

$V_{I\text{ nom}} = 72\text{ V}$ $V_{O1} = -24.0\text{ V}$ $I_{O1\text{ nom}} = -6.25\text{ A}$
 $V_{I\text{ nom}} = 110\text{ V}$ $V_{O2,3} = \pm 15.0\text{ V}$ $I_{O2,3\text{ nom}} = \pm 3.5\text{ A}$

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
INPUT						
V_I	Input voltage range	Continuously	50.4		137.5	V_{DC}
$V_{I\text{ dyn}}$	Input voltage range dynamic	$V_I = 43.2\text{ V} \dots 50.4\text{ V}$ for $t \leq 0.1\text{ s}$ $V_I = 137.5\text{ V} \dots 154\text{ V}$ for $t \leq 1\text{ s}$	43.2		154	V_{DC}
$V_{I\text{ min}}$	Converter shutdown				43	V_{DC}
$V_{I\text{ max}}$	Converter shutdown		155		158	V_{DC}
V_{Enable}	Enable Function, PIN d18 Reference potential: $-V_I$	Converter On: Enable = low $V_{\text{Enable}} \leq 0.8\text{ V}$, $I \leq 1.5\text{ mA}$ Converter Off: Enable = high $V_{\text{Enable}} \geq 3.0\text{ V}$, $I \leq -50\text{ }\mu\text{A}^*$	0		0.8	V_{DC}
	Stand by current	$43.2\text{ V} \leq V_I \leq 154\text{ V}$, Enable = high			18	mA
I_I	Input current	No load $V_I = 154\text{ V}$, $I_{O1} = 0\text{ A}$, $I_{O2,3} = 0\text{ A}$ No load $V_I = 43.2\text{ V}$, $I_{O1} = 0\text{ A}$, $I_{O2,3} = 0\text{ A}$ Nominal load $V_I = 72\text{ V}$, $I_{O1} = -6.25\text{ A}$, $I_{O2,3} = \pm 3.5\text{ A}$ Nominal load $V_I = 110\text{ V}$, $I_{O1} = -6.25\text{ A}$, $I_{O2,3} = \pm 3.5\text{ A}$ Nominal load $V_I = 43.2\text{ V}$, $I_{O1} = -6.25\text{ A}$, $I_{O2,3} = \pm 3.5\text{ A}$		120 3.8 2.5 6.4	70	mA mA A A A
$I_{I\text{ max}}$	Max. input switch on current $V_I \geq V_{I\text{ min}}$, $V_{\text{Enable}} \rightarrow \leq 0.8\text{ V}$	$I_{O1} = -6.25\text{ A}$, $I_{O2,3} = \pm 3.5\text{ A}$ $\Delta t \leq 200\text{ ms}$			6.5	A
	Input fuse		10 A Pico Fuse			
C_I	Converter input capacitance				42	μF
C_d	Damping Unit (optional)		200 \pm 20%			μF
	External line inductance				50	μH
	Reverse input protection	Parallel diode + internal fuse	1.5KE160CA			

