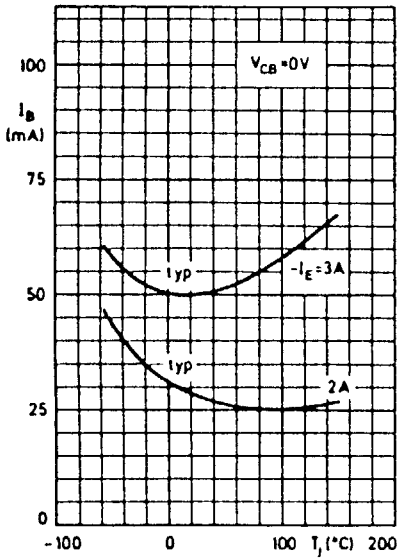
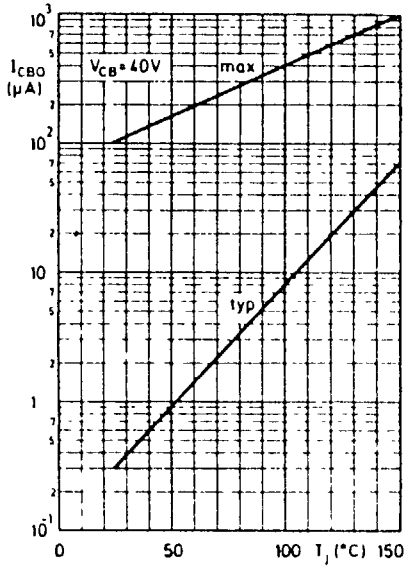
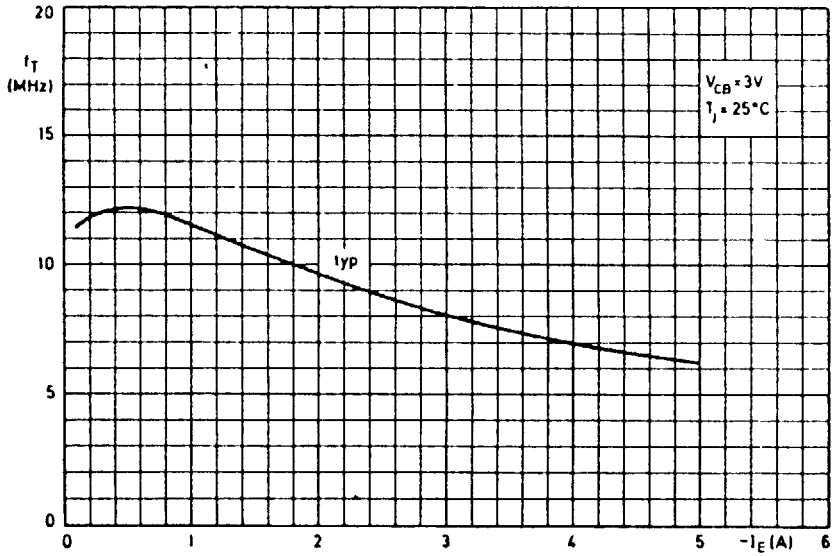






N-P-N SILICON EPITAXIAL-BASE A.F. POWER TRANSISTORS

BD201 BD203

N-P-N silicon epitaxial-base power transistors in a plastic envelope. With their p-n-p complements BD202 and BD204 they are primarily intended for use in hi-fi equipment delivering an output of 15 to 25W into 4 or 8Ω load.

