

TS78M05A Electrical Characteristics

($V_{in}=10V$, $I_{out}=350mA$, $0^{\circ}C \leq T_j \leq 125^{\circ}C$, $C_{in}=0.33\mu F$, $C_{out}=0.1\mu F$; unless otherwise specified.)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit	
Output voltage	V_{out}	$T_j=25^{\circ}C$	4.90	5	5.10	V	
		$7.5V \leq V_{in} \leq 20V$, $5mA \leq I_{out} \leq 350mA$	4.80	5	5.20		
Line Regulation	REGline	$T_j=25^{\circ}C$	$7.5V \leq V_{in} \leq 25V$	--	3	100	mV
			$8V \leq V_{in} \leq 12V$	--	1	50	
Load Regulation	REGload	$T_j=25^{\circ}C$	$5mA \leq I_{out} \leq 500mA$	--	15	100	
			$5mA \leq I_{out} \leq 200mA$	--	5	50	
Quiescent Current	I_q	$I_{out}=0$, $T_j=25^{\circ}C$	--	3	6	mA	
Quiescent Current Change	ΔI_q	$7.5V \leq V_{in} \leq 25V$	--	--	0.8		
		$5mA \leq I_{out} \leq 350mA$	--	--	0.5		
Output Noise Voltage	V_n	$10Hz \leq f \leq 100KHz$, $T_j=25^{\circ}C$	--	40	--	μV	
Ripple Rejection Ratio	RR	$f=120Hz$, $8V \leq V_{in} \leq 18V$	62	78	--	dB	
Voltage Drop	V_{drop}	$I_{out}=500mA$, $T_j=25^{\circ}C$	--	2	--	V	
Output Resistance	R_{out}	$f=1KHz$	--	17	--	$m\Omega$	
Output Short Circuit Current	I_{os}	$T_j=25^{\circ}C$	--	50	--	mA	
Peak Output Current	$I_{o peak}$	$T_j=25^{\circ}C$	--	0.7	--	A	
Temperature Coefficient of Output Voltage	$\Delta V_{out} / \Delta T_j$	$I_{out}=5mA$, $0^{\circ}C \leq T_j \leq 125^{\circ}C$	--	-0.2	--	$mV/^{\circ}C$	

Not Recommended

Electrical Characteristics Curve

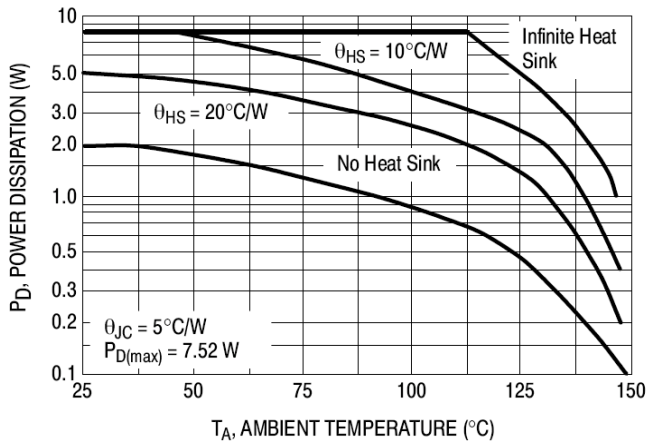


Figure 1. Worst Case Power Dissipation vs. Ambient Temperature (TO-220)

