

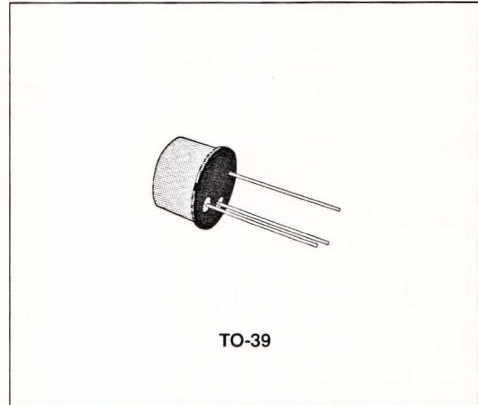


MEDIUM POWER AMPLIFIER

DESCRIPTION

The BC460 and BC461 are silicon planar epitaxial PNP transistors in TO-39 metal case. They are intended for general purpose applications, especially for driver stages.

The complementary NPN types are respectively the BC440 and BC441.



INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit
		BC460	BC461	
V_{CBO}	Collector-base Voltage ($I_E = 0$)	- 50	- 70	V
$V_{CEO(sus)}$	Collector-emitter Voltage ($I_B = 0$)	- 40	- 60	V
V_{CER}	Collector-emitter Voltage ($R_{BE} \leq 100 \Omega$)	- 50	- 70	V
V_{EBO}	Emitter-base Voltage ($I_C = 0$)	- 5		V
I_{CM}	Collector Peak Current	- 2		A
P_{tot}	Total Power Dissipation at $T_{amb} \leq 25^\circ C$ at $T_{case} \leq 25^\circ C$	1		W
		10		W
T_{stg}	Storage Temperature	- 65 to 200		$^\circ C$
T_j	Junction Temperature	200		$^\circ C$

THERMAL DATA

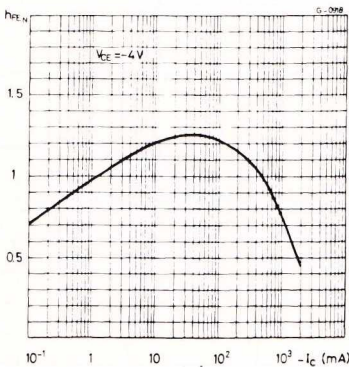
$R_{th\ j-case}$	Thermal Resistance Junction-case	Max	17.5	°C/W
$R_{th\ j-amb}$	Thermal Resistance Junction-ambient	Max	175	°C/W

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

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cutoff Current ($I_E = 0$)	$V_{CB} = -40\ V$			-100	nA
I_{CER}	Collector Cutoff Current ($R_{BE} = 100\ \Omega$)	For BC460 $V_{CE} = -50\ V$ For BC461 $V_{CE} = -70\ V$			-10 -10	μA μA
$V_{(BR)EBO}$	Emitter Base Breakdown Voltage ($I_C = 0$)	$I_E = -100\ \mu A$	-5			V
$V_{(BR)CEO}^*$	Collector-emitter Breakdown Voltage ($I_B = 0$)	$I_C = -10\ mA$ For BC460 For BC461	-40 -60			V V
$V_{CE(sat)}^*$	Collector-emitter Saturation Voltage	$I_C = -1\ A$ $I_B = -100\ mA$			-1	V
$V_{BE(sat)}^*$	Base-emitter Saturation Voltage	$I_C = -1\ A$ $I_B = -100\ mA$			-1.5	V
h_{FE}^*	DC Current Gain	Gr. 4 $I_C = -500\ mA$ $V_{CE} = -4\ V$ Gr.5 $I_C = -500\ mA$ $V_{CE} = -4\ V$ Gr.6 $I_C = -500\ mA$ $V_{CE} = -4\ V$ $I_C = -1\ A$ $V_{CE} = -2\ V$ (for BC460 only)	40 60 115 20		70 130 250	
f_T	Transition frequency	$I_C = -50\ mA$ $V_{CE} = -4\ V$	50			MHz

* Pulsed : pulse duration = 300 μs , duty cycle = 1 %.

DC Normalized Current Gain.



Collector-emitter Saturation Voltage.

