

NPN Silicon Transistor

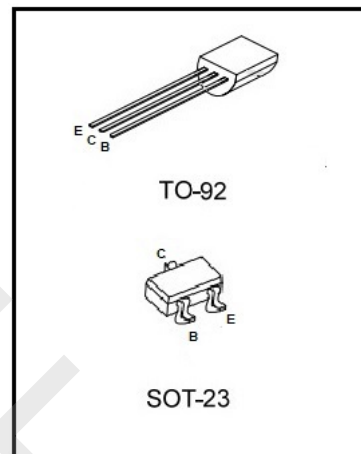
2SC3198

FEATURES

- Low Noise
- Complementary to 2SA1266
- Package: TO-92/SOT-23

Maximum Ratings (Ta = 25°)

Parameter	Symbol	Rating		Unit
Collector-base voltage	BV_{CBO}	50		V
Collector-emitter voltage	BV_{CEO}	50		V
Emitter-base voltage	BV_{EBO}	5		V
Collector current	I_C	150		mA
Emitter current	I_E	150		
Collector Power Dissipation	P_C	SOT-23	0.25	W
		TO-92	0.4	
Junction Temperature	T_j	125		°C
Storage Temperature	T_{stg}	-55~+125		°C



Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=100\mu A, I_E=0$	50			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=1mA, I_B=0$	50			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E=100\mu A, I_C=0$	5			V
collector-base cut-off current	I_{CBO}	$V_{CB}=50V, I_E=0$			0.1	μA
collector-emitter cut-off current	I_{CEO}	$V_{CE}=50V, I_B=0$			0.1	μA
emitter-base cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			0.1	μA
DC current gain	H_{FE}	$V_{CE}=6V, I_C=2mA$	70		400	
		$V_{CE}=6, I_C=150mA$	25			
collector-emitter saturation voltage	V_{CESAT}	$I_C=100mA, I_B=10mA$			-0.3	V
Base-Emitter Saturation Voltage	V_{BESAT}	$I_C=-100mA, I_B=-10mA$			-1.0	
Transition frequency	f_T	$V_{CE}=10V, I_C=1mA$	80			MHz
Output Capacitance	C_{OB}	$V_{CB}=10V, I_C=1mA, f=1MHz$			7	pF
Noise Figure	NF	$V_{CE}=6V, I_C=0.1mA, R_g=10K\Omega, f=1KHz$			10	dB

Classification of H_{FE}

Rank	2SC3198-O	2SC3198-Y	2SC3198-GR
Range	70-140	120-240	200-400