

Electrical Characteristics Curve ($T_a = 25^\circ\text{C}$, unless otherwise noted)

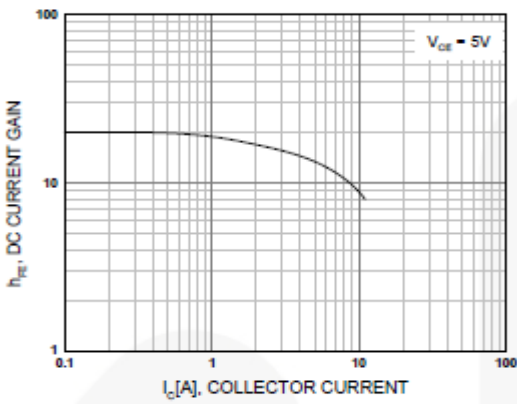


Figure 1. DC Current Gain

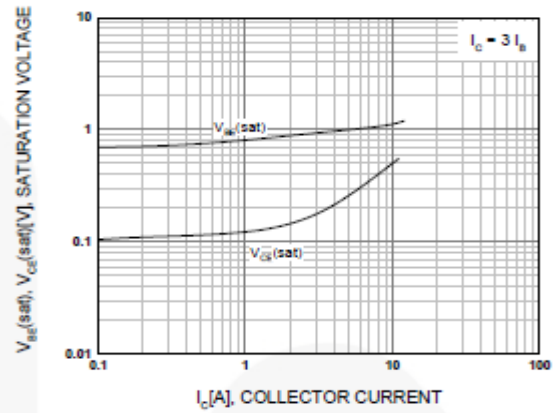


Figure 2. Base-Emitter Saturation Voltage and Collector-Emitter Saturation Voltage

