2SC458

Rev.E Mar.-2016

蓝箭电子 BLUE ROCKET ELECTRONICS

DATA SHEET

/ Descriptions

TO-92 NPN Silicon NPN transistor in a TO-92 Plastic Package.

/ Features

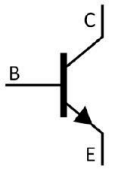
2SA1029

Complementary pair with 2SA1029.

/ Applications

Low frequency amplifier r.

/ Equivalent Circuit



/ Pinning

PIN1 Base PIN 2 Collector PIN 3 Emitter

/ hFE Classifications & Marking

h_{FE} Classifications Symbol	B	C	D
h_{FE} Range	100~200	160~320	250~500

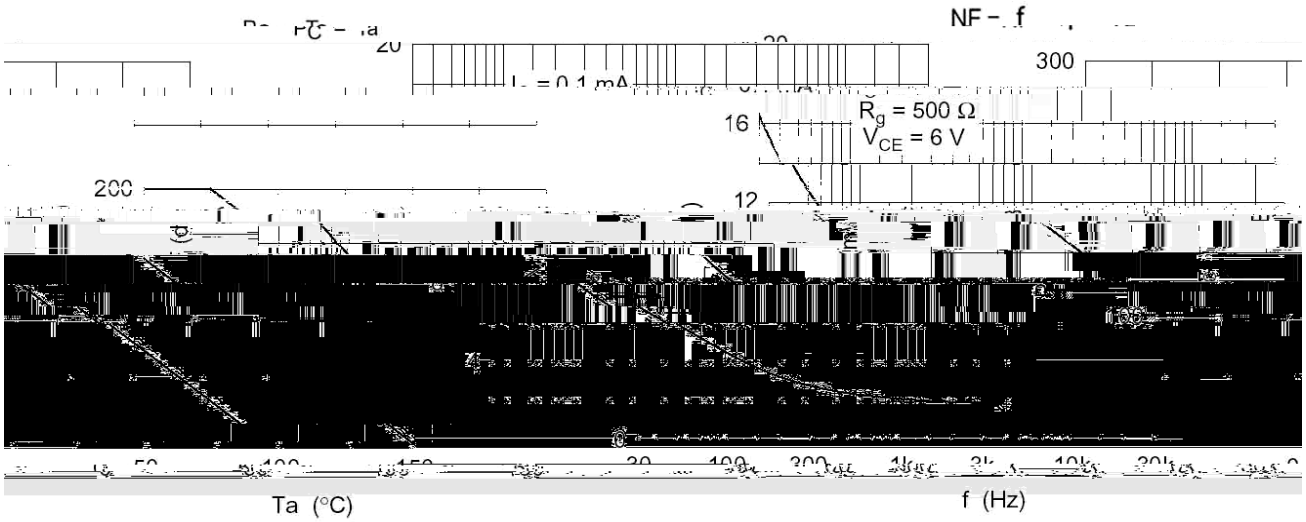
/ AbsoluteMaximumRatings(Ta=25)

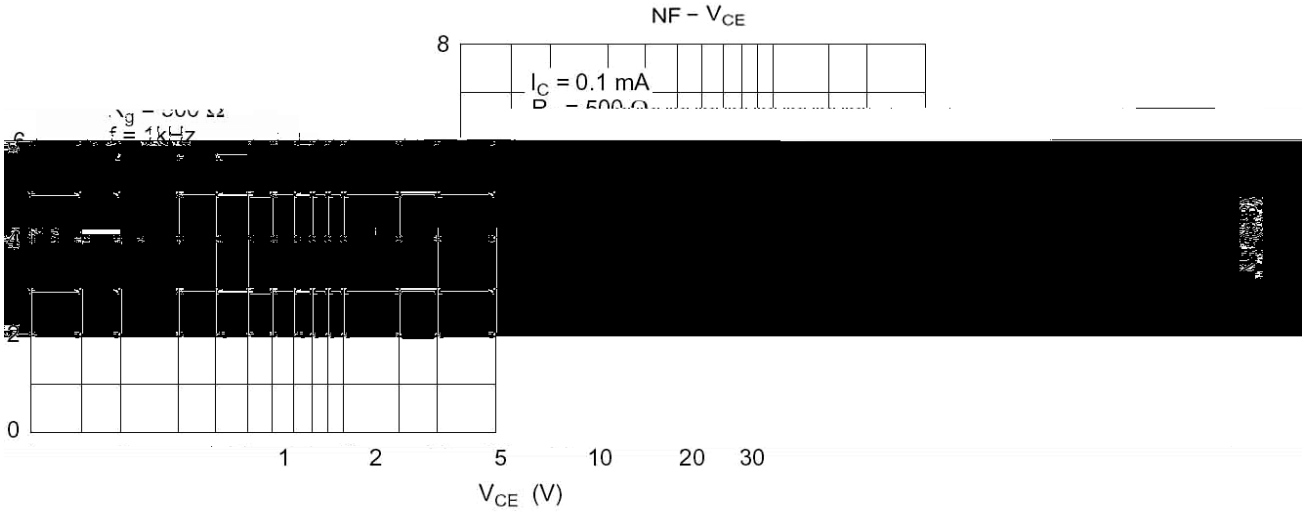
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CEO}	30	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	100	mA
Emitter Current - Continuous	I_E	-100	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ		
Collector to Base Breakdown Voltage	V_{CBO}	=10μA I_E=0	30			V
Collector to Emitter Breakdown Voltage	V_{CEO}	=1.0mA R_{BE}=∞	30			V
Emitter to Base Breakdown oltage	V_{EBO}	$_C$=0	5.0			V
Collector Cut-Off Current	I_{CBO}	V =18V I_E=0			0.5	μA
Emitte	$_{EBO}$	V =2.0V I_C=0			0.5	μA
DC Current Gain	h	V =12V I =2.0mA	100		500	
Collector to Emitter Saturation oltage	$V_{CE(sat)}$	=10mA I_B=1.0mA			0.2	V
Base to Emitter Voltage	V_{BE}	V =12V I_C=2.0mA		0.67	0.75	V
		$_C$				
Collector Output Capacitance	C	V =10V I_E=0 f=1.0MHz				
Noise Figure	NF	V =6.0V I_C=0.1mA f=1.0KHz R =500Ω		4.0	10	dB
Small Signal Input Impedance	h_{ie}	V =5.0V I_C=0.1mA f=270Hz				
Small Signal Voltage Feedback Ratio	h	V =5.0V I_C=0.1mA f=270Hz				-6
Small Signal Current Feedback Ratio	h	V =5.0V I_C=0.1mA f=270Hz				
Small Signal Output Admittance	h_{oe}	V =5.0V I_C=0.1mA f=270Hz				

/ Electrical Characteristic Curve





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( ) / Temperature Profile for Dip Soldering(Pb-Free)

	Note:
1 25 150 60 90sec;	1.Preheating:25~150 , Time:60~90sec.
2 255±5 5±0.5sec;	2.Peak Temp.:255±5 , Duration:5±0.5sec.
3 2 10 /sec.	3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

270±5	10±1 sec.	Temp:270±5	Time:10±1 sec

/ Packaging SPEC.

/ BULK

Package Type	Units	Dimension	(unit mm3)