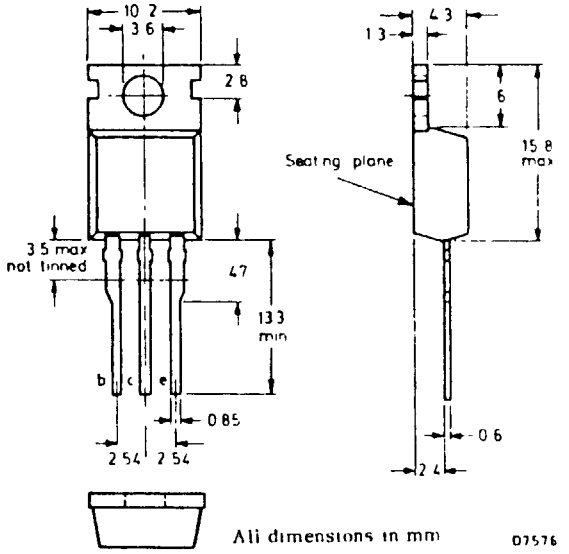
QUICK REFERENCE DATA

			BD201	BD203	
V_{CBO}	max.		60	60	V
V_{CEO}	max.		45	60	V
I_C	max.		8.0	8.0	A
P_{tot}	max.	($T_{mb} \leq 25°C$)	60	60	W
T_j	max.		150	150	°C
h_{FE}	min.	(I_C = 3A, V_{CE} = 2V)	30	-	
		(I_C = 2A, V_{CE} = 2V)	-	30	
f_{hfe}	min.	(I_C = 0.3A, V_{CE} = 3V)	25	25	kHz

Unless otherwise stated data are applicable to both types.

OUTLINE AND DIMENSIONS Similar to I.E.D.E.C. TO-220

Collector connected to the metal part of the mounting surface.



All dimensions in mm

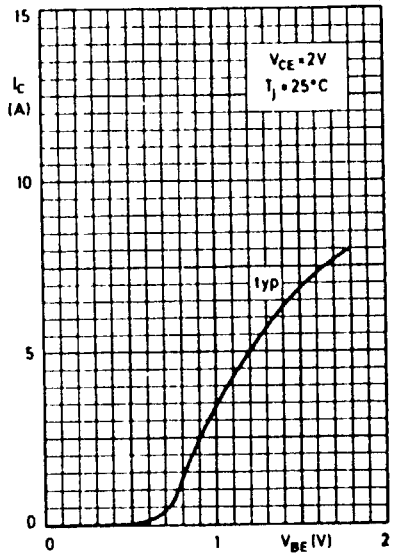
D7576

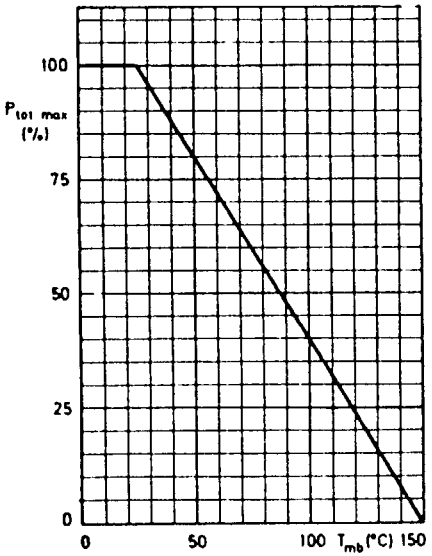
Accessories available 56338(insulating bush), 56325(mica washer)

