

multicomp

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SPC-F008.DWG

A negative 3-terminal voltage regulator in a TO92 type package suitable for numerous applications requiring up to 100mA. This device features thermal shutdown and current limiting making this remarkably rugged. In most applications, no external components are required for operation.

A useful for on-card regulation or any other application where a regulated negative voltage at a modest current level is needed. This device offers a substantial advantage over the common resistor/zener diode approach.

Features:

- No External Components Required
- Internal Short-Circuit Current Limiting
- Internal Thermal Overload Protection

Absolute Maximum Ratings:

- Input Voltage, V_{IN} -35V
Internal Power Dissipation (Note 1), P_D Internally Limited
Operating Junction Temperature Range, T_{opr} 0°C to +70°C
Maximum Junction Temperature, T_J +125°C
Storage Temperature Range, T_{stg} -55°C to +150°C
Lead Temperature (During Soldering, 10sec.), T_L +300°C
- Note Thermal resistance, junction -to-ambient is +180°C/W when mounted with 0.40 inch leads on a P.C. board, and +160°C/W when mounted with 0.25 inch leads on a P.C. board.
1. board.

Electrical Characteristics: (0° ≤ T_J ≤ +125°C, $V_{OUT} = -18V$, $V_{IN} = -27V$, $I_O = 40mA$, $C_{IN} = 0.33\mu F$, $C_{OUT} = 0.1\mu F$, Note 2, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Output Voltage	V_O	$T_J = +25^\circ C$ $1mA \leq I_O \leq 100mA$, $33V \leq V_{IN} \leq -20.7V$	-17.3	-18	-18.7	V
Line Regulation	Reg_{line}	$T_J = +25^\circ C$, $-33V \leq V_{IN} \leq -20.7V$ $\leq -20.7V$	-	-	325	mV
Load Regulation	Reg_{load}	$T_J = +25^\circ C$, $1mA \leq I_O \leq 100mA$ $\leq 100mA$	-	-	170	mV
Quiescent Current	I_B	$T_J = +125^\circ C$ With line, $-33V \leq V_{IN} \leq -21V$	-	-	6	mA
Quiescent Current Change	I_B	$\leq -21V$ With load, $1mA \leq I_O \leq 40mA$	-	-	1.5	mA
Output Noise Voltage	V_N	$T_J = +25^\circ C$, $f = 10Hz$ to 10kHz	-	150	-	μV
Ripple Rejection	RR	$-33V \leq V_{IN} \leq -23V$, $f = 120Hz$	33	48	-	dB
Drop Out Voltage	V_{DO}	$T_J = +25^\circ C$, $I_O = 40mA$	-	1.7	-	V

Note 2. To ensure constant junction temperature, low duty cycle pulse testing is used.

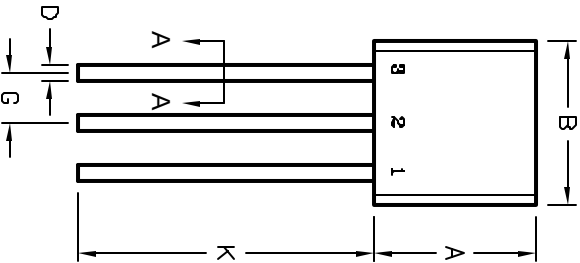
REVISIONS

DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
1975	A	RELEASED	HO	3/24/05	JN	04/25/08	JN	04/25/08

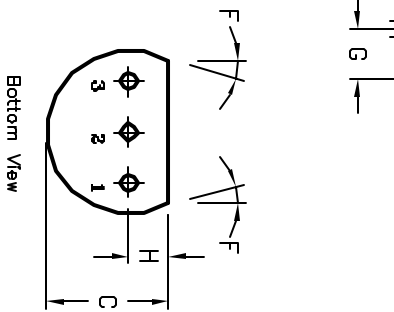
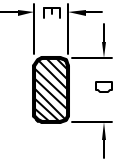
TO-92



DIM.	MIN.	MAX.
A	4.32	5.33
B	4.45	5.20
C	3.18	4.19
D	0.41	0.55
E	0.35	0.50
F	5°	
G	1.14	1.40
H	1.14	1.53
K	12.70	-



SECTION A-A



- 1 = Input
2 = Common
3 = Output

TOLERANCES:

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DRAWN BY:	DATE:
HISHAM ODISH	3/24/05
CHECKED BY:	DATE:
Jason Nash	04/25/08
APPROVED BY:	DATE:
Jason Nash	04/25/08

DRAWING TITLE:

Voltage Regulator

SIZE	DWG. NO.	ELECTRONIC FILE	REV
A	79L18	35C0956.DWG	A
SCALE:	NTS	U.O.M.: MILLIMETERS	SHEET: 1 OF 1

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