

The logo for Westcode Semiconductors features a stylized 'W' inside a circle on the left and right, flanking the word 'WESTCODE' in a bold, sans-serif font. Below 'WESTCODE' is the word 'SEMICONDUCTORS' in a larger, bold, sans-serif font.

Technical
Publication
WT5603/06
Issue 1
February 1981

High Power Transistor Types WT5603 to WT5606

- 100kW Switched Power
- 200 Amperes Continuous
- 500 Volts Sustaining Voltage

These transistors are designed for switching into clamped inductive loads (see Figure 1), for such applications as:

Choppers

Inverters

A.C. Machines (Speed Regulation)

utilising the transistors with Pulse Width Modulation or Multi-Step systems for frequency and/or voltage control.

Maximum ratings

		WT 5603	WT 5604	WT 5605	WT 5606
V_{CEV}	$R_{BE} = 10\Omega$	500V	550V	600V	450V
$V_{CER(SUS)}$		400V	450V	500V	350V
V_{EBO}	$25^{\circ}C \ T_C$		10V		
$I_{C(CONT)}$			200A		
$I_{C(PEAK)}$			300A		
$I_{B(CONT)}$			100A		
P_{tot}			1.25kW		
T_j			150°C		

Limit electrical characteristics at Tj 125°C

I_{CEV}	at $V_{CEV}, V_{EB} = 1.0V$	10mA max.		
I_{EBO}	at V_{EBO}	100mA max.		
$V_{CER(SUS)}$	at 0.5A, $R_{BE} = 10\Omega$	450V min.	500V min.	350V min.
$V_{CE(SAT)}$	$\left. \begin{array}{l} \\ \\ \\ \\ \\ \end{array} \right\} \text{ at } I_C = 100A, I_B = \left(\frac{100}{h_{FE}} \times 1.5 \right) A$ at $V_{CE} = 2.0V, I_C = 100A$ resistive load $I_C = 100A$ $I_B = \pm \left(\frac{100}{h_{FE}} \times 1.5 \right) A, V_{CE} = 200V, V_{EB} = 5V$ $\left[\begin{array}{l} \text{clamped inductive load} \\ I_C = 100A, I_B = \pm \left(\frac{100}{h_{FE}} \times 1.5 \right) A \\ V_{CE} = V_{CER(SUS)}, V_{EB} = 5V \text{ max.} \end{array} \right]$	$\left. \begin{array}{c} \\ \\ \\ \\ \\ \end{array} \right\}$	1.0V max.	
$V_{BE(SAT)}$				
h_{FE}				
t_{on}				
t_s				
t_f				
$t_{f(1)}$		12 min.	10 min.	8 min.
			3μs max.	10 min.
			5μs max.	
			2μs max.	
			1.25μs max.	
$R_{TH(J-C)}$			0.1°C/W	

Printed by Borough Press (Wiltshire) Limited

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