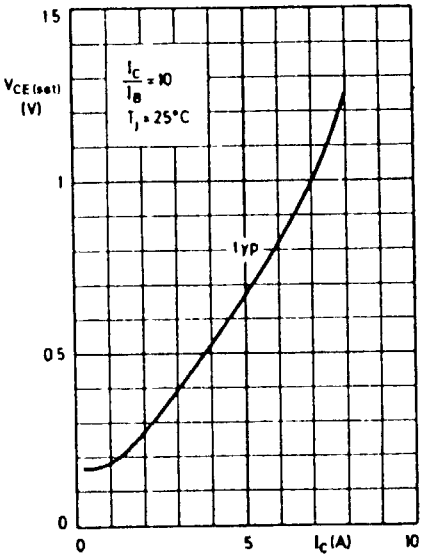
SEMELAB

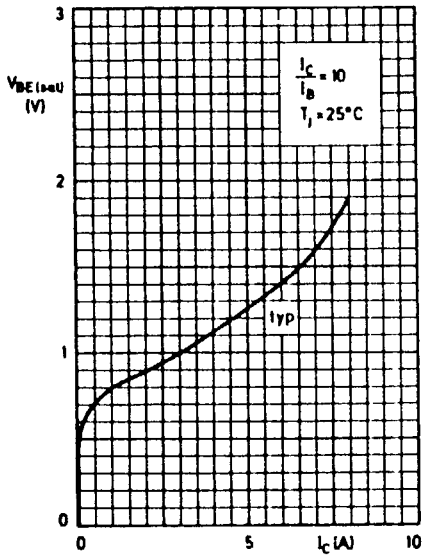
N-P-N SILICON EPITAXIAL-BASE A.F. POWER TRANSISTORS

BD201 BD203









RATINGS

Limiting values of operation according to the absolute maximum system

Electrical

		BD201	BD203	
V_{CBO}	max.	60	60	V
V_{CEO}	max.	45	60	V
V_{EBO}	max.	5.0	5.0	V
I_C	max. (d.c.)	8.0	8.0	A
I_{CM}	max. (peak value, $t_p \leq 10ms$)	12	12	A
I_{CSM}	max. (non-repetitive peak value, $t_p \leq 2ms$)	25	25	A
P_{tot}	max. ($T_{mb} \leq 25^oC$)	60	60	W

