SOT-89 NPN Silicon NPN transistor in a SOT-89 Plastic Package.

V_{CEO} , BR2SA1013TQ AEC-Q101

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

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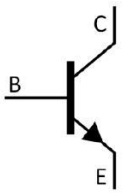
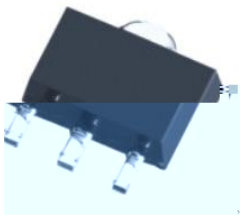
Color TV class B sound output applications, Meet the stringent requirements of automotive applications.



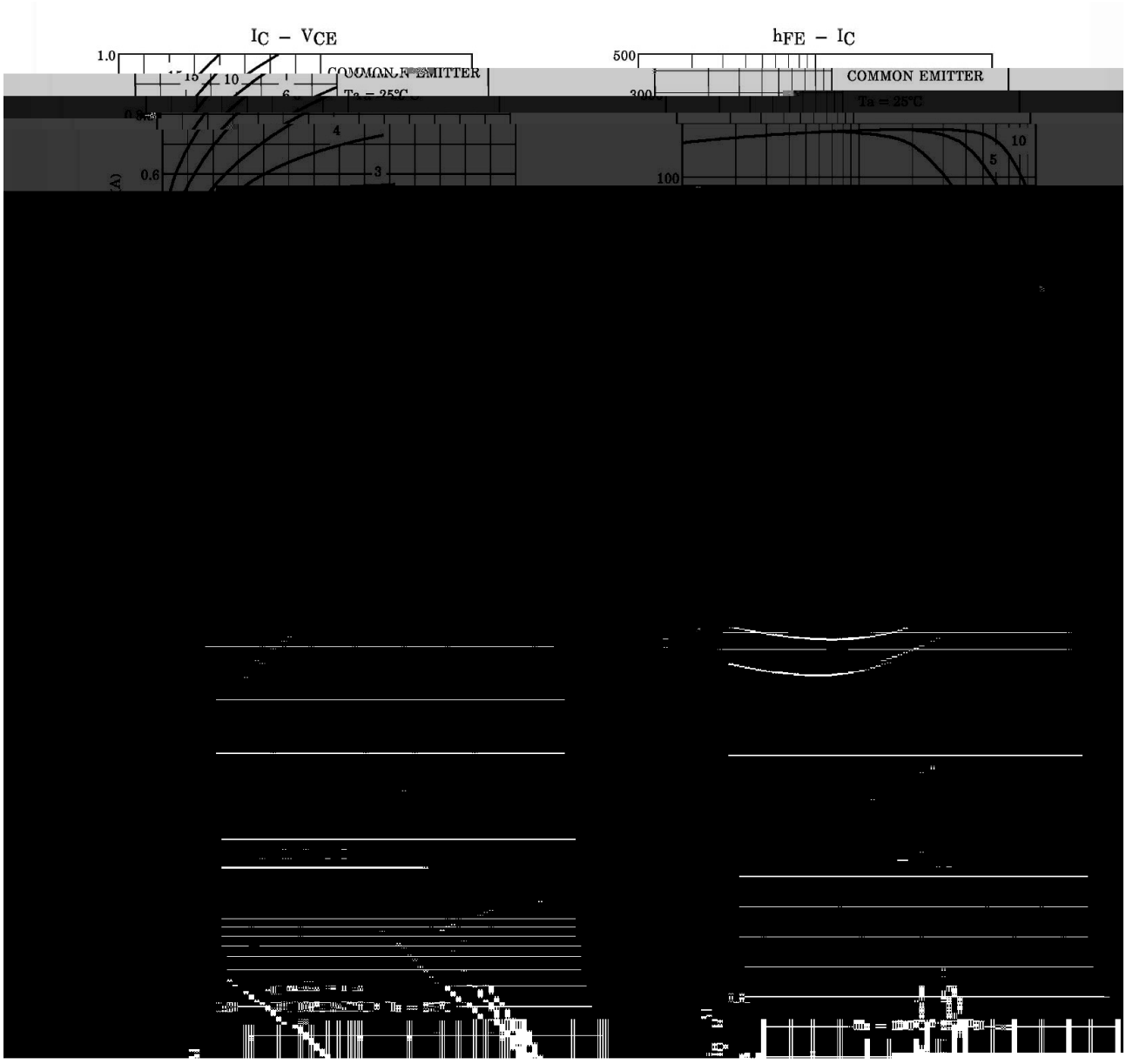


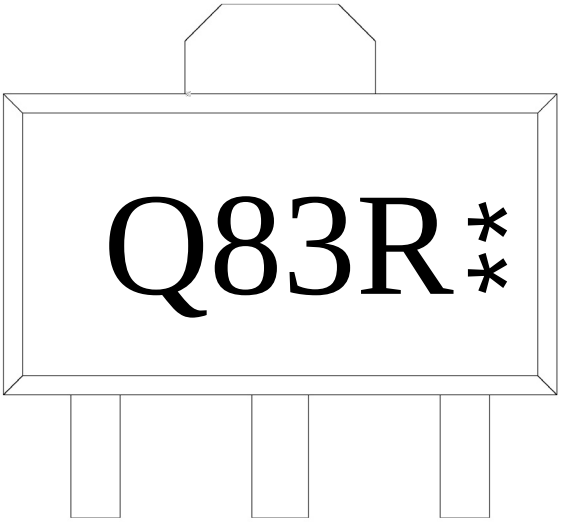
PIN1 Base PIN 2 Collector PIN 3 Emitter

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

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	℃
Storage Temperature Range	T_{stg}	-55 150	℃

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


I_C – V_{CE}
1.0
0.6
(A)
4
3
h_{FE} – I_C
500
300
100
COMMON EMITTER
Ta = 25°C
10
5



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