

# Transistors

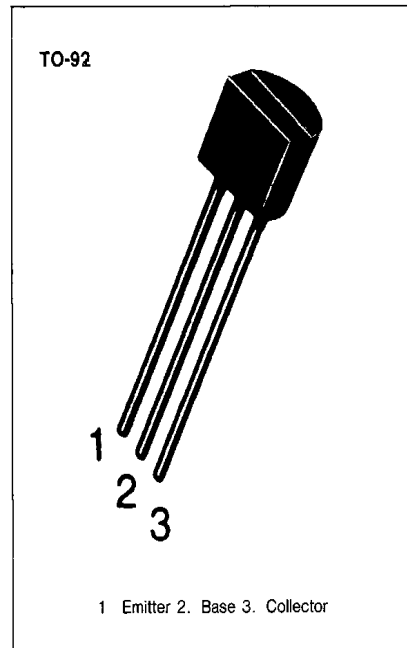
## 2SC838

### FM RADIO RF AMP, MIX, CONV, OSC, IF AMP

- High Current Gain Bandwidth Product  $f_T = 250\text{MHz}$  (Typ)

### ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CBO}$	35	V
Collector-Emitter Voltage	$V_{CEO}$	30	V
Emitter-Base Voltage	$V_{EBO}$	4	V
Collector Current	$I_C$	30	mA
Collector Dissipation	$P_C$	250	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 ~ 150	$^\circ\text{C}$



### ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C = 100\mu\text{A}, I_E = 0$	35			V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C = 5\text{mA}, I_B = 0$	30			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	4			V
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 30\text{V}, I_E = 0$			0.1	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 4\text{V}, I_C = 0$			0.1	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE} = 12\text{V}, I_C = 2\text{mA}$	40		240	
Base-Emitter On Voltage	$V_{BE}(\text{on})$	$V_{CE} = 6\text{V}, I_C = 1\text{mA}$	0.65	0.75	0.75	V
Collector-Emitter Saturation Voltage	$V_{CE}(\text{sat})$	$I_C = 10\text{mA}, I_B = 1\text{mA}$		0.1	0.4	V
Current Gain-Bandwidth Product	$f_T$	$V_{CE} = 10\text{V}, I_C = 1\text{mA}$	100	250		MHz
Output Capacitance	$C_{ob}$	$V_{CB} = 10\text{V}, I_E = 0$ $f = 1\text{MHz}$		2.0	3.2	pF

### $h_{FE}$ CLASSIFICATION

Classification	R	O	Y
$h_{FE}$	40-80	70-140	120-240



This datasheet has been downloaded from:

[www.DatasheetCatalog.com](http://www.DatasheetCatalog.com)

Datasheets for electronic components.



LittleDiode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

[LittleDiode.com](http://LittleDiode.com)

Looking forward to providing you with the best possible service.