

TO-92 Plastic-Encapsulate Transistors

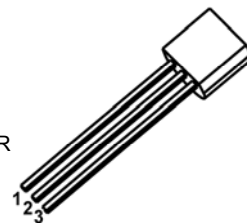
2SC1359 TRANSISTOR (NPN)

FEATURES

- Optimum for RF Amplification of FM/AM Radios.
- High Transition Frequency f_T .

TO - 92

1. EMITTER
2. COLLECTOR
3. BASE



MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	30	mA
P_C	Collector Power Dissipation	400	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	312	$^\circ\text{C/W}$
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 0.1\text{mA}, I_E = 0$	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, I_B = 0$	20			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}	$V_{CB} = 10\text{V}, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$			0.1	μA
DC current gain	h_{FE}	$V_{CE} = 10\text{V}, I_C = 1\text{mA}$	70		220	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 15\text{mA}, I_B = 1.5\text{mA}$			0.2	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 15\text{mA}, I_B = 1.5\text{mA}$			1.2	V
Transition frequency	f_T	$V_{CE} = 10\text{V}, I_C = 1\text{mA}, f = 200\text{MHz}$	150			MHz

CLASSIFICATION OF h_{FE}

RANK	B	C
RANGE	70-140	110-220