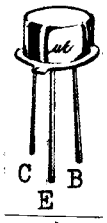
BC440 BC441 • BC460 BC461

COMPLEMENTARY SILICON AF MEDIUM POWER AMPLIFIERS & SWITCHES

MICRO ELECTRONICS

THE BC440, BC441, BC460, BC461 ARE SILICON PLANAR EPITAXIAL TRANSISTORS FOR AF DRIVERS AND OUTPUTS, AS WELL AS FOR SWITCHING APPLICATIONS UP TO 1 AMPERE. THE BC440, BC441 ARE NPN AND ARE COMPLEMENTARY TO THE PNP BC460, BC461 RESPECTIVELY.

CASE TO-39



ABSOLUTE MAXIMUM RATINGS

For p-n-p devices, voltage and current values are negative.

		BC440(NPN) BC460(PNP)	BC441(NPN) BC461(PNP)
Collector-Emitter Voltage ($R_{BE} \leq 100\Omega$)	V_{CER}	50V	75V
Collector-Emitter Voltage ($I_B=0$)	V_{CEO}	40V	60V
Emitter-Base Voltage	V_{EBO}	5V	5V
Collector Current	I_C	1A	
Collector Peak Current	I_{CM}	2A	
Total Power Dissipation ($T_C \leq 25^oC$, $V_{CE} \leq 10V$)	P_{tot}	10W	
($T_A \leq 25^oC$)		1W	
Operating Junction & Storage Temperature	T_j, T_{stg}	-55 to 200°C	

ELECTRICAL CHARACTERISTICS ($T_A=25^oC$ unless otherwise noted)

PARAMETER	SYMBOL	BC440 BC460 MIN	BC440 BC460 MAX	BC441 BC461 MIN	BC441 BC461 MAX	UNIT	TEST CONDITIONS
Collector-Emitter Breakdown Voltage	LV_{CEO} *	40		60		V	I_C=100mA I_B=0
Emitter-Base Breakdown Voltage	BV_{EBO}	5		5		V	I_E=0.1mA I_C=0
Collector Cutoff Current	I_{CBO}		100		100	nA	V_{CB}=40V I_E=0
Collector Cutoff Current	I_{CER}		10			µA	V_{CE}=50V R_{BE}=100Ω
					10	µA	V_{CE}=70V R_{BE}=100Ω
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$*		1		1	V	I_C=1A I_B=0.1A
Base-Emitter Saturation Voltage	$V_{BE(sat)}$*		1.5		1.5	V	I_C=1A I_B=0.1A
D.C. Current Gain	H_{FE} *	40	250	40	250	V	I_C=500mA V_{CE}=4V
Group 4		40	70	40	70		
Group 5		60	130	60	130		
Group 6		115	250	115	250		
		20					I_C=1A V_{CE}=2V
Current Gain-Bandwidth Product	f_T	50		50		MHz	IC=50mA VCE=4V
Collector-Base Capacitance	Cob		25		25	pF	V_{CB}=10V I_E=0 f=1MHz

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* Pulse Test : Pulse Width=0.3mS, Duty Cycle=1%

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TYPICAL CHARACTERISTICS