Temperature

T_{stg}		-65 to +150	^oC
T_j	max.	150	^oC

THERMAL CHARACTERISTICS

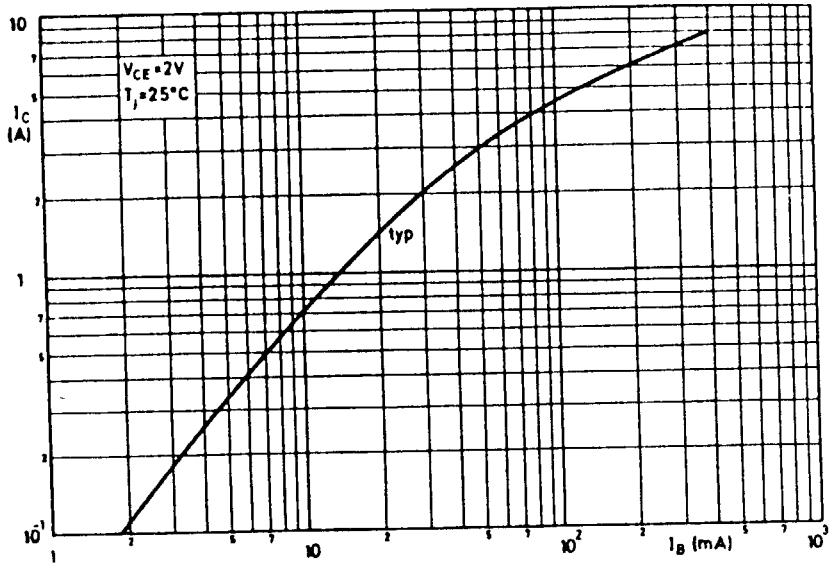
$R_{th(j\text{-}mb)}$		2.0	$^oC/W$

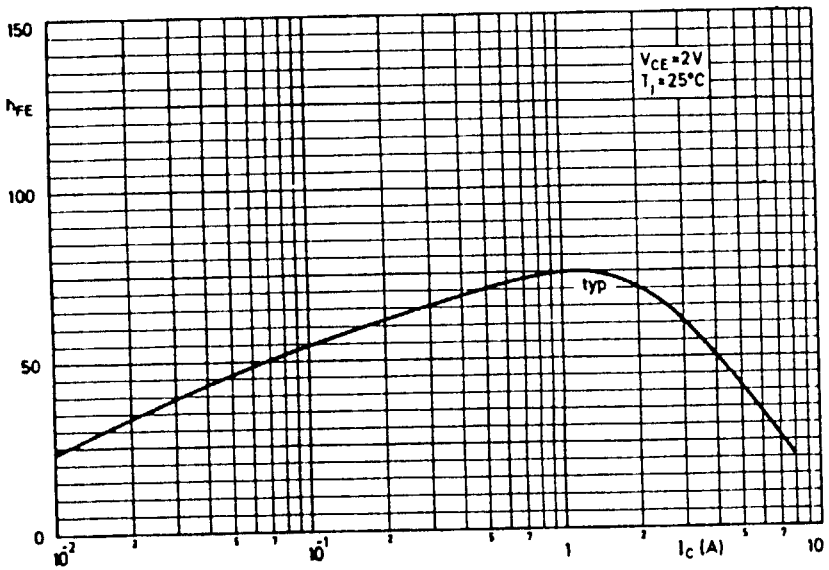
ELECTRICAL CHARACTERISTICS (T_j = 25°C unless otherwise stated)

		Min.	Typ.	Max.	
	Collector cut-off current				
I_{CEO}	I_B = 0, V_{CE} = 30V	-	-	1.0	mA
I_{CBO}	I_E = 0, V_{CB} = 40V, T_j = 150°C	-	-	1.0	mA
I_{EBO}	Emitter cut-off current				
	I_C = 0, V_{EB} = 5V	-	-	5.0	mA
*V_{BE}	Base-emitter voltage				
	I_C = 3A, V_{CE} = 2V	-	-	1.5	V
*V_{CEK}	Knee voltage				
	I_C = 3A, I_B = the value for which I_C = 3.3A at V_{CE} = 2V		1.0		V
*$V_{CE(sat)}$	Collector-emitter saturation voltage				
	I_C = 3A, I_B = 0.3A	-	-	1.0	V

*Measured with pulses of 300μs and with 2% duty cycle.

SEMELAB





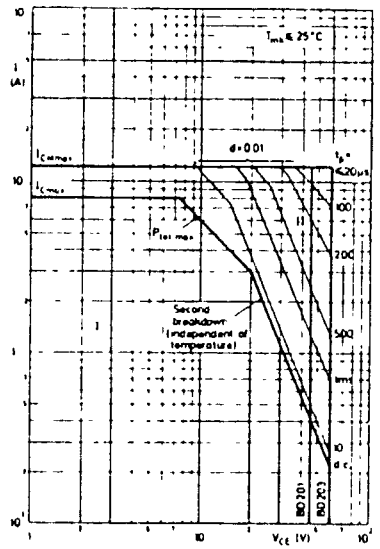
N-P-N SILICON EPITAXIAL-BASE A.F. POWER TRANSISTORS

BD201 BD203

ELECTRICAL CHARACTERISTICS (Cont'd)

		Min.	Typ.	Max.	
$*h_{FE}$	Static forward current transfer ratio				
	I_C = 1A, V_{CE} = 2V	30	-	-	
	I_C = 3A, V_{CE} = 2V BD201	30	-	-	
	I_C = 2A, V_{CE} = 2V BD203	30	-	-	
f_{hfe}	Cut-off frequency				
	I_C = 0.3A, V_{CE} = 3V	25	-	-	kHz
f_T	Transition frequency				
	I_C = 0.3A, V_{CE} = 3V, f = 1MHz	3.0	-	-	MHz

*Measured with pulses of 300μs and with 2% duty cycle.



SAFE OPERATING AREAS WITH THE TRANSISTOR FORWARD BIASED

I Region of permissible d.c. operation

II Permissible extension for repetitive pulse operation

(for P_{tot} max. versus T_{mb} see page 7)

SEMELAB

N-P-N SILICON EPITAXIAL-BASE A.F. POWER TRANSISTORS

BD201
BD203