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62C 36629

D

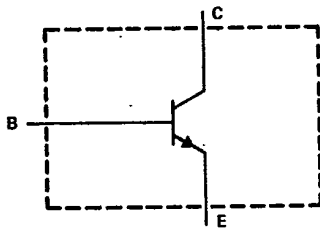
T-33-11

**BU326, BU326A
N-P-N SILICON POWER TRANSISTORS**

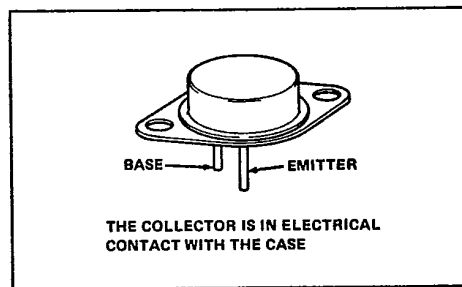
OCTOBER 1982 - REVISED OCTOBER 1984

- 60 W at 25°C Case Temperature
- 6 A Continuous Collector Current
- 8 A Peak Collector Current
- Designed for Use in Consumer and Industrial High-Voltage Switching Applications, Particularly Switching-Mode Power Supplies

device schematic



TO-3 PACKAGE



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

	BU326	BU326A
Collector-base voltage	800 V	900 V
Collector-emitter voltage ($V_{BE} = 0$)	800 V	900 V
Collector-emitter voltage ($I_B = 0$)	375 V	400 V
Emitter-base voltage	10 V	
Continuous collector current	6 A	
Peak collector current (see Note 1)	8 A	
Continuous base current	2 A	
Peak base current (see Note 1)	3 A	
Continuous device dissipation (see Figure 6)	60 W	
Operating junction temperature	-65°C to 150°C	

NOTE 1: These values apply for $t_W \leq 2$ ms, duty cycle $\leq 10\%$.



BD, BDW, BDX, BU, BUX, BUY Devices

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**BU326, BU326A
N-P-N SILICON POWER TRANSISTORS**

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

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
V _{CEO(sus)}	I _C = 0.1 A, L = 25 mH, See Note 2	BU326	375		V
	I _C = 0.1 A, L = 25 mH, See Note 2	BU326A	400		
I _{CES}	V _{CE} = 800 V, V _{BE} = 0	BU326		1	mA
	V _{CE} = 800 V, V _{BE} = 0, T _C = 125°C			2	
	V _{CE} = 900 V, V _{BE} = 0	BU326A		1	
	V _{CE} = 900 V, V _{BE} = 0, T _C = 125°C			2	
I _{EBO}	V _{EB} = 10 V, I _C = 0			10	mA
h _{FE}	V _{CE} = 5 V, I _C = 0.6 A		40		
V _{CE(sat)}	I _C = 2.5 A, I _B = 0.5 A			1.5	V
	I _C = 4 A, I _B = 1.25 A			3	
V _{BE(sat)}	I _C = 2.5 A, I _B = 0.5 A			1.4	V
	I _C = 4 A, I _B = 1.25 A			1.6	

NOTE 2: Inductive loop switching measurement.

thermal characteristics

PARAMETER	MIN	TYP	MAX	UNIT
R _{θJC}		1.67		°C/W

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

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
t _{on}	I _C = 2.5 A, I _{B1} = 0.5 A, I _{B2} = -1 A, V _{CC} = 250 V, See Figure 1	0.3 0.5			μs
t _s		2 3.5			μs
t _f		0.15			μs
t _f		T _C = 95°C	0.2	1	



BD, BDW, BDX, BU, BUX, BUY Devices

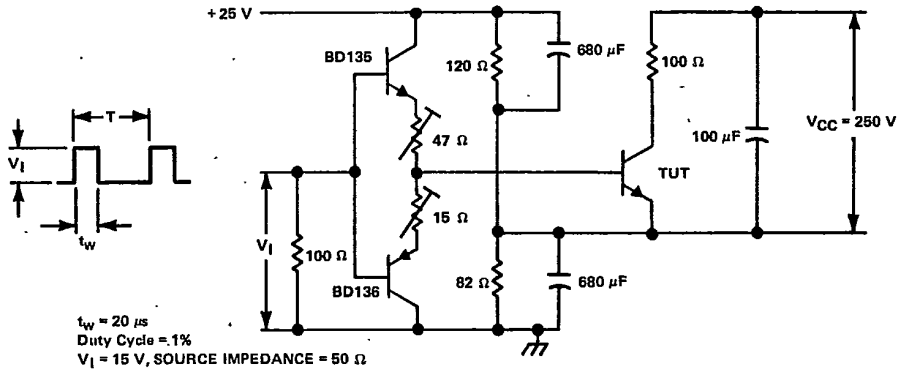
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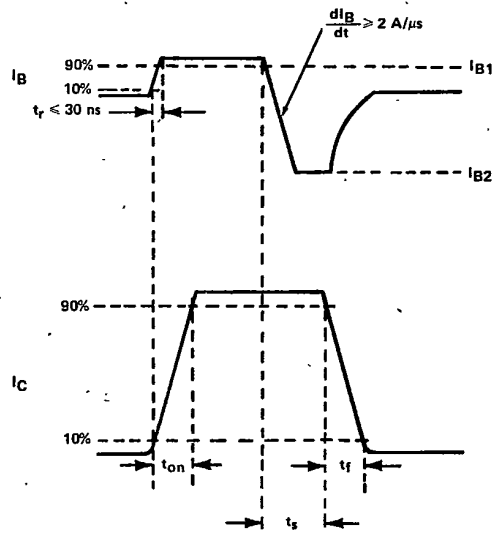
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PARAMETER MEASUREMENT INFORMATION



