

LOW VOLTAGE HIGH CURRENT  
SMALL SIGNAL NPN  
TRANSISTOR

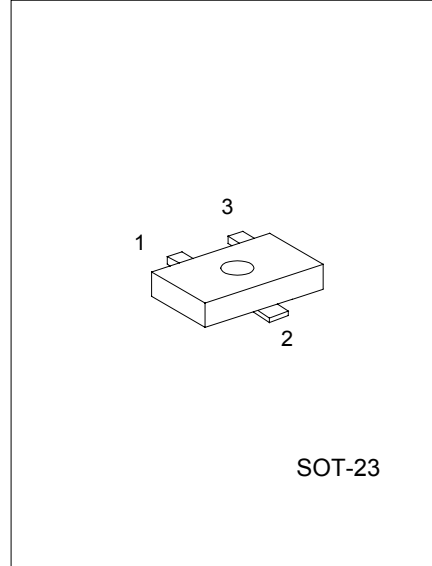
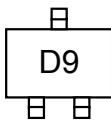
DESCRIPTION

The @vic AV8050S is a low voltage high current small signal NPN transistor, designed for Class B push-pull audio amplifier and general purpose applications.

FEATURES

- \*Collector current up to 700mA
- \*Collector-Emitter voltage up to 20 V
- \*Complementary to @vic AV8550S

MARKING



SOT-23

1:EMITTER 2:COLLECTOR 3:BASE

ABSOLUTE MAXIMUM RATINGS (Ta=25°C ,unless otherwise specified )

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V <sub>CB0</sub>	30	V
Collector-Emitter Voltage	V <sub>CEO</sub>	20	V
Emitter-Base Voltage	V <sub>EBO</sub>	5	V
Collector Dissipation(Ta=25°C)	P <sub>c</sub>	1	W
Collector Current	I <sub>c</sub>	700	mA
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>STG</sub>	-65 ~ +150	°C

ELECTRICAL CHARACTERISTICS(Ta=25°C,unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV <sub>CB0</sub>	I <sub>c</sub> =100μA,I <sub>E</sub> =0	30			V
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	I <sub>c</sub> =1mA,I <sub>B</sub> =0	20			V
Emitter-Base Breakdown Voltage	BV <sub>EBO</sub>	I <sub>E</sub> =100μA,I <sub>c</sub> =0	5			V
Collector Cut-Off Current	I <sub>CB0</sub>	V <sub>CB</sub> =30V,I <sub>E</sub> =0			1	uA
Emitter Cut-Off Current	I <sub>EBO</sub>	V <sub>EB</sub> =5V,I <sub>c</sub> =0			100	nA
DC Current Gain(note)	hFE1	V <sub>CE</sub> =1V,I <sub>c</sub> =1mA	100	110	400	
	hFE2	V <sub>CE</sub> =1V,I <sub>c</sub> =150 mA	120			
	hFE3	V <sub>CE</sub> =1V,I <sub>c</sub> =500mA	40			
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> =500mA,I <sub>B</sub> =50mA			0.5	V
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>c</sub> =500mA,I <sub>B</sub> =50mA			1.2	V
Base-Emitter Saturation Voltage	V <sub>BE</sub>	V <sub>CE</sub> =1V,I <sub>c</sub> =10mA			1.0	V

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Current Gain Bandwidth Product	$f_T$	$V_{CE}=10V, I_c=50mA$	100			MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0$ $f=1MHz$		9.0		pF

CLASSIFICATION OF hFE2

RANK	C	D	E
RANGE	120-200	160-300	280-400

TYPICAL PERFORMANCE CHARACTERISTICS

