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 SATAGES 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

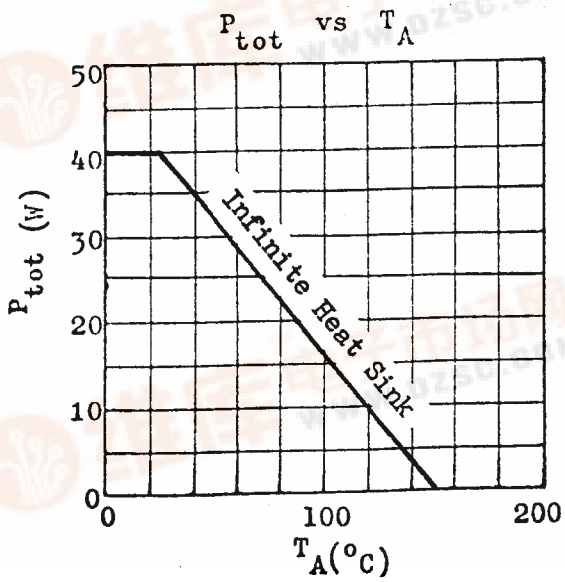
BCE

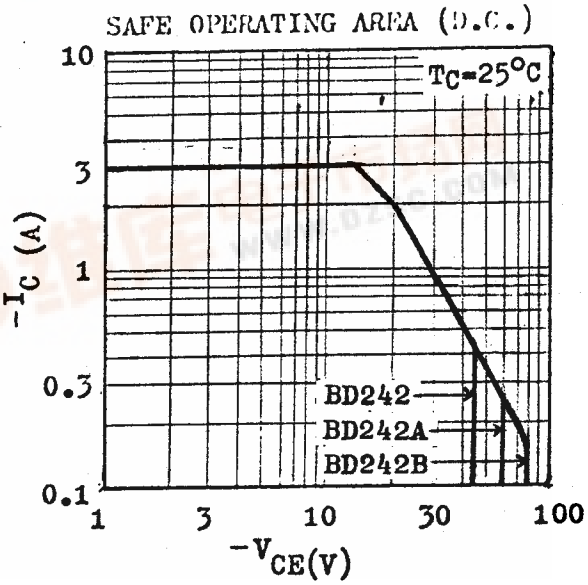
ABSOLUTE MAXIMUM RATINGS

		BD242	BD242A	BD242B
Collector-Emitter Voltage (R_{BE}=100Ω)	$-V_{CER}$	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 @ $T_C \leq 25^oC$	P_{tot}		40W	
@ $T_A \leq 25^oC$			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.





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PARAMETER	SYMBOL	BD240C MIN	BD240C MAX	BD242C MIN	BD242C MAX	UNIT	TEST CONDTIONS
Collector-Emitter Breakdown Voltage	LV_{CER} *	115		115		V	I_C=30mA R_{BE}=100Ω
Collector-Emitter Breakdown Voltage	LV_{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			V	I_C=1A I_B=0.2A
					1.2	V	I_C=3A I_B=0.6A
Base-Emitter Voltage	V_{BE} *		1.3			V	I_C=1A V_{CE}=4V
					1.8	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%