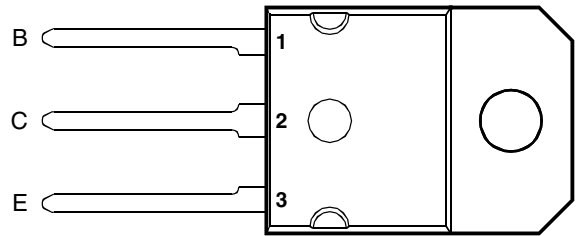




- Rugged Triple-Diffused Planar Construction
- 900 Volt Blocking Capability

SOT-93 PACKAGE
(TOP VIEW)



Pin 2 is in electrical contact with the mounting base.

MDTRAAA

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

RATING		SYMBOL	VALUE	UNIT
Collector-base voltage ($I_E = 0$)	BU426	V_{CB0}	800	V
	BU426A		900	
Collector-emitter voltage ($V_{BE} = 0$)	BU426	V_{CES}	800	V
	BU426A		900	
Collector-emitter voltage ($I_B = 0$)	BU426	V_{CEO}	375	V
	BU426A		400	
Continuous collector current		I_C	6	A
Peak collector current (see Note 1)		I_{CM}	10	A
Continuous base current		I_B	+2, -0.1	A
Peak base current (see Note 1)		I_{BM}	± 3	A
Continuous device dissipation at (or below) 50°C case temperature		P_{tot}	70	W
Operating junction temperature range		T_j	-65 to +150	°C
Storage temperature range		T_{stg}	-65 to +150	°C

NOTE 1: This value applies for $t_p \leq 2$ ms, duty cycle $\leq 2\%$.

PRODUCT INFORMATION

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

PARAMETER	TEST CONDITIONS			MIN	TYP	MAX	UNIT
$V_{CEO(sus)}$ Collector-emitter sustaining voltage	$I_C = 100 \text{ mA}$	$L = 25 \text{ mH}$	(see Note 2)	BU426 BU426A	375 400		V
I_{CES} Collector-emitter cut-off current	$V_{CE} = 800 \text{ V}$	$V_{BE} = 0$		BU426		1	mA
	$V_{CE} = 900 \text{ V}$	$V_{BE} = 0$		BU426A		1	
	$V_{CE} = 800 \text{ V}$	$V_{BE} = 0$	$T_C = 125^\circ\text{C}$	BU426		2	
	$V_{CE} = 900 \text{ V}$	$V_{BE} = 0$	$T_C = 125^\circ\text{C}$	BU426A		2	
I_{EBO} Emitter cut-off current	$V_{EB} = 10 \text{ V}$	$I_C = 0$				10	mA
h_{FE} Forward current transfer ratio	$V_{CE} = 5 \text{ V}$	$I_C = 0.6 \text{ A}$	(see Notes 3 and 4)		30	60	
$V_{CE(sat)}$ Collector-emitter saturation voltage	$I_B = 0.5 \text{ A}$	$I_C = 2.5 \text{ A}$	(see Notes 3 and 4)			1.5	V
	$I_B = 1.25 \text{ A}$	$I_C = 4 \text{ A}$				3	
$V_{BE(sat)}$ Base-emitter saturation voltage	$I_B = 0.5 \text{ A}$	$I_C = 2.5 \text{ A}$	(see Notes 3 and 4)			1.4	V
	$I_B = 1.25 \text{ A}$	$I_C = 4 \text{ A}$				1.6	

- NOTES: 2. Inductive loop switching measurement.
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.

thermal characteristics

PARAMETER	MIN	TYP	MAX	UNIT
$R_{\theta JC}$ Junction to case thermal resistance			1.1	$^\circ\text{C/W}$

resistive-load-switching characteristics at 25°C case temperature (unless otherwise noted)

