



Technical
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High Power Transistor Types WT4311 to WT4334 and WT4411 to WT4434

- 275 to 375 Amperes Peak
- 150 to 250 Amperes Continuous
- 140 to 100 Volts Sustaining Voltage

These transistors are designed for low frequency, high current switching operation and low voltage, high power linear operation for such applications as:

- Choppers
- Inverters
- Linear Regulators

Maximum ratings

		WT 4 x 11 4 x 12 4 x 13 4 x 14 4 x 15 4 x 16	WT 4 x 21 4 x 22 4 x 23 4 x 24 4 x 25	WT 4 x 31 4 x 32 4 x 33 4 x 34	Units
V_{CEV}		60-160V	60-140V	60-120V	20V steps
$V_{CER(SUS)}$	$R_{BE} = 50\Omega$	40-140V	40-120V	40-100V	20V steps
V_{CER}	$R_{BE} = 50\Omega$	30, 50, 60-120V	30, 50, 60-100V	30, 50, 60, 80V	20V steps
V_{EBO}			7		V
$I_{C(CONT)}$		150	200	250	A
$I_{C(PEAK)}$		275	325	375	A
$I_{B(CONT)}$			50		A
P_{Tot}	25°C T_C	WT4300 WT4400	1.04		kW
			0.83		kW
T_J			150		°C

Limit electrical characteristics at Tj 25°C

		WT 4x11 4x12 4x13 4x14 4x15 4x16	WT 4x21 4x22 4x23 4x24 4x25	WT 4x31 4x32 4x33 4x34	Units
I _{CEV} I _{EBO} V _{CER(SUS)} I _{CER} V _{CE(SAT)} V _{BE(SAT)} h _{FE} t _{on} t _s t _f R _{TH(J-C)}	at V _{CEV} , V _{EB} = 1V at V _{EBO} at 0.5A, R _{BE} = 50Ω at V _{CER} , R _{BE} = 50Ω $\left[\text{at } I_{CHFE} I_B = \left(\frac{I_{CHFE} \times 2}{h_F} \right) \right]$ at V _{CE} 4V, I _{C(CONT)} $\left[\begin{array}{l} \text{resistive load} \\ \text{at } I_{CHFE} \\ I_B = \pm \left(\frac{I_{CHFE} \times 2}{h_{FE4V}} \right) \\ V_{CE} = V_{CER(SUS)}, V_{EB} = 5V \end{array} \right]$	40-140 0.9 1.75	10 50 40-120 5 1.0 1.9 10 3 (typical) 2 (typical) 4 (typical)	40-100 1.05 2.0	mA max. mA max. V min. mA max. V max. V max. min. μs μs μs °C/W °C/W
	WT4300 WT4400		0.12 0.15		

Limit electrical characteristics at Tj 150°C

		WT 4x11 4x12 4x13 4x14 4x15 4x16	WT 4x21 4x22 4x23 4x24 4x25	WT 4x31 4x32 4x33 4x34	Units
I _{CEV} I _{EBO} V _{CER(SUS)} I _{CER} V _{CE(SAT)} V _{BE(SAT)} h _{FE} t _{on} t _s t _f R _{TH(J-C)}	at V _{CEV} , V _{EB} = 1V at V _{EBO} at 0.5A, R _{BE} = 50Ω at V _{CER} , R _{BE} = 50Ω $\left[\text{at } I_{CHFE} I_B = \left(\frac{I_{CHFE} \times 2}{h_F} \right) \right]$ at V _{CE} 4V, I _{C(CONT)} $\left[\begin{array}{l} \text{resistive load} \\ \text{at } I_{CHFE} \\ I_B = \pm \left(\frac{I_{CHFE} \times 2}{h_{FE4V}} \right) \\ V_{CE} = V_{CER(SUS)}, V_{EB} = 5V \end{array} \right]$	40-140 1.25 2.1 7	20 50 40-120 50 1.4 2.25 7 5 (typical) 2 (typical) 6 (typical)	40-100 1.5 2.4 7.5	mA max. mA max. V min. mA max. V max. V max. min. μs μs μs °C/W °C/W
	WT4300 WT4400		0.12 0.15		

