SOT23 NPN SILICON PLANAR VHF/UHF TRANSISTOR

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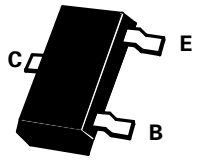
BFQ31A

PARTMARKING DETAILS
BFQ31A – S4
BFQ31AR – S5



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CEO}	15	V
Emitter-Base Voltage	V_{EBO}	3	V
Continuous Collector Current	I_C	100	mA
Base Current	I_B	50	mA
Power Dissipation at T_{amb}=25°C	P_{tot}	330	mW
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C).

PARAMETER	SYMBOL	BFQ31A		UNIT	CONDITIONS.
		MIN.	MAX.		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	30		V	I_C=1.0μA, I_E=0
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	15		V	I_C=3mA, I_B=0*
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	3		V	I_E=10μA, I_C=0
Collector Cut-Off Current	I_{CBO}		0.01	μA	V_{CB}=15V, I_E=0
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.4	V	I_C=10mA, I_B=1mA
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		1.0	V	I_C=10mA, I_B=1mA
Static Forward Current Transfer Ratio	h_{FE}	100			I_C=3mA, V_{CE}=1V
Transition Frequency	f_T	600		MHz	I_C=4mA, V_{CE}=10V f=100MHz
Output Capacitance	C_{obo}		1.7	pF	V_{CB}=10V, f=1MHz
Input Capacitance	C_{ibo}		2.0	pF	V_{CB}=0.5V, f=1MHz
Noise Figure	N		6.0	dB	I_C=1mA, V_{CE}=6V R_s=400Ω, f=60MHz

*Measured under pulsed conditions.
Spice parameter data is available upon request for this device

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