

# 深圳市晶泰源电子有限公司

**2SC3199**

**NPN SILICON TRANSISTOR**

**FEATURES**

Power dissipation

$P_{CM}$ : 400 mW ( $T_{amb}=25^{\circ}C$ )

Collector current

$I_{CM}$ : 150 mA

Collector-base voltage

$V_{(BR)CBO}$ : 50 V

Operating and storage junction temperature range

$T_J, T_{stg}$ :  $-55^{\circ}C$  to  $+150^{\circ}C$

**TO-92S**

1. EMITTER

2. COLLECTOR

3. BASE



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**ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^{\circ}C$  unless otherwise specified)**

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=50V, I_E=0$			0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			0.1	$\mu A$
DC current gain	$h_{FE(1)}$	$V_{CE}=6V, I_C=2mA$	70		700	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=10mA$		0.1	0.25	V
Transition frequency	$f_T$	$V_{CE}=10V, I_C=1mA$	80			MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$		2.0	3.5	pF
Noise figure	NF	$V_{CE}=6V, I_C=0.1mA, f=1KHz, R_g=10K\Omega$		1.0	10	dB
$h_{FE}$ Linearity		$h_{FE}(0.1mA)/h_{FE}(2mA)$		0.95		

**CLASSIFICATION OF  $h_{FE(1)}$**

Rank		Y	GR	
Range		120-240	200-400	