



FILM MICROELECTRONICS INCORPORATED
A SaCot Company

FM812S7

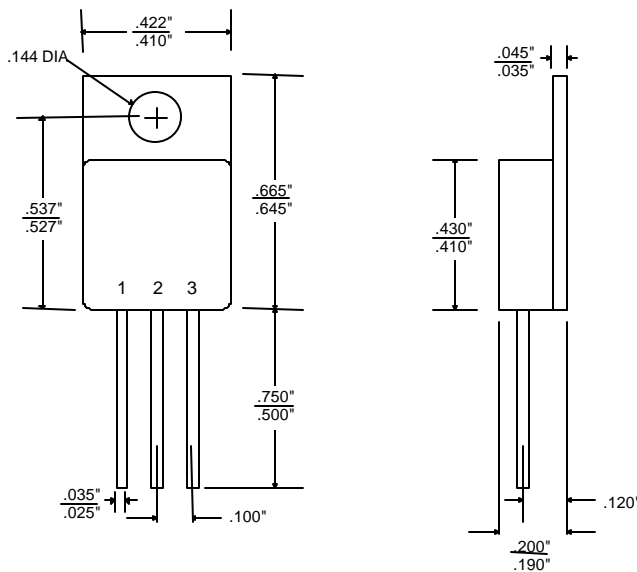
PRODUCT DATA SHEET

1.5 AMP, 12 VOLT POSITIVE VOLTAGE REGULATOR IN AN ISOLATED HERMETIC TO-257 PACKAGE

ABSOLUTE MAXIMUM RATINGS @ $T_c = 25^\circ\text{C}$, unless otherwise stated

Parameter		Rating	Units
P_D	Power Dissipation	15	W
V_{IN}	Input Voltage	35	Vdc
θ_{JC}	Thermal Resistance Junction to Case	4.2	$^\circ\text{C}/\text{W}$
I_{MAX}	Output Current	1.5	A
T_J	Operating Junction Temperature	-55 to +150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-65 to +150	$^\circ\text{C}$
	Lead Temperature (10 sec)	300	$^\circ\text{C}$

MECHANICAL OUTLINE



PIN CONNECTION
PIN 1: INPUT
PIN 2: GROUND
PIN 3: OUTPUT



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ELECTRICAL CHARACTERISTICS @ $T_A = 25^\circ\text{C}$, $V_{IN} = 10\text{V}$, $I_o = 500\text{mA}$ unless otherwise stated

Parameter	Min.	Max.	Units	Test Conditions
V_{OUT} Output Voltage	11.88 11.64	12.12 12.36	V	$14.5\text{V} \leq V_{IN} \leq 27\text{V}$, $T_A = -55^\circ\text{C}$ to $+125^\circ\text{C}$
V_{RLINE} Line Regulation	-	18 50 9 30	mV	$14.5\text{V} \leq V_{IN} \leq 27\text{V}$, $T_A = -55^\circ\text{C}$ to $+125^\circ\text{C}$ $16\text{V} \leq V_{IN} \leq 22\text{V}$, $T_A = -55^\circ\text{C}$ to $+125^\circ\text{C}$
V_{RLOAD} Load Regulation	-	32 60 20 40	mV	$5\text{mA} \leq I_o \leq 1.5\text{A}$, $T_A = -55^\circ\text{C}$ to $+125^\circ\text{C}$ $5\text{mA} \leq I_o \leq 1.0\text{A}$, $T_A = -55^\circ\text{C}$ to $+125^\circ\text{C}$ $250\text{mA} \leq I_o \leq 750\text{mA}$, $T_A = -55^\circ\text{C}$ to $+125^\circ\text{C}$
R_N Ripple Rejection	61 54	-	dB	$f = 120\text{Hz}$, $\Delta V_{IN} = 10\text{V}$, $T_A = -55^\circ\text{C}$ to $+125^\circ\text{C}$
I_{OS} Short Circuit Current	-	1.2 2.8	A	$V_{IN} = 35\text{V}$, $T_A = -55^\circ\text{C}$ to $+125^\circ\text{C}$
$\frac{\Delta V_{OUT}}{\Delta t}$ Long Term Stability	-	75	mV	$t = 1,000$ hrs.
V_{DO} Dropout Voltage	-	2.5	V	$\Delta V_{OUT} = 100\text{mV}$, $I_o = 1.0\text{A}$
N_o Output Noise Voltage	-	40	$\mu\text{V}/\text{V}$	$f = 10\text{Hz}$ to 100kHz
I_{SCD} Standby Current Drain	-	6 6.5	mA	$T_A = -55^\circ\text{C}$ to $+125^\circ\text{C}$
$I_{O(pk)}$ Output Current (Peak)	1.5	3.3	A	

RECOMMENDED OPERATING CONDITIONS

Parameter	Range	Units
V_{IN} Input Voltage Range	+ 14.5 to + 27	Vdc
T_A Ambient Operating Temperature Range	-55 to +125	$^\circ\text{C}$