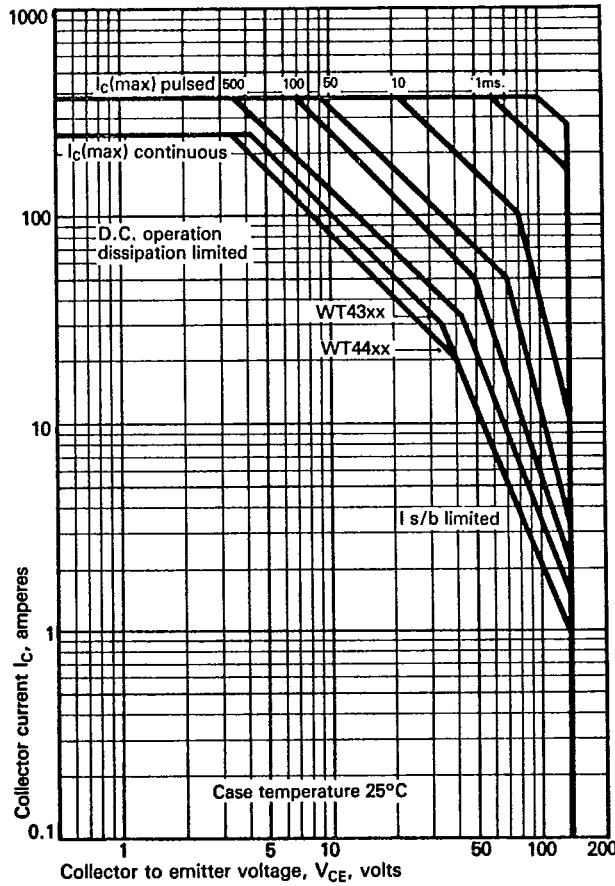


Figure 1 Max. Forward Bias Safe Operating Areas

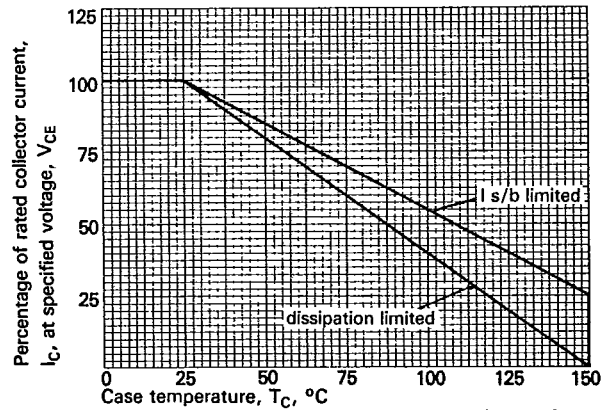


Figure 2 Dissipation and Is/b Limited Boundary Derating with Case Temperature

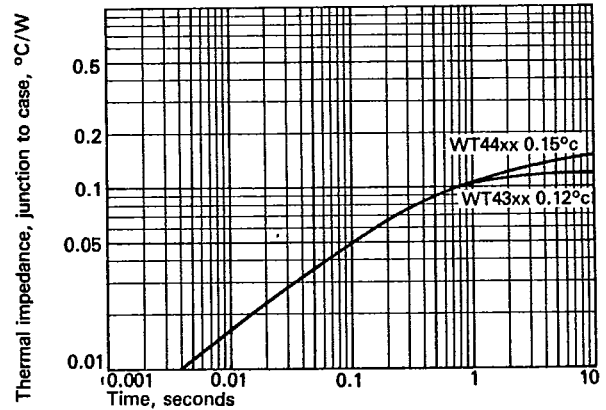


Figure 3 Transient Thermal Impedance, Junction to Case

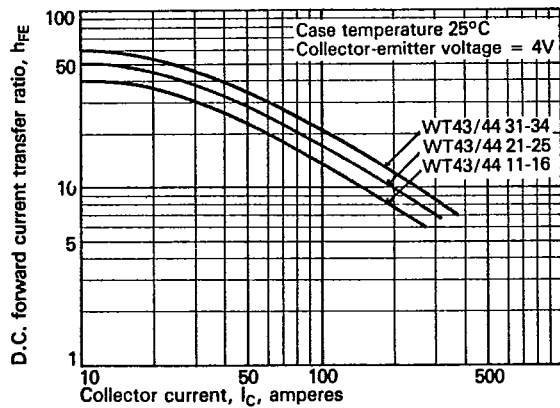


Figure 4 Min. D.C. Forward Current Transfer Ratio v. Collector Current at Tc, 25°C

