

阅读申明

- 1.本站收集的数据手册和产品资料都来自互联网，版权归原作者所有。如读者和版权方有任何异议请及时告之，我们将妥善解决。
- 2.本站提供的中文数据手册是英文数据手册的中文翻译，其目的是协助用户阅读，该译文无法自动跟随原稿更新，同时也可能存在翻译上的不当。建议读者以英文原稿为参考以便获得更精准的信息。
- 3.本站提供的产品资料，来自厂商的技术支持或者使用者的心得体会等，其内容可能存在描述上的差异，建议读者做出适当判断。
- 4.如需与我们联系，请发邮件到marketing@iczoom.com，主题请标有“数据手册”字样。

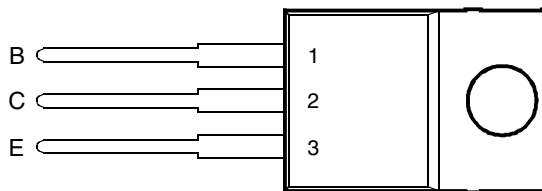
Read Statement

1. The datasheets and other product information on the site are all from network reference or other public materials, and the copyright belongs to the original author and original published source. If readers and copyright owners have any objections, please contact us and we will deal with it in a timely manner.
2. The Chinese datasheets provided on the website is a Chinese translation of the English datasheets. Its purpose is for reader's learning exchange only and do not involve commercial purposes. The translation cannot be automatically updated with the original manuscript, and there may also be improper translations. Readers are advised to use the English manuscript as a reference for more accurate information.
3. All product information provided on the website refer to solutions from manufacturers' technical support or users the contents may have differences in description, and readers are advised to take the original article as the standard.
4. If you have any questions, please contact us at marketing@iczoom.com and mark the subject with "Datasheets" .



- Designed for Complementary Use with BDX33, BDX33A, BDX33B, BDX33C and BDX33D
- 70 W at 25°C Case Temperature
- 10 A Continuous Collector Current
- Minimum h_{FE} of 750 at 3V, 3 A

TO-220 PACKAGE
(TOP VIEW)



Pin 2 is in electrical contact with the mounting base.

MDTRACA



This series is currently available, but not recommended for new designs.

absolute maximum ratings at 25°C case temperature (unless otherwise noted)

RATING		SYMBOL	VALUE	UNIT
Collector-base voltage ($I_E = 0$)	BDX34	V_{CBO}	-45	V
	BDX34A		-60	
	BDX34B		-80	
	BDX34C		-100	
	BDX34D		-120	
Collector-emitter voltage ($I_B = 0$)	BDX34	V_{CEO}	-45	V
	BDX34A		-60	
	BDX34B		-80	
	BDX34C		-100	
	BDX34D		-120	
Emitter-base voltage		V_{EBO}	-5	V
Continuous collector current		I_C	-10	A
Continuous base current		I_B	-0.3	A
Continuous device dissipation at (or below) 25°C case temperature (see Note 1)		P_{tot}	70	W
Continuous device dissipation at (or below) 25°C free air temperature (see Note 2)		P_{tot}	2	W
Operating free air temperature range		T_J	-65 to +150	°C
Storage temperature range		T_{stg}	-65 to +150	°C
Operating free-air temperature range		T_A	-65 to +150	°C

NOTES: 1. Derate linearly to 150°C case temperature at the rate of 0.56 W/°C.
2. Derate linearly to 150°C free air temperature at the rate of 16 mW/°C.

PRODUCT INFORMATION

electrical characteristics at 25°C case temperature (unless otherwise noted)

