



BD 242 · BD 242A · BD 242B

PNP SILICON EPITAXIAL BASE POWER TRANSISTORS

MICRO ELECTRONICS

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

CASE TO-220B

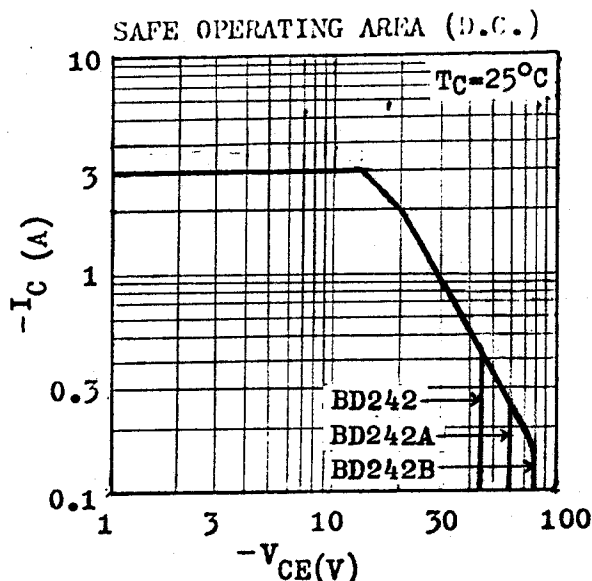
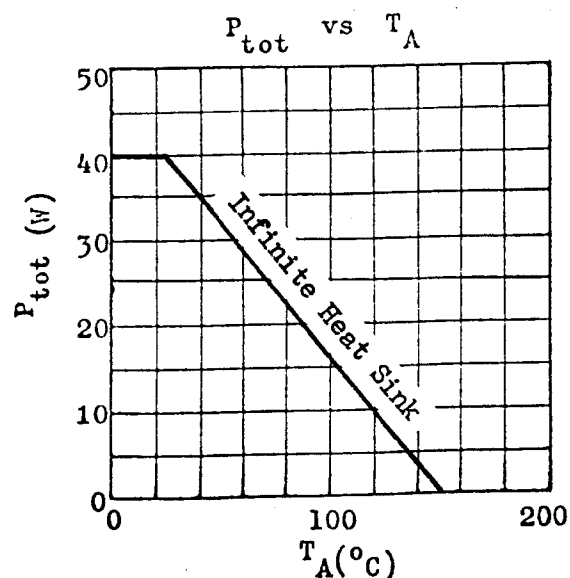


ABSOLUTE MAXIMUM RATINGS

		BD242	BD242A	BD242B
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 @ $T_C \leq 25^\circ\text{C}$	P_{tot}		40W	
			2W	
Junction and Storage Temperature	T_j, T_{stg}		-55 to $+150^\circ\text{C}$	

THERMAL RESISTANCE

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

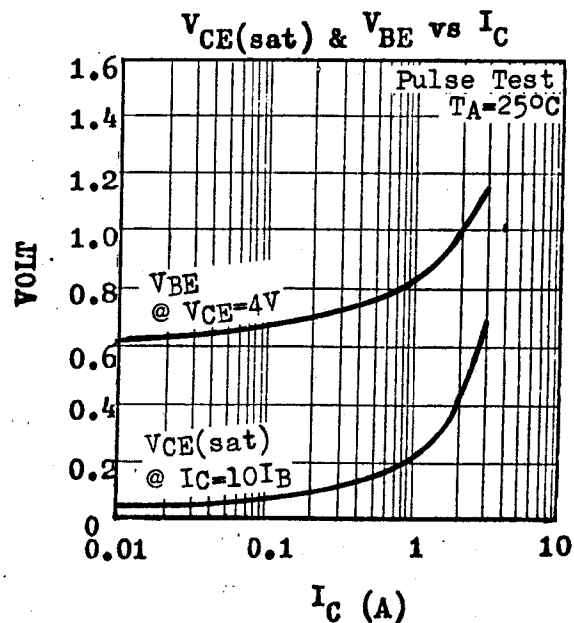
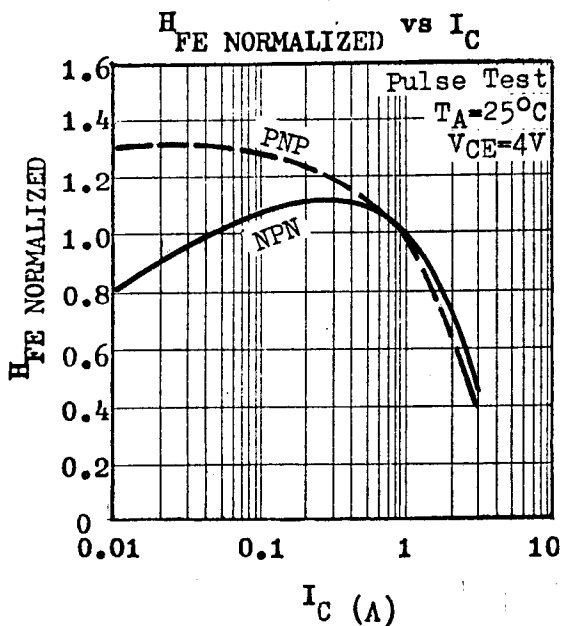


MICRO ELECTRONICS LTD.

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PARAMETER	SYMBOL	BD240C		BD242C		UNIT	TEST CONDITIONS
		MIN	MAX	MIN	MAX		
Collector-Emitter Breakdown Voltage	$V_{CER} *$	115		115		V	$I_C=30mA$ $R_{BE}=100\Omega$
Collector-Emitter Breakdown Voltage	$V_{CEO} *$	100		100		V	$I_C=30mA$ $I_B=0$
Collector Cutoff Current	I_{CEO}		0.3		0.3	mA	$V_{CE}=60V$ $I_B=0$
Collector Cutoff Current	I_{CES}		0.2		0.2	mA	$V_{CE}=100V$ $V_{BE}=0$
Emitter Cutoff Current	I_{EBO}		1		1	mA	$V_{EB}=5V$ $I_C=0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)} *$	0.7		1.2		V	$I_C=1A$ $I_B=0.2A$
						V	$I_C=3A$ $I_B=0.6A$
Base-Emitter Voltage	$V_{BE} *$	1.3		1.8		V	$I_C=1A$ $V_{CE}=4V$
						V	$I_C=3A$ $V_{CE}=4V$
D.C. Current Gain	$H_{FE} *$	40					$I_C=0.2A$ $V_{CE}=4V$
		15		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	$I_C=0.2A$ $V_{CE}=10V$
				3		MHz	$I_C=0.5A$ $V_{CE}=10V$

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



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