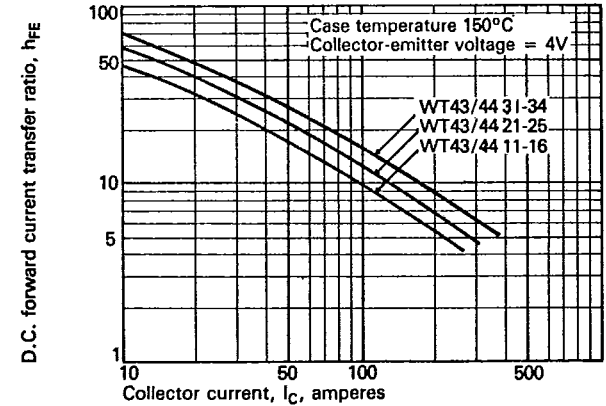


Figure 5 Min. D.C. Forward Current Transfer Ratio v. Collector Current at Tc, 150°C

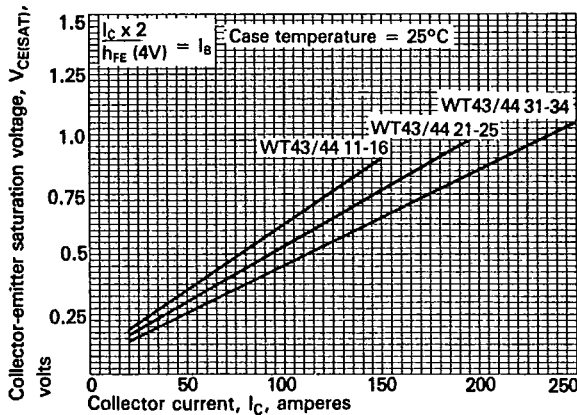


Figure 6 Max. Collector to Emitter Saturation Voltage Characteristic at Tc, 25°C

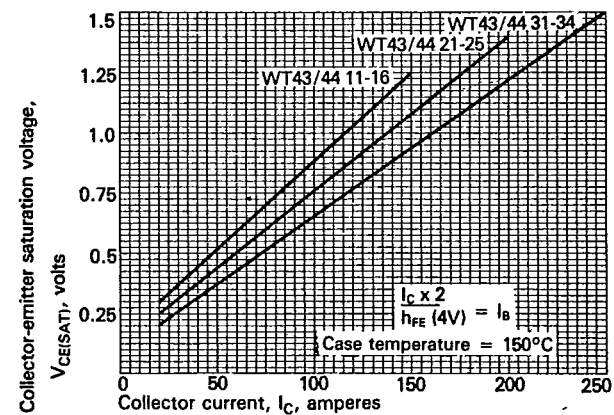


Figure 7 Max. Collector to Emitter Saturation Voltage Characteristic at Tc, 150°C