PARAMETER	TEST CONDITIONS		MIN	TYP	MAX	UNIT		
$V_{(BR)CEO}$ Collector-emitter breakdown voltage	$I_C = -100 \text{ mA}$	$I_B = 0$ (see Note 3)	BDX34	-45			V	
			BDX34A	-60				
			BDX34B	-80				
			BDX34C	-100				
			BDX34D	-120				
I_{CEO} Collector-emitter cut-off current	$V_{CE} = -30 \text{ V}$	$I_B = 0$	BDX34			-0.5	mA	
			BDX34A			-0.5		
			BDX34B			-0.5		
			BDX34C			-0.5		
			BDX34D			-0.5		
			BDX34	$T_C = 100^\circ\text{C}$				-10
			BDX34A	$T_C = 100^\circ\text{C}$				-10
			BDX34B	$T_C = 100^\circ\text{C}$				-10
			BDX34C	$T_C = 100^\circ\text{C}$				-10
			BDX34D	$T_C = 100^\circ\text{C}$				-10
I_{CBO} Collector cut-off current	$V_{CB} = -45 \text{ V}$	$I_E = 0$	BDX34			-1	mA	
			BDX34A			-1		
			BDX34B			-1		
			BDX34C			-1		
			BDX34D			-1		
			BDX34	$T_C = 100^\circ\text{C}$				-5
			BDX34A	$T_C = 100^\circ\text{C}$				-5
			BDX34B	$T_C = 100^\circ\text{C}$				-5
			BDX34C	$T_C = 100^\circ\text{C}$				-5
			BDX34D	$T_C = 100^\circ\text{C}$				-5
I_{EBO} Emitter cut-off current	$V_{EB} = -5 \text{ V}$	$I_C = 0$			-10	mA		
h_{FE} Forward current transfer ratio	$V_{CE} = -3 \text{ V}$	$I_C = -4 \text{ A}$	BDX34	750				
			BDX34A	750				
			BDX34B	750				
			BDX34C	750				
			BDX34D	750				
$V_{BE(on)}$ Base-emitter voltage	$V_{CE} = -3 \text{ V}$	$I_C = -4 \text{ A}$	BDX34			-2.5	V	
			BDX34A			-2.5		
			BDX34B	(see Notes 3 and 4)				-2.5
			BDX34C			-2.5		
			BDX34D			-2.5		
$V_{CE(sat)}$ Collector-emitter saturation voltage	$I_B = -8 \text{ mA}$	$I_C = -4 \text{ A}$	BDX34			-2.5	V	
			BDX34A			-2.5		
			BDX34B	(see Notes 3 and 4)				-2.5
			BDX34C			-2.5		
			BDX34D			-2.5		
V_{EC} Parallel diode forward voltage	$I_E = -8 \text{ A}$	$I_B = 0$			-4	V		

NOTES: 3. These parameters must be measured using pulse techniques, $t_p = 300 \mu\text{s}$, duty cycle $\leq 2\%$.

4. These parameters must be measured using voltage-sensing contacts, separate from the current carrying contacts.

PRODUCT INFORMATION



thermal characteristics

PARAMETER		MIN	TYP	MAX	UNIT
$R_{\theta JC}$	Junction to case thermal resistance			1.78	°C/W
$R_{\theta JA}$	Junction to free air thermal resistance			62.5	°C/W

resistive-load-switching characteristics at 25°C case temperature

PARAMETER	TEST CONDITIONS †			MIN	TYP	MAX	UNIT
t_{on} Turn-on time	$I_C = -3$ A	$I_{B(on)} = -12$ mA	$I_{B(off)} = 12$ mA		1		μs
t_{off} Turn-off time	$V_{BE(off)} = 3.5$ V	$R_L = 10$ Ω	$t_p = 20$ μs, dc ≤ 2%		5		μs

† Voltage and current values shown are nominal; exact values vary slightly with transistor parameters.

PRODUCT INFORMATION

TYPICAL CHARACTERISTICS

TYPICAL DC CURRENT GAIN
VS
COLLECTOR CURRENT

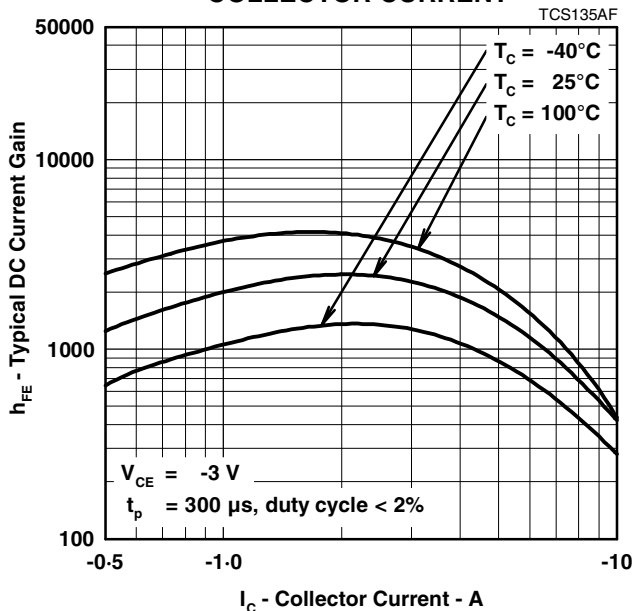


Figure 1.

