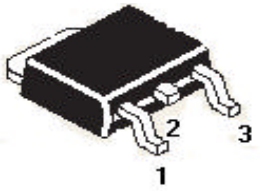
Continental Device India Limited
An ISO/TS 16949, ISO 9001 and ISO 14001 Certified Company

3-TERMINAL POSITIVE VOLTAGE REGULATOR

CL7824DT



Pin: 1 Input
2 Ground
3 Output

TO-252 (DPAK)
Plastic Package

Fixed Voltage Monolithic Integrated Circuit Voltage Regulators is Designed for a Wide Range of Applications

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNIT
Input Voltage	V_{IN}	40	V
Power Dissipation at T_a=25ºC	P_D	2.0	W
Power Dissipation at T_C=25ºC	P_D	15	W
Operating Free Air, Case or Virtual Junction Temperature Range	T_j	0 to 150	ºC
Storage Temperature Range	T_{stg}	- 65 to +150	ºC
Lead Temperature 1.6mm (1/16 inch) from Case for 10 seconds	T_L	260	ºC

Recommended Operating Conditions

DESCRIPTION	SYMBOL	MIN	TYP	MAX	UNIT
Input Voltage	V_I	27		38	V
Output Current	I_O			1.5	A
Operating Junction Temperature	T_j	0		125	ºC

ELECTRICAL CHARACTERISTICS

(At Specified Virtual Junction Temperature, V_I=33V, I_O=500mA, (unless specified otherwise)

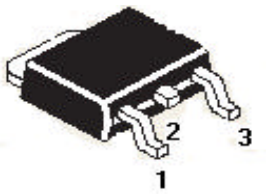
DESCRIPTION	SYMBOL	*TEST CONDITION	MIN	TYP	MAX	UNIT
Output Voltage	**V_O	25ºC	23		25	V
		I_O=5mA to 1A, 0ºC to 125ºC V_I=27V to 38V, P ≤15W, 0ºC to 125ºC	22.8		25.2	V
Line Regulation	R_{BGIN}	V_I=27V to 38V, 25ºC			480	mV
		V_I=30 to 36V, 25ºC			240	mV
Ripple Rejection	R_R	V_I=28V to 38V, f=120Hz, 0º to 125ºC	50			dB
Load Regulation	R_{BGL}	I_O=5mA to1.5A, 25ºC			480	mV
		I_O=250mA to 750mA, 25ºC			240	mV
Output Resistance	$_rO$	f=1KHz , 0ºC to 125ºC		0.028		Ω
Temperature Coefficient of Output Voltage	$\Delta V_O/\Delta T$	I_O=5mA , 0ºC to 125ºC		- 1.5		mV/ºC
Output Noise Voltage	V_{NO}	f=10Hz to 100KHz, 25ºC		170		µV
Dropout Voltage	$V_{DIF\ (min)}$	I_O=1A , 25ºC		2.0		V

***Pulse testing techniques are used to maintain the junction temperature as close to the ambient temperature as possible. Thermal effects must be taken into account separately.**

****This specification applies only for dc power dissipation permitted by absolute maximum rating.**

3-TERMINAL POSITIVE VOLTAGE REGULATOR

CL7824DT



Pin: 1 Input
2 Ground
3 Output

TO-252 (DPAK)
Plastic Package

ELECTRICAL CHARACTERISTICS

(At Specified Virtual Junction Temperature, V_I=33V, I_O=500mA, (unless specified otherwise)

DESCRIPTION	SYMBOL	*TEST CONDITION	MIN	TYP	MAX	UNIT
Quiescent Current	I_Q	25ºC			8.0	mA
Quiescent Current Change	ΔI_{QIN}	V_I=27V to 38V, 0ºC to 125ºC			1.0	mA
	ΔI_{QL}	I_O=5mA to 1A, 0ºC to 125ºC			0.5	mA
Short Circuit Output Current	I_{OS}	25ºC		150		mA
Peak Output Current	I_{omax}	25ºC		2.1		A

***Pulse testing techniques are used to maintain the junction temperature as close to the ambient temperature as possible. Thermal effects must be taken into account separately.**

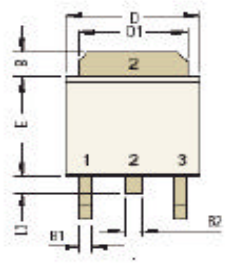
MARKING **XY= Date Code**	**CL** **7824DT** **XY MX**

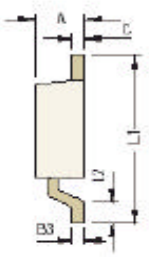
CL7824DT Rev120606E

CL7824DT

TO-252 (DPAK)
Plastic Package

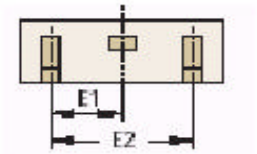
Package TO-252 (DPAK)





