

**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

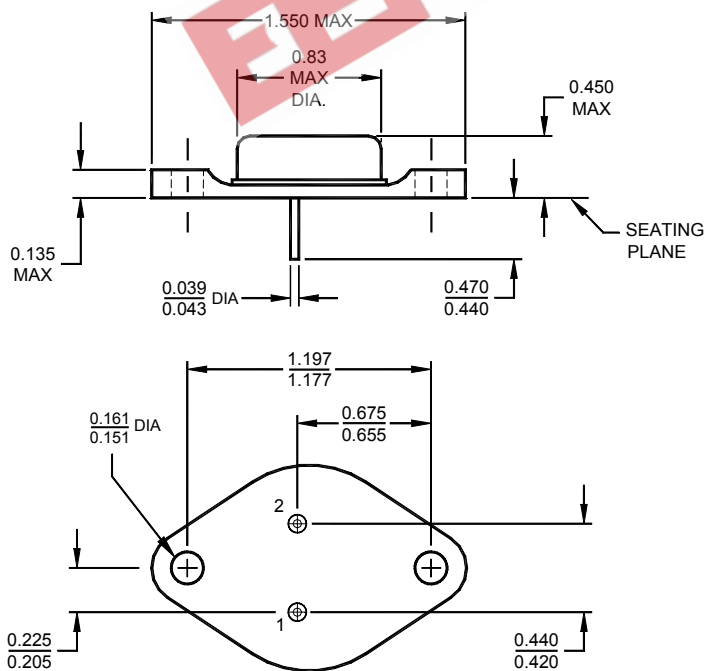
**DESCRIPTION**

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  $\mu$ f 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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## POSITIVE VOLTAGE REGULATORS

### ELECTRICAL CHARACTERISTICS (Note 1)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$I_{OUT} = 1A, V_{IN} - V_O = 5V$	$V_{OUT} - 0.1V$	$V_{OUT}$	$V_{OUT} + 0.1V$	VDC
Differential Voltage $V_{IN} - V_{OUT}$	$\Delta V$	$I_{OUT} = I_{MAX}$	5			VDC
Line Regulation (Note 3)		$V_{IN} - V_O = 5V$ to $V_{IN} = 40V$ $I_{OUT} = .5A$			0.1	% $V_{OUT}$
Load Regulation (Note 2)		$I_{OUT} = .5A$ to $I_{OUT} = I_{MAX}$ $V_{IN} = V_{OUT} + 5V$			40	mV
Ripple Rejection		$f = 50$ to $500$ Hz $1.0V_{pp}$ $V_{IN} - V_O = 5V$	60			dB
Temperature Coefficient	TC	$0^{\circ}C \leq T_C \leq 100^{\circ}C$		.05		%/ $^{\circ}C$
Standby Current	$I_s$				25	mA
Thermal Resistance	$\theta_{jc}$			1		$^{\circ}C/W$
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

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Figure 1. Power Derating

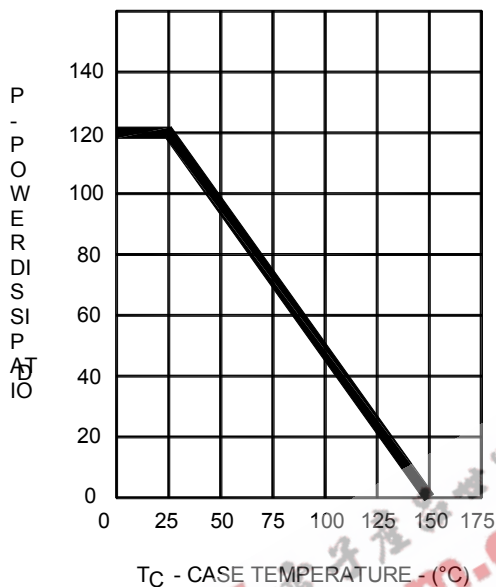
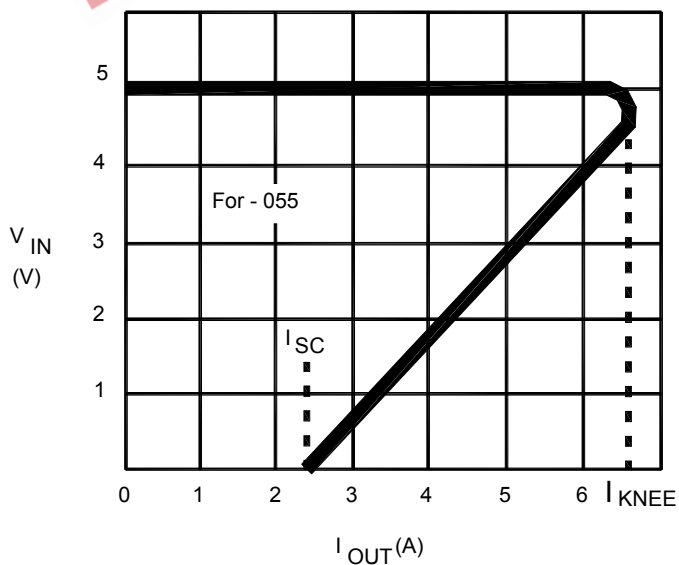


Figure 2. Typical Output Characteristics



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