Solitron Devices, Inc. PRODUCT SPECIFICATION

HYBRID VOLTAGE REGULATORS
CJSE017 CJSE018 CJSE019 CJSE020 CJSE021 CJSE022

FIXED OUTPUT HYBRID VOLTAGE REGULATORS

± 6V

3 AMPERES

FEATURES

POSITIVE, NEGATIVE SUPPLY OPERATION
3A CURRENT RATING
40V LINE VOLTAGE CAPABILITY
LINE AND LOAD REGULATION ≤ ±0.5%
THREE-TERMINAL SIMPLICITY

APPLICATIONS

- DC MOTOR SUPPLIES
- MEDICAL ELECTRONICS
- INDUSTRIAL CONTROLS
- DISTRIBUTED POWER SYSTEMS
- MILITARY EQUIPMENT, SPACE AND TELECOMMUNICATIONS
- COMPUTERS
- INSTRUMENTATION
- DATA TERMINALS

TO-3 (2 PINS)

MAXIMUM RATINGS

		CJSE017 CJSE018 CJSE019 CJSE020 CJSE021 CJSE022
$\|\pm V_{in}\|$	INPUT VOLTAGE	40 V
I_{opk}	PEAK LOAD CURRENT	3 A
T_A	OPERATING TEMPERATURE	−55°C to +150°C
T_{stg}	STORAGE TEMPERATURE	−55°C to +150°C
$R_{\theta JC}$	THERMAL RESISTANCE, JUNCTION TO CASE	1.67°C/W
P_D	POWER DISSIPATION (25°C)	90 W

6 V REGULATORS	CJSE	017	018	019	020	021	022
Regulation, Line and Load	T_C = 25°C	+6±5%	-6±.5%	+6±.5%	-6±.5%	+6±.5%	-6±.5%
	-55°C ≤ T_A ≤ +125°C	±3%	±3%	±2%	±2%	±1%	±1%

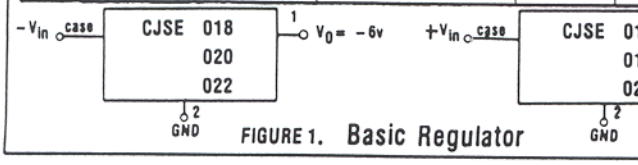

FIGURE 1. Basic Regulator

NOTE: Output voltages values can be internally adjusted between |±4V| and |±10V| to meet your application requirements.

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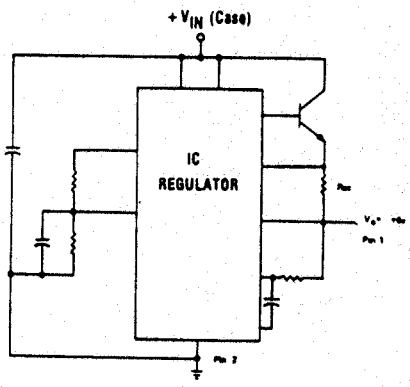
ELECTRICAL CHARACTERISTICS ($|\pm V_{in}|$ = 16 Vdc, $|\pm I_O|$ = 2A, Rsc = .4Ω, Tc = +25°C unless otherwise noted)

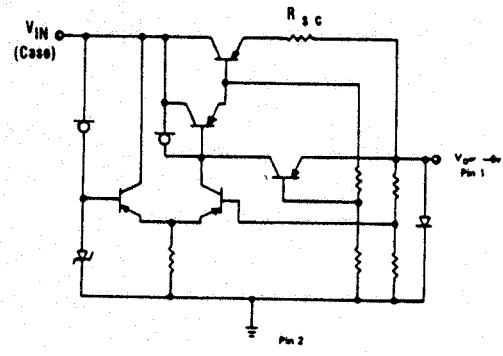
CHARACTERISTICS		SYMBOL	MIN.	MAX.	UNITS
INPUT VOLTAGE		$\|\pm V_{in}\|$	11	40	V
OUTPUT VOLTAGE RANGE		$\|\pm V_O\|$	5.94	6.06	V
OUTPUT VOLTAGE RANGE		$\|\pm V_O\|$			
(-55°C ≤ T_A ≤ +125°C)	CJSE017 CJSE018		5.82	6.18	V
	CJSE019 CJSE020		5.88	6.12	V
	CJSE021 CJSE022		5.94	6.06	V
INPUT-OUTPUT VOLTAGE DIFF.		$\|\pm \Delta V\|$	5.0		V
STANDBY CURRENT		I_{in}-I_O		50	mA
SHORT CIRCUIT CURRENT (V_O = 0V)		I_{sc}		500	mA
RIPPLE ATTENUATION ($\|\pm V_{in}\|$ = 16V, I_O = 1.0A, f = 120Hz)			60		db
TEMPERATURE COEFFICIENT		$\frac{\Delta V_O}{V_O \Delta T}$			
(-55°C ≤ T_A ≤ +125°C)	CJSE017 CJSE018			±0.020	%/°C
	CJSE019 CJSE020			±0.010	%/°C
	CJSE021 CJSE022			±0.005	%/°C

HYBRID VOLTAGE REGULATORS
CJSE017 CJSE018 CJSE019 CJSE020 CJSE021 CJSE022



CJSE 017, 019, 021

FIGURE 2



CJSE 018, 020, 022

FIGURE 3

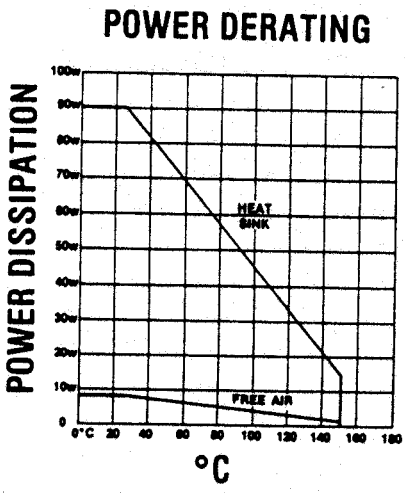


FIGURE 4

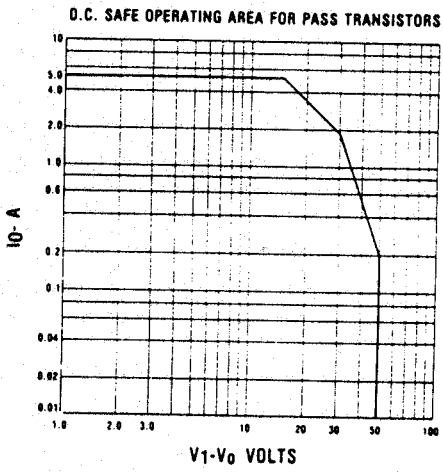


FIGURE 5

NOTES:

1. -6v Reg. incorporate a FET constant current source, which provides current mode regulation. A minimum input-output voltage differential of 5 volts is recommended to bias the FET into its constant current region. At lower voltages the FET becomes resistive, and regulation reverts to the basic mode.
2. Foldback current limiting is accomplished in the regulators as shown in Fig. 6.
3. Output current and power capability may be increased by driving one or more external power transistors. Maintain safe operating conditions for both regulator and the external transistor.

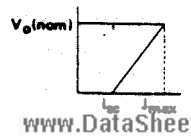


FIGURE 6