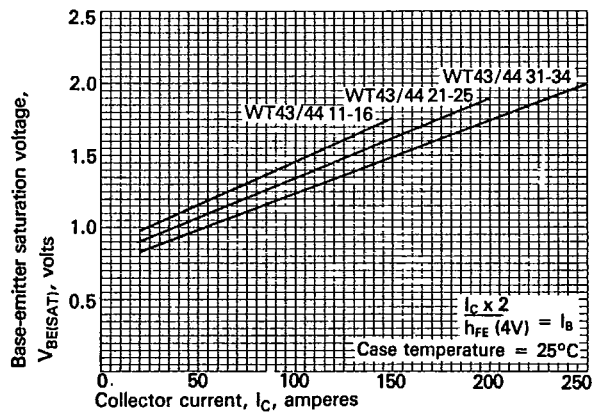


Figure 8 Max. Base to Emitter Saturation Voltage Characteristic at T_c, 25°C

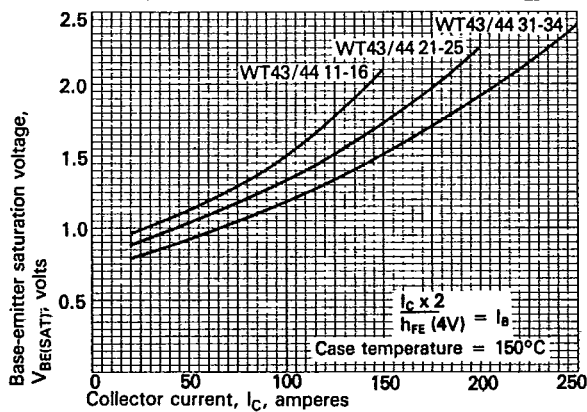
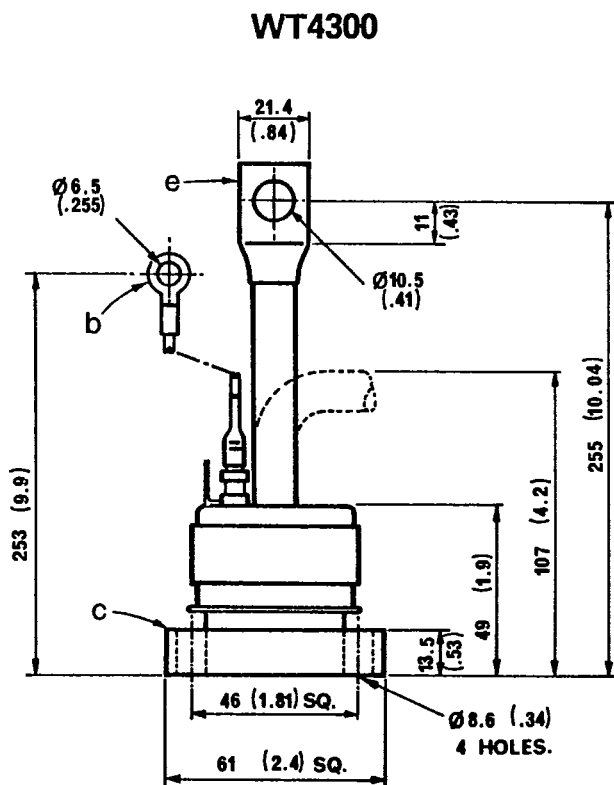


Figure 9 Max. Base to Emitter Saturation Voltage Characteristic at T_c, 150°C

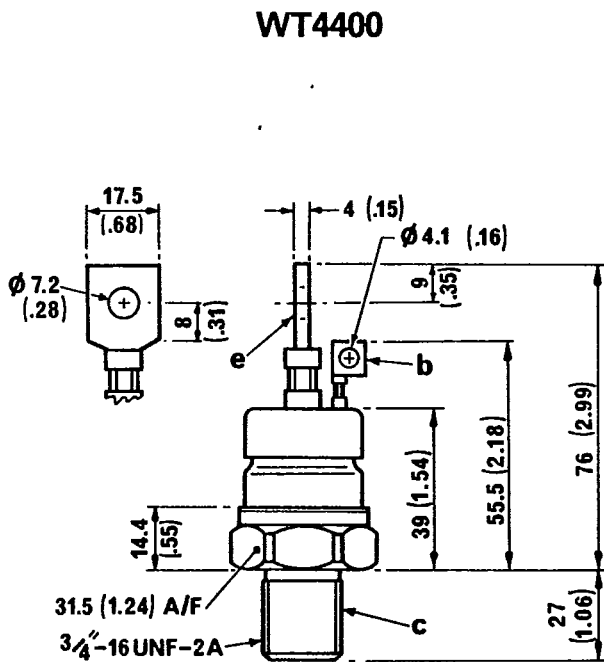


Dimensions in mm (inches)

Mounting force

1.659—2.073 Kg

Weight: 710 grams



Dimensions in mm (inches)

Mounting torque

2.5—2.77 KgM

threads not to be lubricated

Weight: 255 grams

In the interest of product improvement, Westcode reserves the right to change specifications at any time without notice.

WESTCODE SEMICONDUCTORS

0-02 Fair Lawn Avenue, Fair Lawn, New Jersey 07410
Telephone (201) 791-3020 • Telex 130389

HAWKER SIDDELEY

Westinghouse Brake and Signal Co. Ltd.