

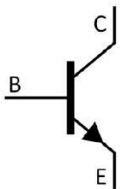
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SOT-89 NPN Silicon NPN transistor in a SOT-89 Plastic Package.

V_{CE0} , BR2SA1013TQ AEC-Q101

High V_{CE0} , complementary pair with BR2SA1013TQ, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

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

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