TEST CIRCUIT



VOLTAGE WAVEFORMS

FIGURE 1. RESISTIVE-LOAD SWITCHING



BD, BDW, BDX, BU, BUX, BUY Devices

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N-P-N SILICON POWER TRANSISTORS

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TYPICAL CHARACTERISTICS

FORWARD CURRENT TRANSFER RATIO
VS
COLLECTOR CURRENT

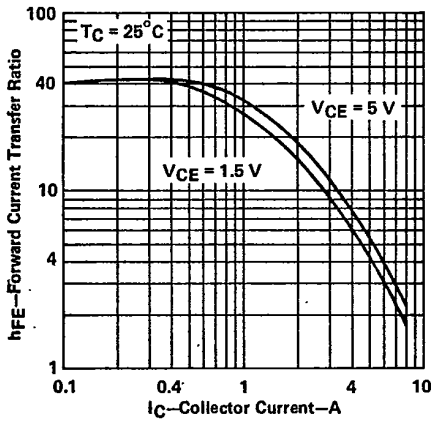


FIGURE 2

COLLECTOR-EMITTER SATURATION VOLTAGE
VS
BASE CURRENT

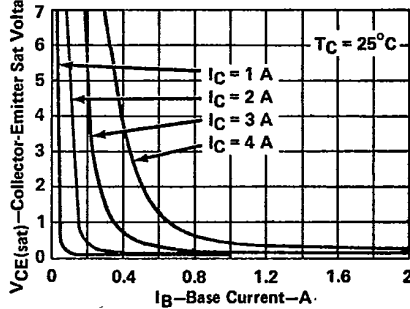


FIGURE 3

COLLECTOR-EMITTER SATURATION VOLTAGE
VS
BASE CURRENT

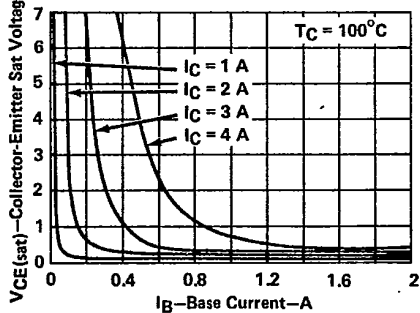


FIGURE 4

BASE-EMITTER SATURATION VOLTAGE
VS
BASE CURRENT

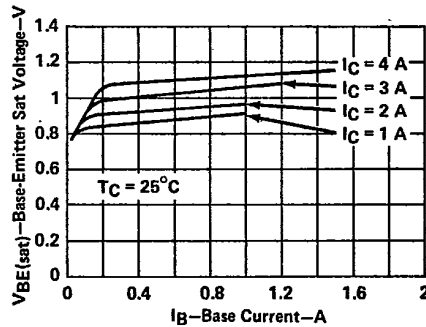


FIGURE 5

BD, BDW, BDW, BDX, BU, BUX, BUY Devices

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MAXIMUM SAFE OPERATING AREA
FORWARD-BIAS SAFE OPERATING AREA

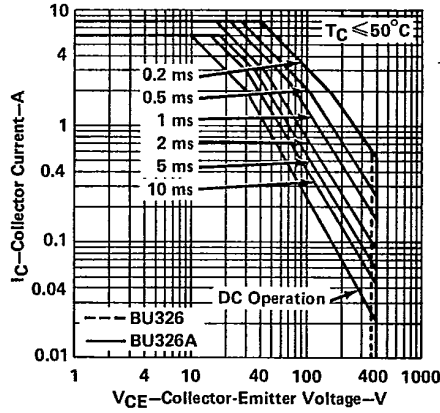


FIGURE 6

THERMAL INFORMATION
DISSIPATION DERATING CURVE

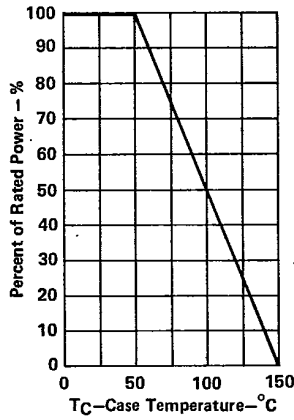


FIGURE 7



BD, BDW, BDX, BU, BUX, BUY Devices