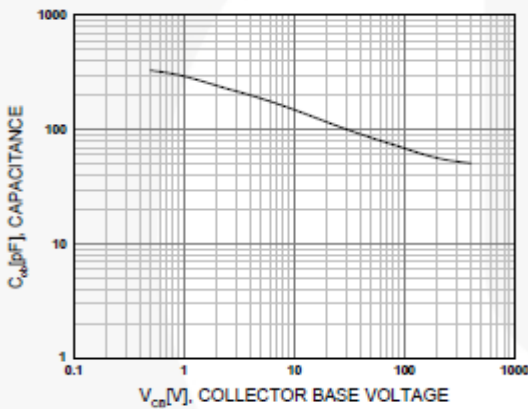


Figure 3. Collector Output Capacitance

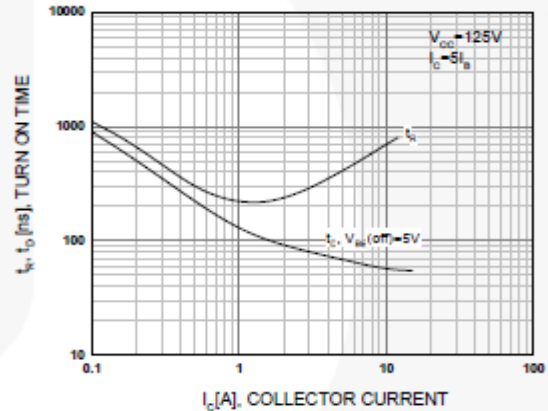


Figure 4. Turn-On Time

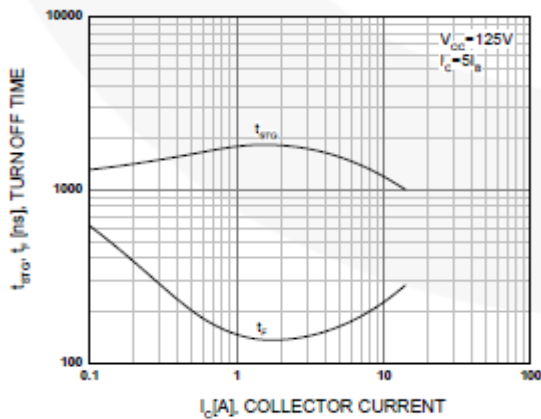


Figure 5. Turn-Off Time

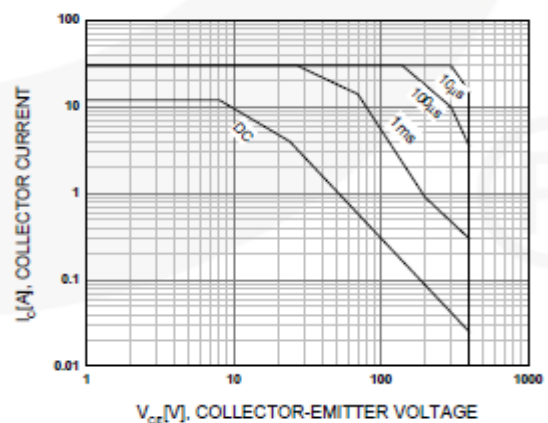


Figure 6. Forward Bias Safe Operating Area

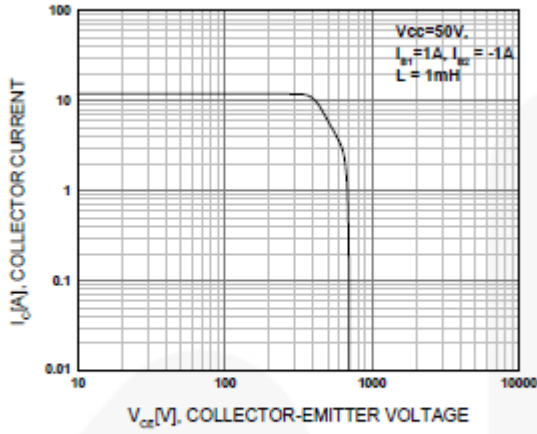


Figure 7. Reverse Bias Safe Operating Area

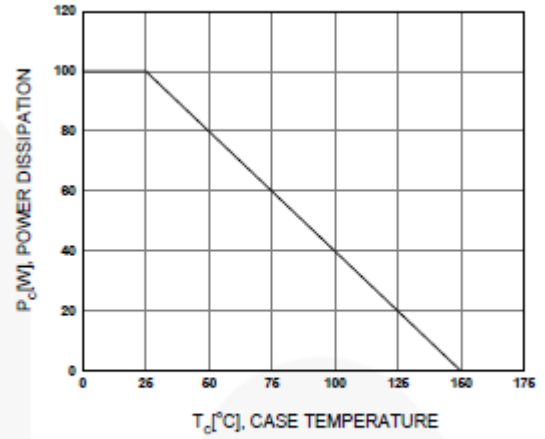
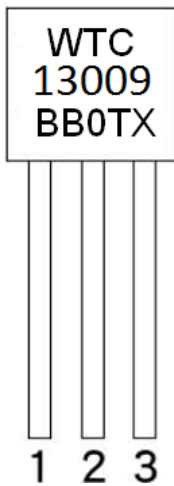


Figure 8. Power Derating

Ordering Information

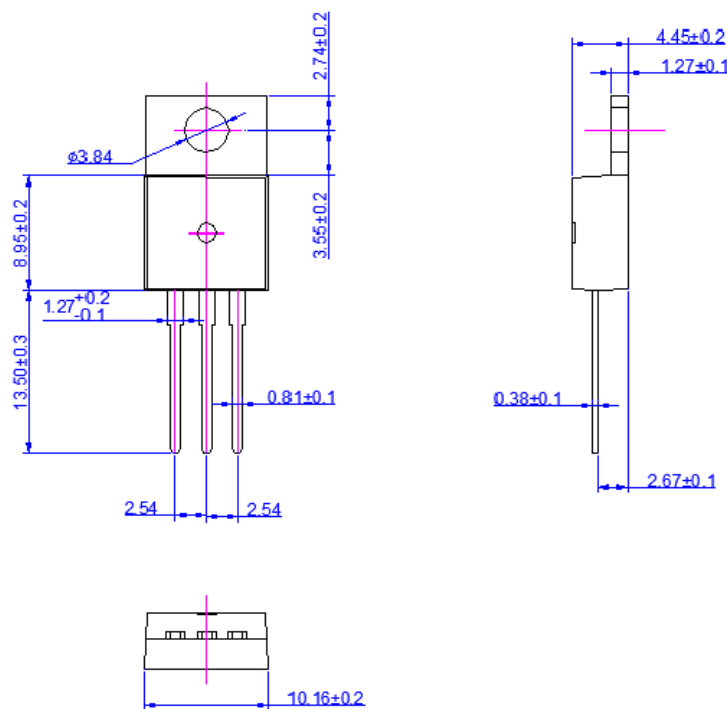
Type NO	Marking	Package Code
WTX13009	13009	TO-220

Marking and Pin Define



First Line	WTC	Company Name	
Second Line	13009	Product Code	
Third Line	BB0TX	1st (Year Code)	A-2010 B-2011 C-2012 D-2013 ...
		2nd (Month Code)	A-Jan, B-Feb, C-Mar, D-Apr, E-May, F-Jun, G-Jul, H-Aug, I-Sep, J-Oct, K-Nov, L-Dec
		3rd (Lot Code)	0~9, A~Z
		4th (Product Code)	M - MOS , T - Transistor, L - Linear
		5th (Package Code)	I - TO251, D - TO252 , L - TO92, M - TO126, X - TO220, F - TO220F, Y - SOT89, S - SOP8
		6th (Spec Code)	(Reserve)

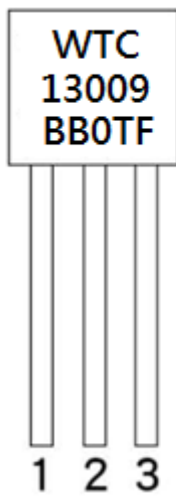
TO-220 Package Dimension



Ordering Information

Type NO	Marking	Package Code
WTF13009	13009	TO-220F

Marking and Pin Define



First Line	WTC	Company Name	
Second Line	13009	Product Code	
Third Line	BB0TF	1st (Year Code)	A-2010 B-2011 C-2012 D-2013 ...
		2nd (Month Code)	A-Jan, B-Feb, C-Mar, D-Apr, E-May, F-Jun, G-Jul, H-Aug, I-Sep, J-Oct, K-Nov, L-Dec
		3rd (Lot Code)	0~9, A-Z
		4th (Product Code)	M - MOS, T - Transistor, L - Linear
		5th (Package Code)	I - TO251, D - TO252, L - TO92, M - TO126, X - TO220, F - TO220F, Y - SOT89, S - SOP8
		6th (Spec Code)	(Reserve)

TO-220F Package Dimension