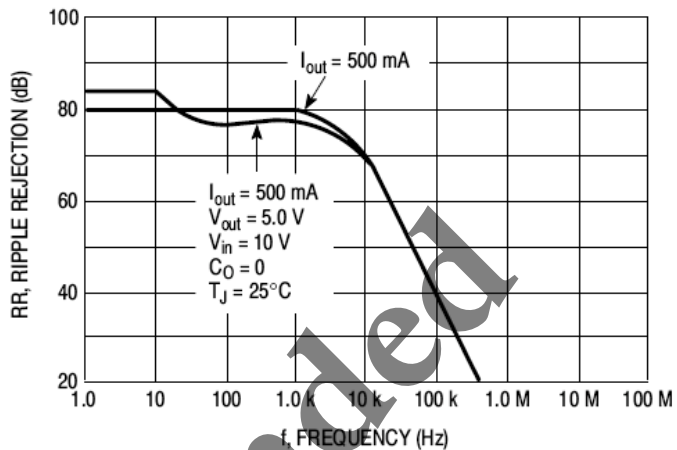


Figure 3. Ripple Rejection vs. Frequency

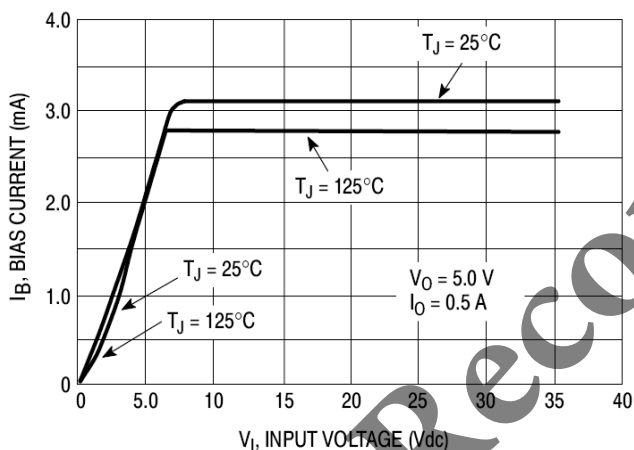


Figure 3. Bias Current vs. Input Voltage

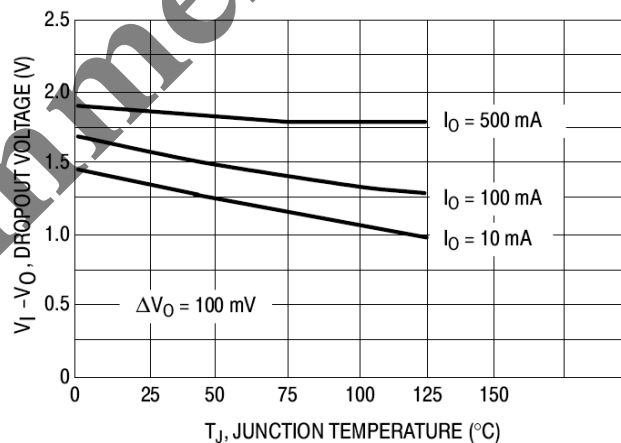


Figure 4. Dropout Voltage vs. Junction Temperature

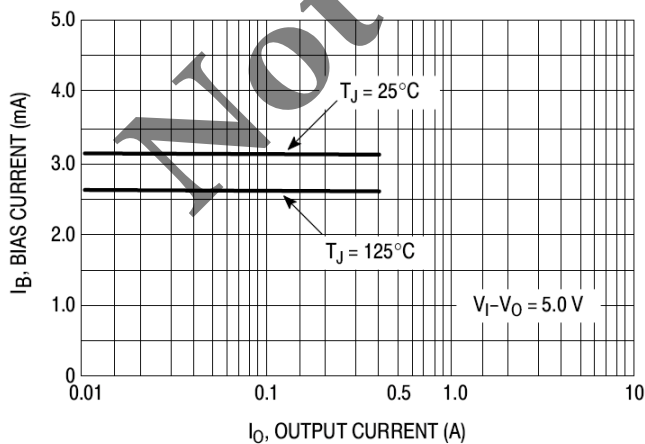
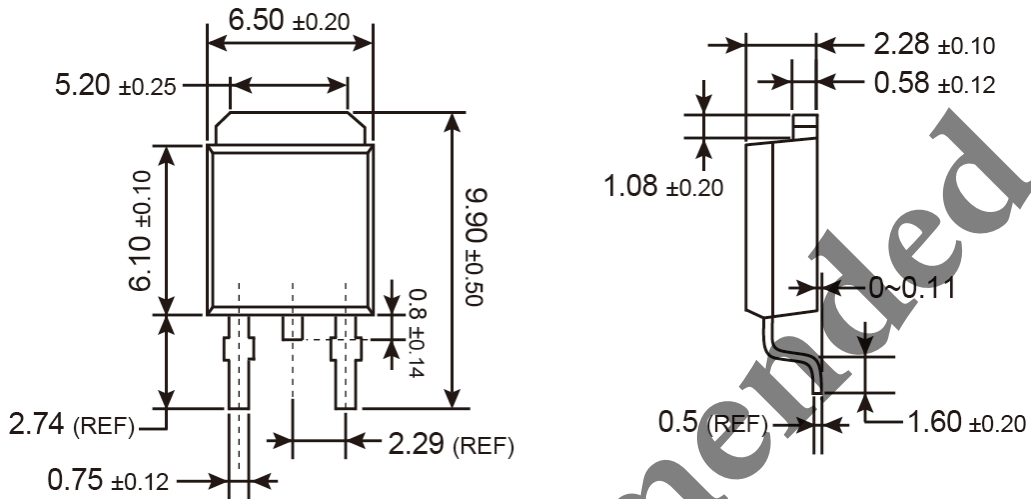


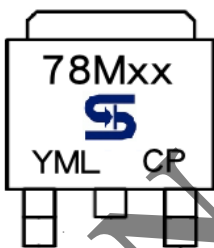
Figure 5. Bias Current vs. Output Current

TO-252 Mechanical Drawing



Unit: Millimeters

Marking Diagram



- XX** = Output Voltage
(05=5V)
- Y** = Year Code
- M** = Month Code for Halogen Free Product
 - O** =Jan
 - P** =Feb
 - Q** =Mar
 - R** =Apr
 - S** =May
 - T** =Jun
 - U** =Jul
 - V** =Aug
 - W** =Sep
 - X** =Oct
 - Y** =Nov
 - Z** =Dec
- L** = Lot Code
- CP** = Package Code for TO-252

Not Recommended

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