OUTPUT: Power Unit

$P_{O\text{ nom}}$	Output power	$43.2\text{ V} \leq V_I \leq 154\text{ V}$		255		W
$V_{O1\text{ nom}}$	Output voltage adjustment, factory set	$I_{O1} = -6.25\text{ A}$	-23.8	-24.0	-24.2	V_{DC}
$V_{O2,3\text{ nom}}$	Output voltage adjustment, factory set	$I_{O2,3} = \pm 3.5\text{ A}$	± 14.8	± 15.0	± 15.2	V_{DC}
ΔV_O	Load regulation V_{O1} , V_{O2} , V_{O3}	$-3.5\text{ A} \leq I_{O2,3} \leq +3.5\text{ A}$ $-6.25\text{ A} \leq I_{O1} \leq 0\text{ A}$ $T_A = -40^\circ\text{C} \dots +85^\circ\text{C}$	$\pm 2.5\% V_{O\text{ nom}}$			V_{DC}
$\Delta V_{O\text{ i dyn}}$	Load regulation dynamic $V_{O1,2,3}$	Pulse load: 20 - 80 - 20 % x $I_{O1,2,3}$		± 100	± 150	mV
t_{dyn}	Response time	Pulse load: 20 - 80 - 20 % x $I_{O2\text{ nom}}$		1	2	ms
$V_{O1,2,3\text{ rms}}$	Ripple	Nominal load BW 300 kHz		100	250	mV _{rms}
$V_{O1,2,3\text{ pp}}$	Noise	Nominal load BW 20 MHz			350	mV _{pp}
t_{on}	Turn on time V_O	1.) $V_I \geq V_{I\text{ min}}$, $V_{\text{Enable}} \rightarrow \leq 0.8\text{ V}$ 2.) $V_{\text{Enable}} \leq 0.8\text{ V}$, $V_I \rightarrow \geq V_{I\text{ min}}$	25		200	ms
t_{off}	Hold up time	$V_{O2,3\text{ min}} = 14.25\text{ V}$ and $V_{O1\text{ min}} = 22.8\text{ V}$ $0\text{ A} \leq I_{O2,3} \leq \pm 3\text{ A}$ and $0\text{ A} \leq I_{O1} \leq 4\text{ A}$	0			ms
	Overvoltage shutdown V_O	$0\text{ A} \leq I_{O1} \leq 3\text{ A}$ $0\text{ A} \leq I_{O2,3} \leq \pm 2\text{ A}$	Converter switch off: $V_{O2,3} \leq 36\text{ V}$ and $V_{O1} \leq 30\text{ V}$			
$I_{O2,3}$	Output current			± 3.5		A
I_{O1}	Output current			6.25		A
	Output short circuit current $I_{O2,3}$	Short circuit between $+V_{O2,3}$ and $-V_{O2,3}$			± 4.2	A
	Output short circuit current I_{O1}	Short circuit between $+V_{O1}$ and $-V_{O1}$			8.7	A
	Sense lines both outputs	Max. voltage drop compensation			0.25	V
C_{O1}	Output capacity converter	Output each output stage		1.35		mF
$C_{O2,3}$	Output capacity converter	Output each output stage		2.85		mF

OUTPUT: Signals

PF	Power Fail, PIN d30 Open Collector Transistor $V_{CE\text{ max}} \leq 70\text{ V}$, $I_{CE\text{ max}} \leq -20\text{ mA}^*$ Reference potential: $-Sense$	Transistor on: PF= low, $V_{O\text{ i}} < V_{O\text{ i min}}$ Transistor off: PF= high, $V_{O\text{ i}} \geq V_{O\text{ i min}}$ Signal defined for $V_O \geq 0.6 \times V_{O\text{ i nom}}$	$V_{O\text{ i}} < 0.95 \times V_{O\text{ nom}} \pm 2\%$ $V_{O\text{ i}} \geq 0.95 \times V_{O\text{ nom}} \pm 2\%$	V V
LED	Signals	$V_{O2,3} > \pm 14.25\text{ V}$ / $V_{O1} < -22.8\text{ V} \pm 2\%$ LED yellow On	$V_{O\text{ i}} < 0.95 \times V_{O\text{ nom}} \pm 2\%$ $V_{O\text{ i}} \geq 0.95 \times V_{O\text{ nom}} \pm 2\%$	

GENERAL SPECIFICATIONS

f	Switching frequency	$V_I = 110\text{ V}$, $I_{O1,2,3} = I_{O\text{ i nom}}$		65		kHz
η	Efficiency	$50.4\text{ V} \leq V_I \leq 137.5\text{ V}$, $P_O \geq 0.7 \times P_{O\text{ nom}}$	91	93		%
	MTBF (SN 29500)	$V_I = 110\text{ V}$, $I_{O1,2,3} = I_{O\text{ i nom}}$, $T_A = +40^\circ\text{C}$			500 000	h
	No load, short circuit proof		Continuously			

* - Sign: sink current

