42050

POSITIVE VOLTAGE REGULATORS
Commercial or Military

Mii
HYBRID MICROELECTRONICS
PRODUCTS DIVISION

Features:

- Output Current To 10 Amps
- Output Voltage To 34 V
- Internal Short Circuit Protection
- Custom Output Voltages available

Applications:

- Designed for use in general purpose applications.
- Military And Hi Rel Industrial Applications Where Hermetically Sealed Product Is Required

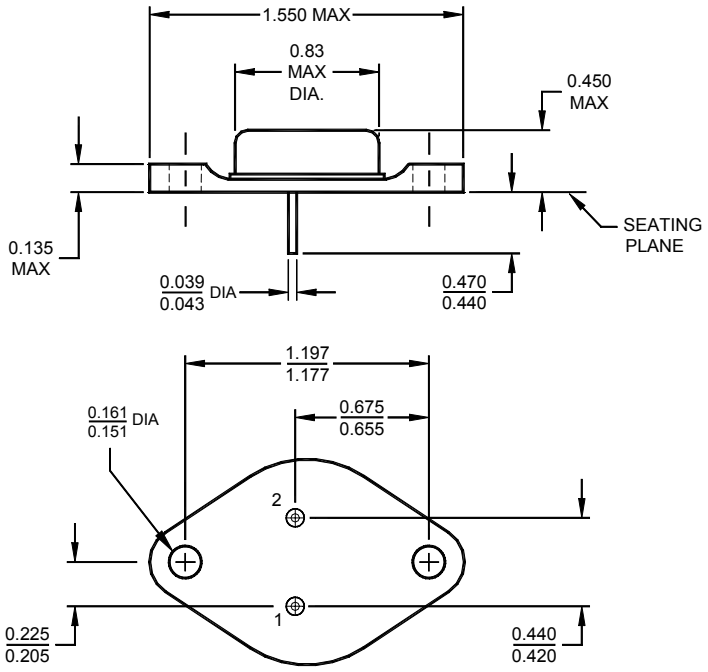
DESCRIPTION

The 42050 series of regulators covers the output voltage range from 5 VDC through 34 VDC. These regulators are fabricated using hybrid techniques. The devices are complete with internal short circuit protection, which includes voltage shutdown and current fold back. The 42050 series regulators are complete and normally do not require any additional components. However, if the regulator is far from the power source a .2 μf capacitor on the input is suggested.

ABSOLUTE MAXIMUM RATINGS

Output Current - I_{OUT} ..... 10 A
Power Dissipation @ 25°C Case Temperature - P_D ..... 120 W
Input Voltage - V_{IN} ..... 40 V
Operating Temperature ..... -55°C to +125°C
Storage Temperature ..... –65°C to + 150°C

Mechanical Configuration



PIN	FUNCTION
1	GROUND
2	V_{OUT}
CASE	V_{IN}

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ELECTRICAL CHARACTERISTICS (Note 1)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	V_{OUT}	I_{OUT} = 1A, $^{V}IN - ^{V}O$ = 5 V	V_{OUT} -0.1 V	V_{OUT}	V_{OUT} +0.1 V	VDC
Differential Voltage V_{IN} - V_{OUT}	ΔV	$I_{OUT} = I_{MAX}$	5			VDC
Line Regulation (Note 3)		$V_{IN} - V_O$ = 5 V to V_{IN} = 40 V I_{OUT} = .5 A			0.1	% V_{OUT}
Load Regulation (Note 2)		I_{OUT} = .5 A to $I_{OUT} = I_{MAX}$ $V_{IN} = V_{OUT}$ + 5 V			40	mV
Ripple Rejection		f = 50 to 500 Hz 1.0Vpp $V_{IN} - V_O$ = 5 V	60			dB
Temperature Coefficient	TC	0°C ≤ T_C ≤ 100°C		.05		%/°C
Standby Current	I_S				25	mA
Thermal Resistance	θ_{jc}			1		°C/W
Long Term Stability				0.1		%/1000 hrs

Note 1: Case temperature 25°C unless otherwise specified.
Note 2: Voltage measured at Pin 2 within .05 inches from case.
Note 3: Instantaneous regulation, average chip temperature changes must be accounted for separately.

42050 HYBRID VOLTAGE REGULATOR DEVICES
Standards Available

TYPE	V_{OUT} (VDC)	MAX I_{OUT} (A)	I_{KNEE} TYP(A)	I_{SC} TYP(A)
42050 - 055	5	5	6.5	2.5
510	5	10	13	3.5
610	6	10	13	3.5
710	7	10	13	3.5
810	8	10	13	3.5
910	9	10	13	3.5
109	10	9	13	3.5
128	12	8	10	3
148	14	8	10	3
158	15	8	10	3
168	16	8	10	3
188	18	8	10	3
208	20	8	10	3
224	22	4	5.5	2
244	24	4	5.5	2
264	26	4	5.5	2
284	28	4	5.5	2
304	30	4	5.5	2
324	32	4	5.5	2
344	34	4	5.5	2

Figure 1. Power Derating

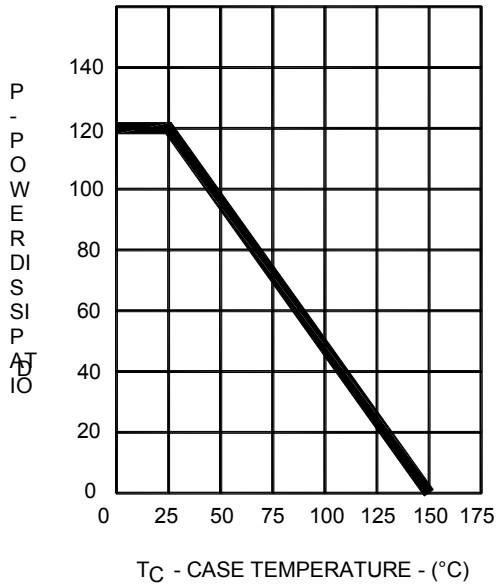

Figure 2. Typical Output Characteristics