PARAMETER	TEST CONDITIONS †			MIN	TYP	MAX	UNIT
t_{on} Turn on time	$I_C = 2.5 \text{ A}$ $V_{CC} = 250 \text{ V}$	$I_{B(on)} = 0.5 \text{ A}$ (see Figures 1 and 2)	$I_{B(off)} = -1 \text{ A}$		0.3	0.6	μs
t_s Storage time					2	3.5	μs
t_f Fall time					0.15		μs
t_f Fall time	$I_C = 2.5 \text{ A}$ $V_{CC} = 250 \text{ V}$	$I_{B(on)} = 0.5 \text{ A}$ $T_C = 95^\circ\text{C}$	$I_{B(off)} = -1 \text{ A}$		0.2	0.75	μs

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

PARAMETER MEASUREMENT INFORMATION

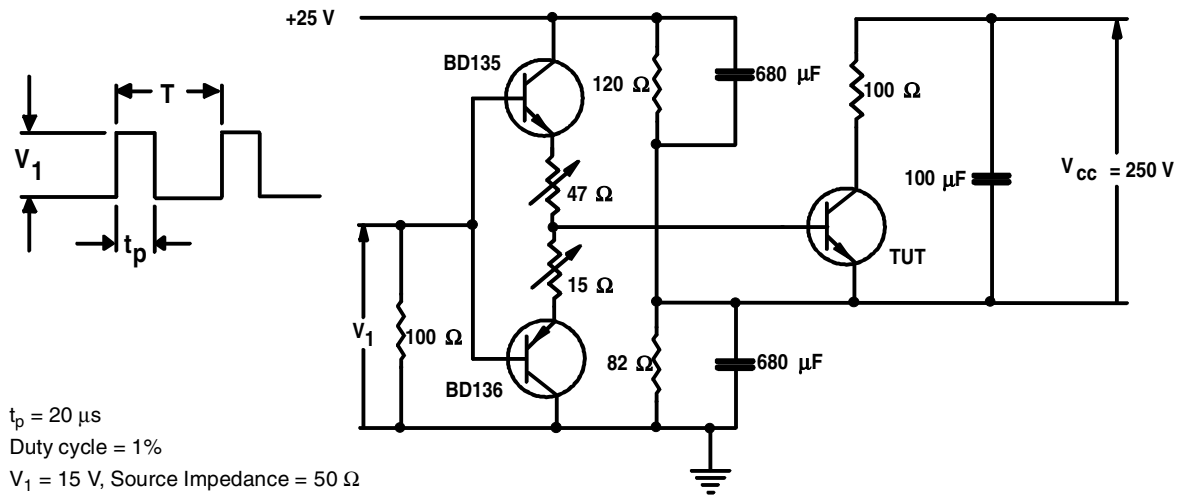


Figure 1. Resistive-Load Switching Test Circuit

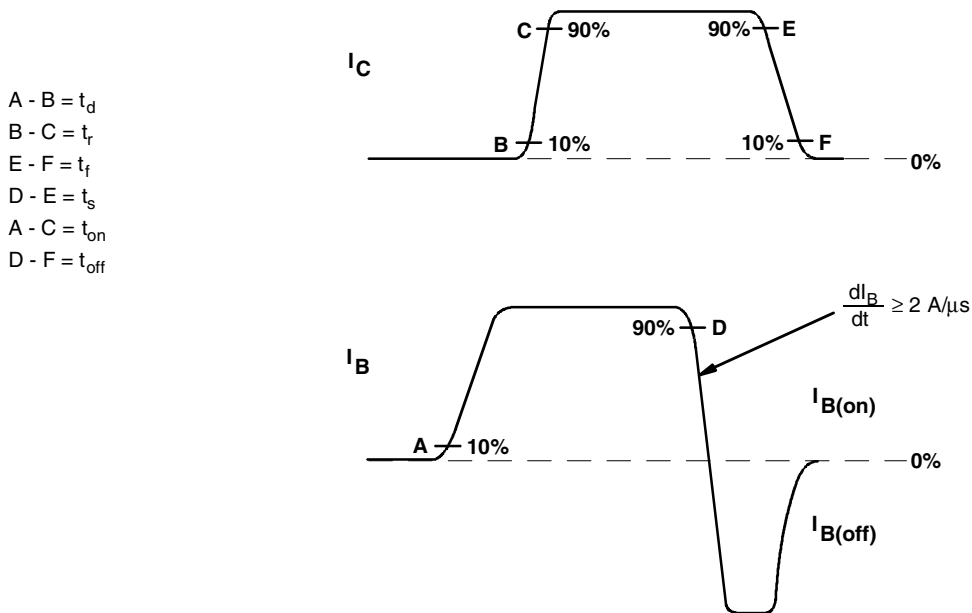


Figure 2. Resistive-Load Switching Waveforms

PRODUCT INFORMATION

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TYPICAL CHARACTERISTICS

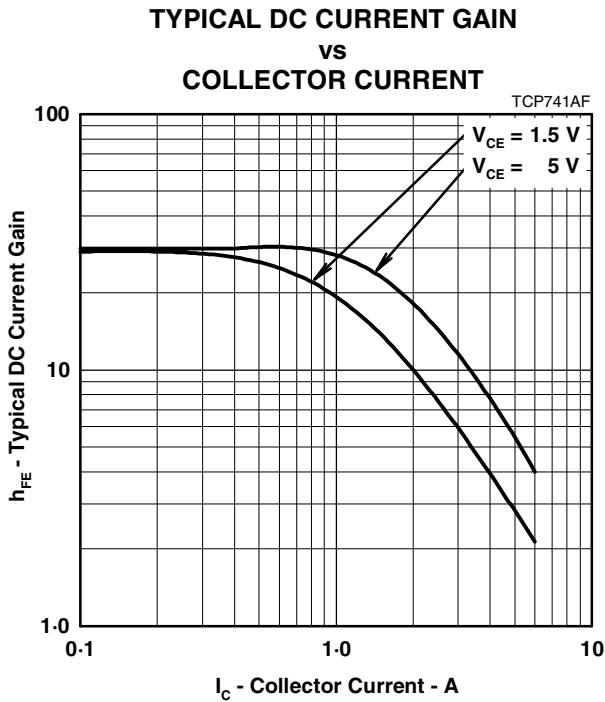


Figure 3.

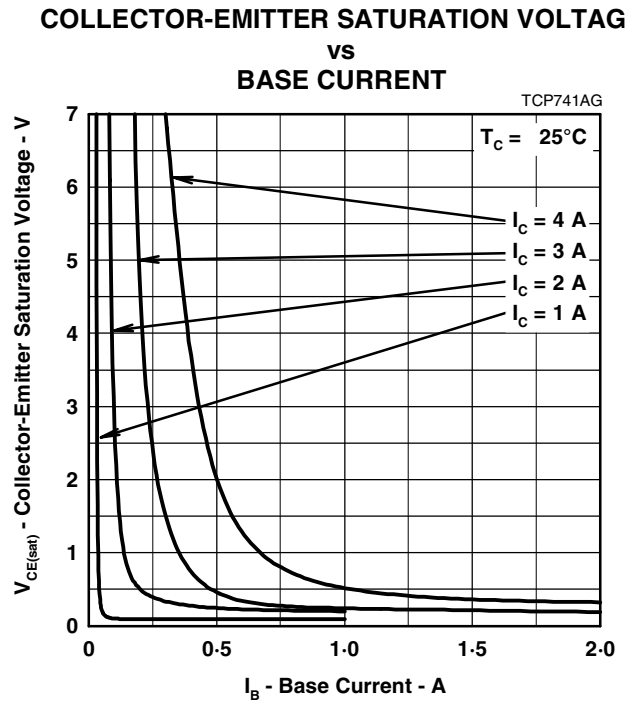


Figure 4.