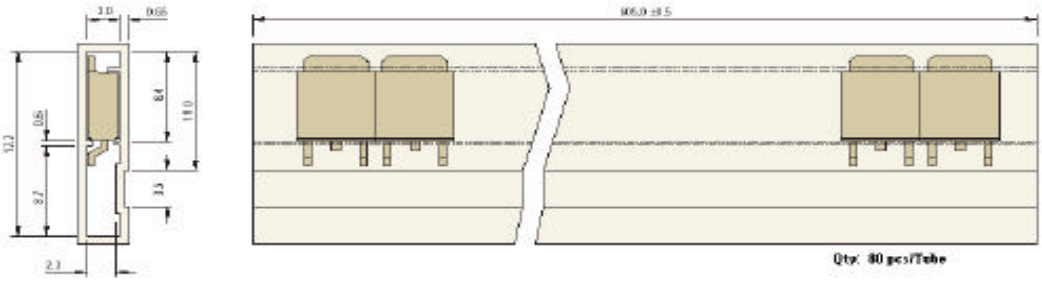
DIM	Min	max
A	2.20	2.40
B	1.30	1.50
B1	0.55	0.65
B2	0.75	0.85
B3	0.46	0.58
C	0.46	0.58
D	6.40	6.60
D1	5.20	5.40
E	5.40	5.60
E1	2.25	2.35
E2	4.50	4.70
L1	9.25	9.75
L2	0.50	
L3	0.90	1.10

All Dimensions are in mm



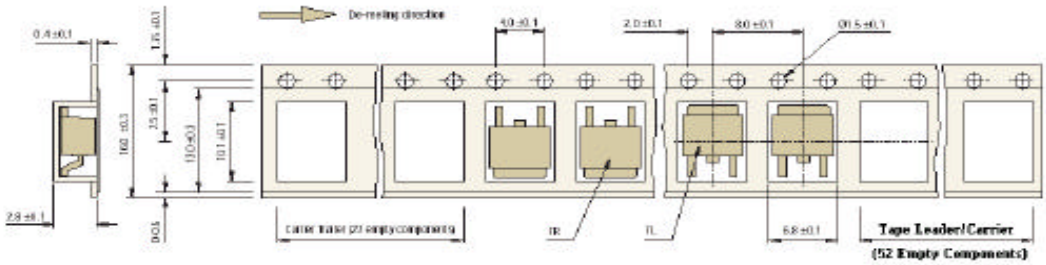
Pin: 1 Input
2 Ground
3 Output

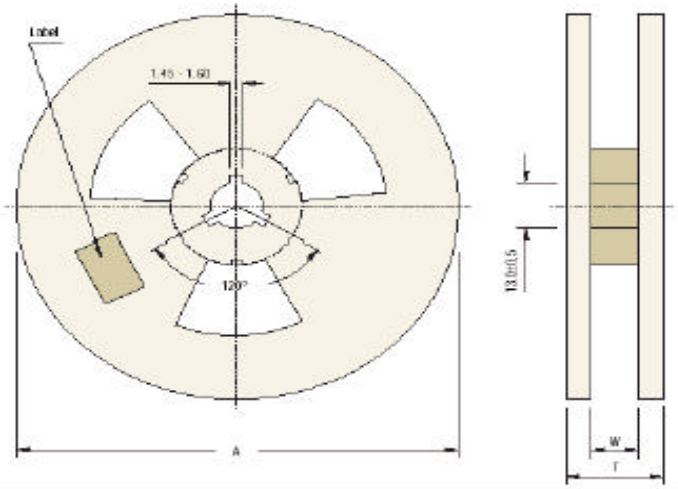
TO-252 (DPAK) Tube Packing



CL7824DT Rev120606E

TO-252 (DPAK) Tape and Reel Specification





Reel Specifications					
Package	Tape Width	Reel Dia. A - Max	Devices Per Reel and MOQ	Inside Thickness W	Reel Thickness T - max
TO-252 (DPAK)	16	330	2,500	17.5 ± 1.5	24.0

All Dimensions are in mm

Packaging Information

Package/ Case Type	Packaging Type	Std. Packing Qty
TO-252 (DPAK)	Tube	1,600
TO-252 (DPAK)	T&R	2,500

T & R: Tape and Reel
Tube : 80 pcs/Tube

CL7824DT Rev120606E

Customer Notes

CL7824DT

TO-252 (DPAK)
Plastic Package

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

CDIL strives for continuous improvement and reserves the right to change the specifications of its products without prior notice.

CDIL is a registered Trademark of
Continental Device India Limited
C-120 Naraina Industrial Area, New Delhi 110 028, India.
Telephone + 91-11-2579 6150, 4141 1112 Fax + 91-11-2579 5290, 4141 1119
email@cdil.com www.cdilsemi.com