COLLECTOR-EMITTER SATURATION VOLTAGE
VS
COLLECTOR CURRENT

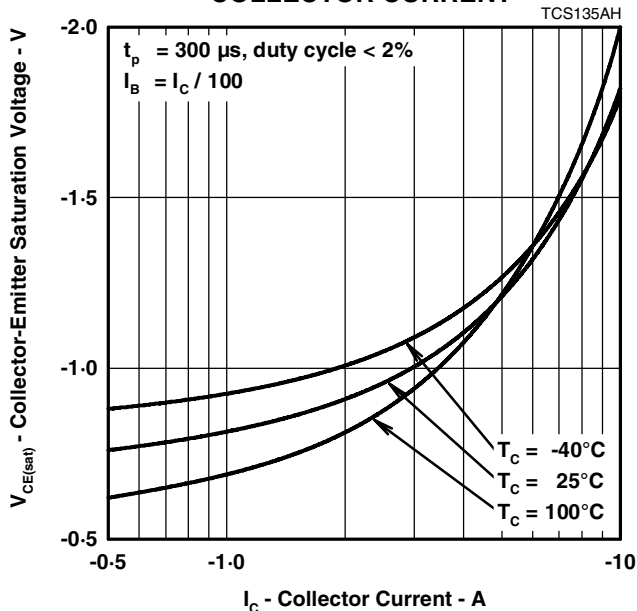


Figure 2.

BASE-EMITTER SATURATION VOLTAGE
VS
COLLECTOR CURRENT

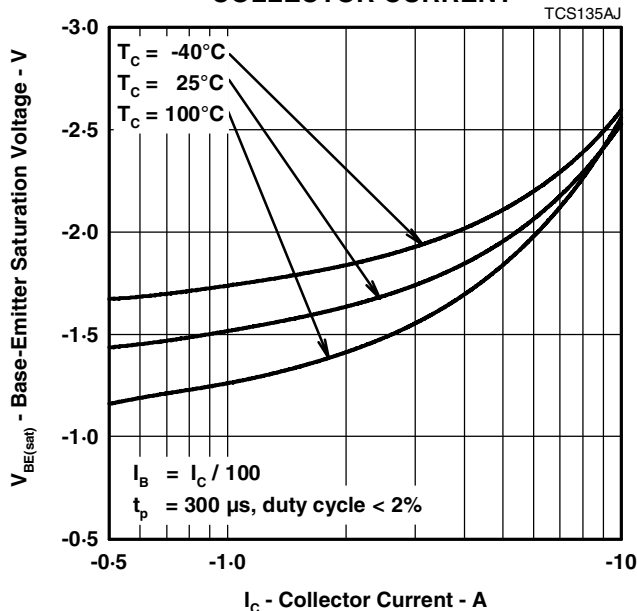


Figure 3.

PRODUCT INFORMATION

THERMAL INFORMATION

**MAXIMUM POWER DISSIPATION
vs
CASE TEMPERATURE**

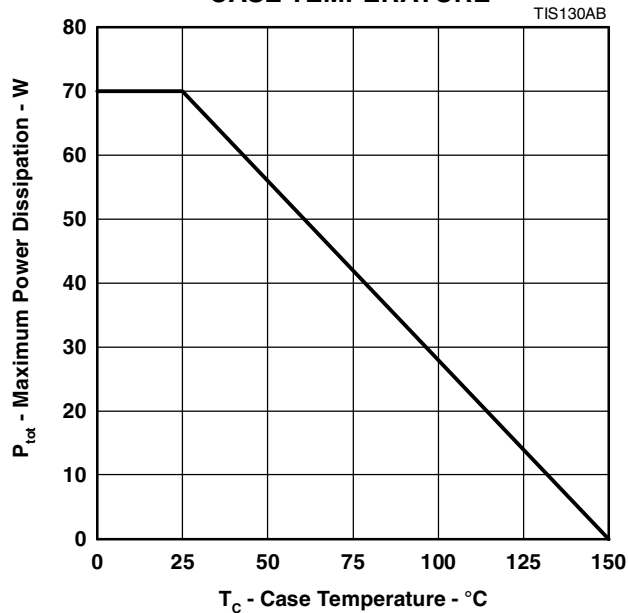


Figure 4.

PRODUCT INFORMATION