

## 2SC2230 TRANSISTOR (NPN)

### FEATURE

Power dissipation

$$P_{CM}: 0.8 \text{ W (Tamb=25°C)}$$

Collector current

$$I_{CM}: 0.1 \text{ A}$$

Collector-base voltage

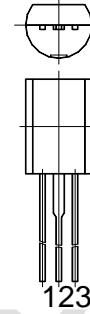
$$V_{(BR)CBO}: 200 \text{ V}$$

Operating and storage junction temperature range

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

### TO-92MOD

1. EMITTER
2. COLLECTOR
3. BASE



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

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100\mu A, I_E = 0$	200		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10 \text{ mA}, I_B = 0$	160		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10\mu A, I_C = 0$	5		V
Collector cut-off current	$I_{CBO}$	$V_{CB} = 200V, I_E = 0$		0.1	$\mu A$
Collector cut-off current	$I_{CER}$	$V_{CB} = 160V, R_{EB} = 10M\Omega$		10	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$		0.1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE} = 10V, I_C = 10mA$	120	400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 50 \text{ mA}, I_B = 5 \text{ mA}$		0.5	V
Base-emitter voltage	$V_{BE}$	$I_C = 1 \text{ mA}, V_{CE} = 10V$		0.7	V
Transition frequency	$f_T$	$V_{CE} = 10V, I_C = 10mA$	50		MHz

### CLASSIFICATION OF $h_{FE}$

Rank	Y	GR
Range	120-240	200-400