



# TO-92 Plastic-Encapsulate Transistors

## C3198 TRANSISTOR ( NPN )

### FEATURES

Power dissipation

$$P_{CM}: 0.625 \text{ W (Tamb=25}^{\circ}\text{C)}$$

Collector current

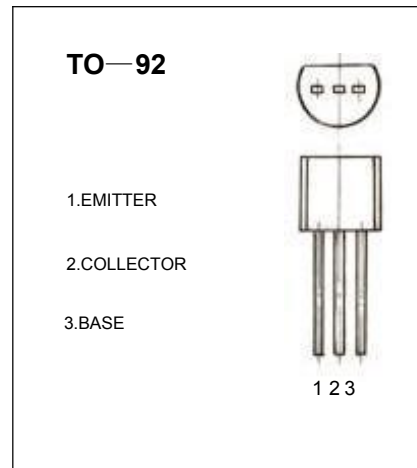
$$I_{CM}: 0.15 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: 60 \text{ V}$$

Operating and storage junction temperature range

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



### ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=0.1\text{mA}, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=5\text{mA}, I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=0.1\text{mA}, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=60\text{V}, I_E=0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5\text{V}, I_C=0$			0.1	$\mu\text{A}$
DC current gain(note)	$H_{FE(1)}$	$V_{CE}=6\text{V}, I_C=2\text{mA}$	70		700	
DC current gain(note)	$H_{FE(2)}$	$V_{CE}=6\text{V}, I_C=150\text{mA}$	25			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100\text{mA}, I_B=10\text{mA}$			0.25	V
Base-emitter voltage	$V_{BE}$	$I_C=100\text{mA}, I_B=10\text{mA}$			1	V
Transition frequency	$f_r$	$V_{CE}=10\text{V}, I_C=1\text{mA}$	80			MHz

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### CLASSIFICATION OF

$H_{FE(1)}$

Rank	O	Y	GR
Range	70-140	120-240	240-400