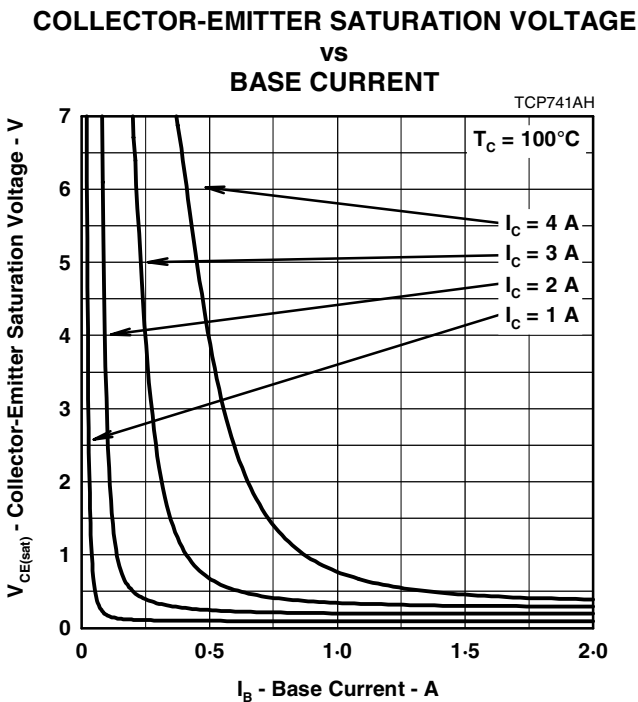


Figure 5.

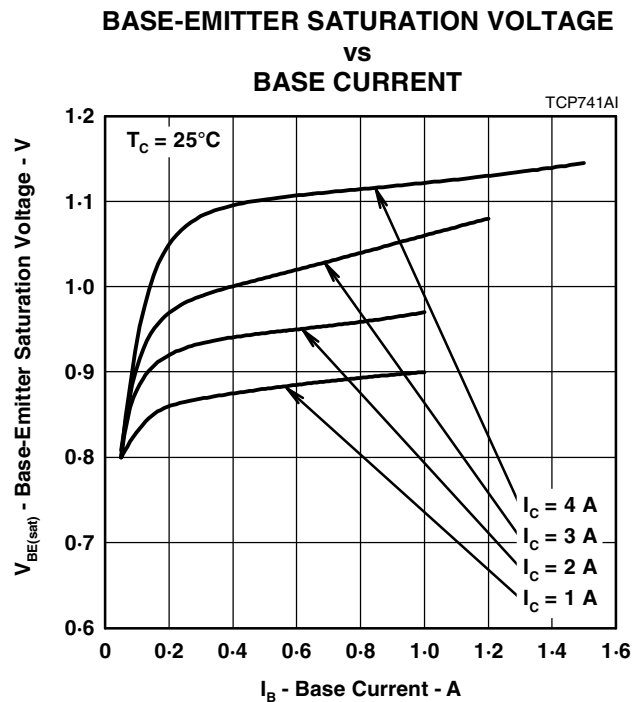


Figure 6.

PRODUCT INFORMATION

MAXIMUM SAFE OPERATING REGIONS

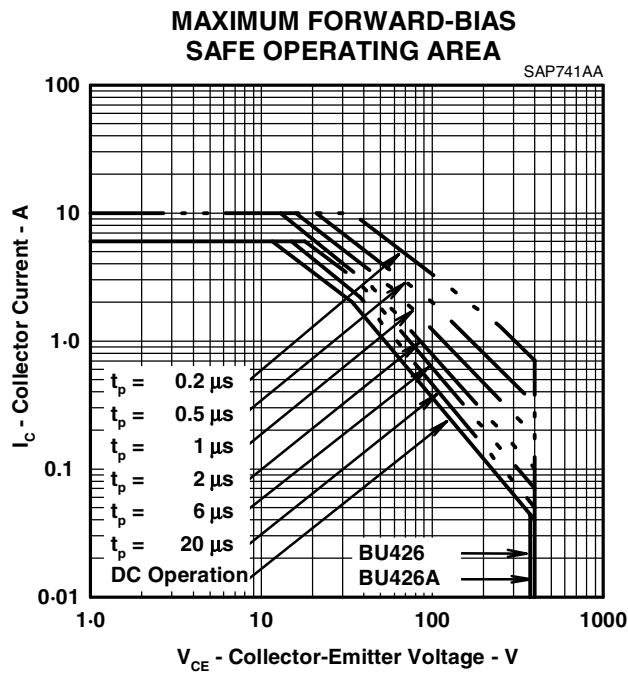


Figure 7.

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