



BD 241 · BD 241A · BD 241B

NPN SILICON EPITAXIAL BASE POWER TRANSISTORS

MICRO ELECTRONICS

CASE TO-220B

THE BD 241, BD 241A AND BD 241B ARE NPN SILICON EPITAXIAL BASE POWER TRANSISTORS DESIGNED FOR SWITCHING, DRIVER AND OUTPUT STAGES IN AUDIO AMPLIFIERS. THE BD 241, BD 241A AND BD 241B ARE COMPLEMENTARY TO BD 242, BD 242A AND BD 242B RESPECTIVELY.

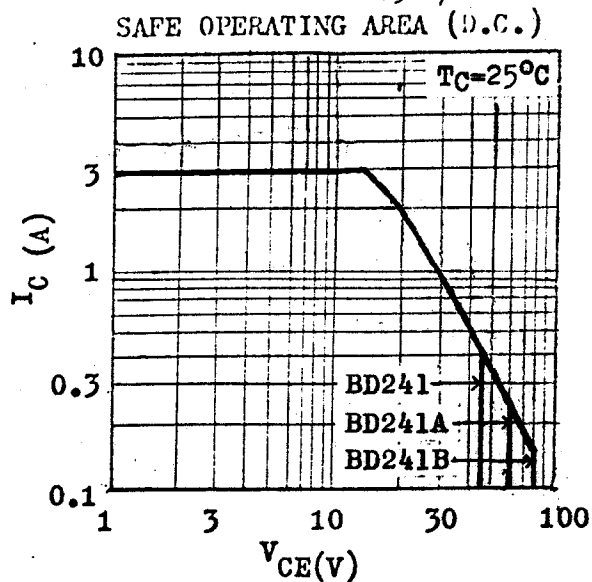
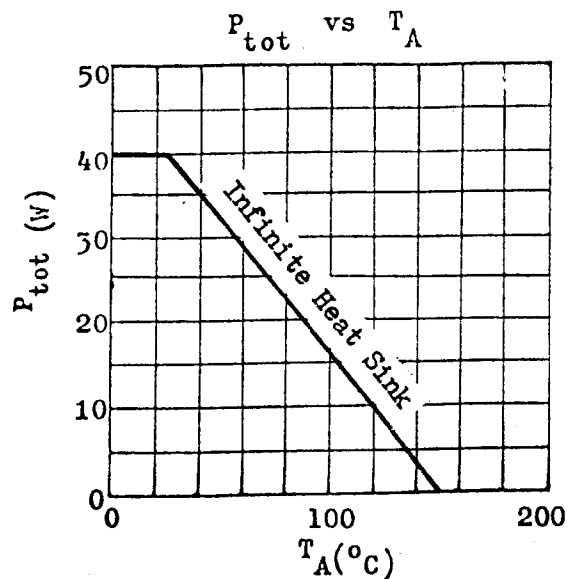


ABSOLUTE MAXIMUM RATINGS

		BD241	BD241A	BD241B
Collector-Emitter Voltage ($R_{BE}=100\Omega$)	V_{CER}	55V	70V	90V
Collector-Emitter Voltage ($I_B=0$)	V_{CEO}	45V	60V	80V
Emitter-Base Voltage	V_{EBO}		5V	
Collector Current	I_C		3A	
Base Current	I_B		1A	
Total Power Dissipation @ $T_C \leq 25^\circ C$	P_{tot}		40W	
@ $T_A \leq 25^\circ C$			2W	
Junction and Storage Temperature	T_j, T_{stg}		-55 to +150°C	

THERMAL RESISTANCE

Junction to Case	θ_{jc}	3.12°C/W	max.
Junction to Ambient	θ_{ja}	62.5°C/W	max.



MICRO ELECTRONICS LTD.

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ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

PARAMETER	SYMBOL	MIN	MAX	UNIT	TEST CONDITIONS
Collector-Emitter Breakdown Voltage	V_{CE0}^*				$I_C=30mA$ $I_B=0$
BD241		45		V	
BD241A		60		V	
BD241B		80		V	
Collector Cutoff Current	I_{CEO}				
BD241, BD241A			0.3	mA	$V_{CE}=30V$ $I_B=0$
BD241B			0.3	mA	$V_{CE}=60V$ $I_B=0$
Collector Cutoff Current	I_{CES}				
BD241			0.2	mA	$V_{CE}=45V$ $V_{BE}=0$
BD241A			0.2	mA	$V_{CE}=60V$ $V_{BE}=0$
BD241B			0.2	mA	$V_{CE}=80V$ $V_{BE}=0$
Emitter Cutoff Current	I_{EBO}		1	mA	$V_{EB}=5V$ $I_C=0$
Base-Emitter Voltage	V_{BE}^*		1.8	V	$I_C=3A$ $V_{CE}=4V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}^*$		1.2	V	$I_C=3A$ $I_B=0.6A$
D.C. Current Gain	H_{FE}^*	25			$I_C=1A$ $V_{CE}=4V$
		10			$I_C=3A$ $V_{CE}=4V$
Small Signal Current Gain	h_{fe}	20			$I_C=0.5A$ $V_{CE}=10V$ $f=1kHz$
Current Gain-Bandwidth Product	f_T	3		MHz	$I_C=0.5A$ $V_{CE}=10V$

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

