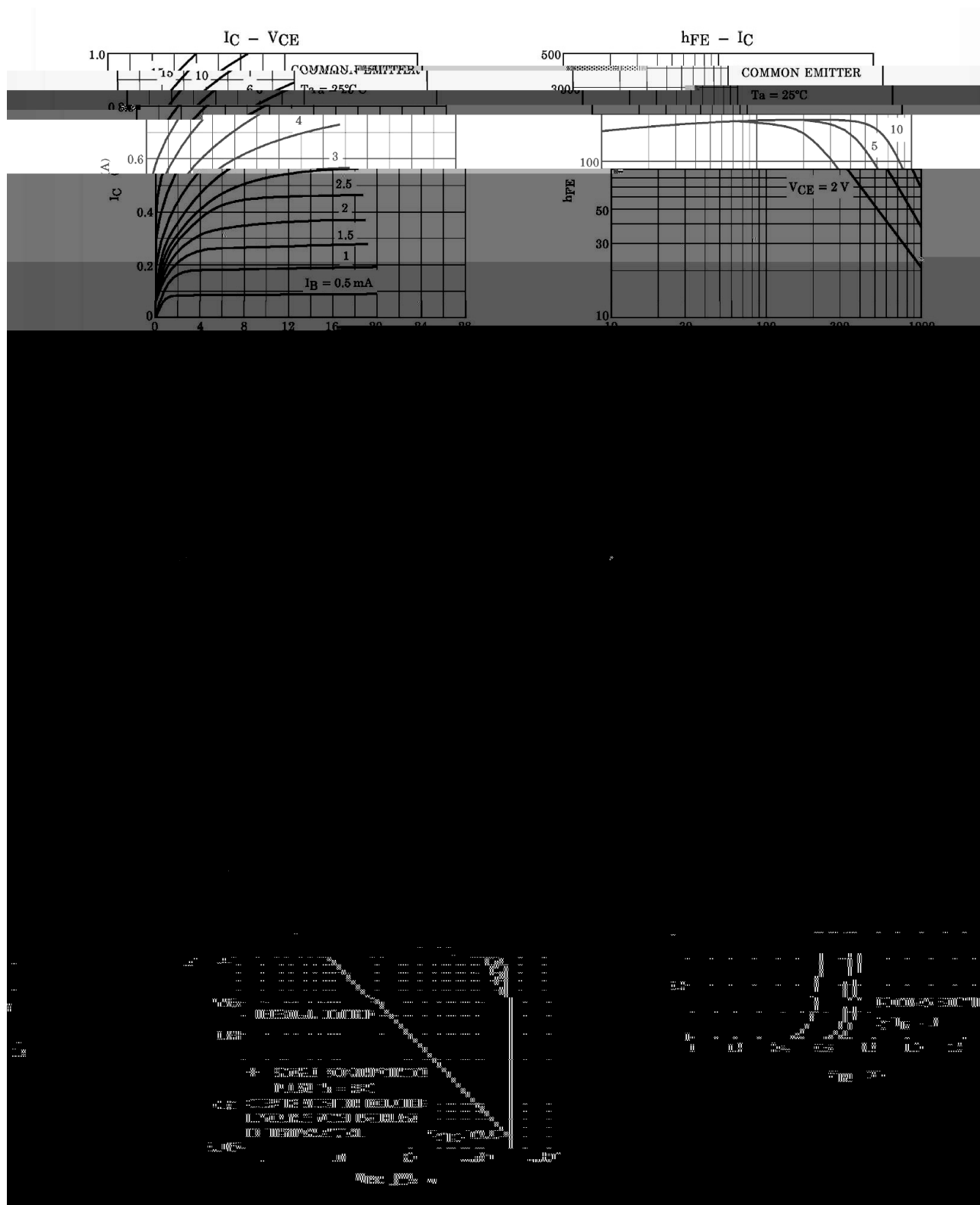
/ Absolute Maximum Ratings(Ta=25)

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

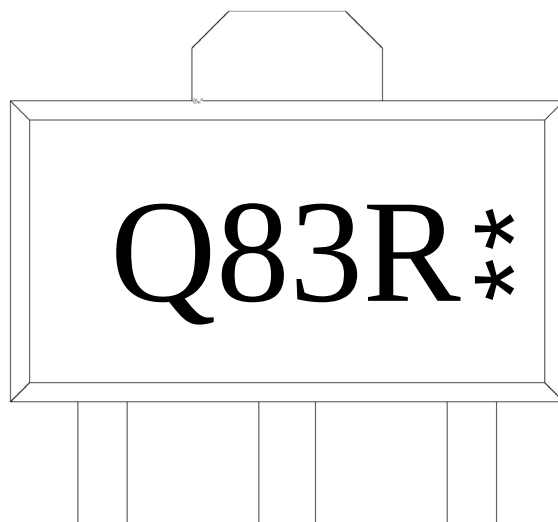
/ Electrical Characteristics(Ta=25)

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

