CTLM1074-M832D

MULTI DISCRETE MODULE™

SURFACE MOUNT SILICON
LOW $V_{CE(SAT)}$ PNP TRANSISTOR
AND
LOW V_F SCHOTTKY RECTIFIER



Top View Bottom View

TLM832D CASE

MARKING CODE: CFD

APPLICATIONS

- Switching Circuits
- DC / DC Converters
- LCD Backlighting
- Battery powered / Portable Equipment applications including Cell Phones, Digital Cameras, Pagers, PDAs, Notebook PCs, etc.

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CTLM1074-M832D consists of a Low $V_{CE(SAT)}$ PNP Transistor and a Low V_F Schottky Rectifier. Packaged in a small, thermally efficient, leadless 3x2mm surface mount case, it is designed for applications where small size, operational efficiency, and low energy consumption are the prime requirements. Due to its leadless package design this device is capable of dissipating up to 4 times the power of similar devices in comparable sized surface mount packages.

FEATURES

- Dual Chip Device
- High Current (1.0A) Transistor and Schottky Rectifier
- Low $V_{CE(SAT)}$ PNP Transistor (450mV @ I_C=1.0A MAX)
- Low V_F Schottky Rectifier (550mV @ 1.0A MAX)
- High Power to Footprint Ratio of 275mW per sq mm (Package Power Dissipation / Package Surface Area)
- Small TLM 3x2mm Leadless Surface Mount Package
- Complementary Device: CTLM1034-M832D

MAXIMUM RATINGS - CASE: (T_A=25°C)	**SYMBOL**		**UNITS**
Power Dissipation (Note 1)	P_D	1.65	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C
Thermal Resistance	Θ_{JA}	76	°C/W
MAXIMUM RATINGS - Q1: (T_A=25°C)			
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	25	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Continuous Collector Current	I_C	1.0	A
MAXIMUM RATINGS - D1: (T_A=25°C)			
Peak Repetitive Reverse Voltage	V_{RRM}	40	V
Continuous Forward Current	I_F	1.0	A
Peak Repetitive Forward Current, tp≤1.0ms	I_{FRM}	3.5	A
Peak Forward Surge Current, tp=8.0ms	I_{FSM}	10	A

ELECTRICAL CHARACTERISTICS - Q1: (T_A=25°C unless otherwise noted)

SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_{CBO}	V_{CB}=40V			100	nA
I_{EBO}	V_{EB}=6.0V			100	nA
BV_{CBO}	I_C=100μA	40			V
BV_{CEO}	I_C=10mA	25			V
BV_{EBO}	I_E=100μA	6.0			V
$V_{CE(SAT)}$	I_C=50mA, I_B=5.0mA		20	50	mV
$V_{CE(SAT)}$	I_C=100mA, I_B=10mA		35	75	mV

Notes: (1) FR-4 Epoxy PCB with copper mounting pad area of 54mm^2.

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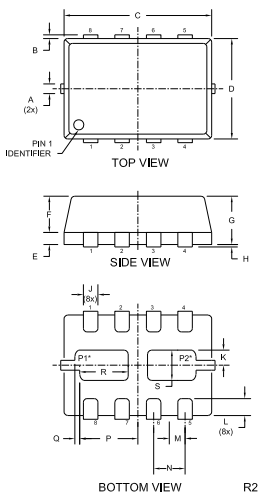
ELECTRICAL CHARACTERISTICS - Q1- Continued: (T_A=25°C)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$V_{CE(SAT)}$	I_C=200mA, I_B=20mA		80	150	mV
$V_{CE(SAT)}$	I_C=500mA, I_B=50mA		150	250	mV
$V_{CE(SAT)}$	I_C=800mA, I_B=80mA		220	400	mV
$V_{CE(SAT)}$	I_C=1.0A, I_B=100mA		275	450	mV
$V_{BE(SAT)}$	I_C=800mA, I_B=80mA			1.1	V
$V_{BE(ON)}$	V_{CE}=1.0V, I_C=10mA			0.9	V
h_{FE}	V_{CE}=1.0V, I_C=10mA	100			
h_{FE}	V_{CE}=1.0V, I_C=100mA	100		300	
h_{FE}	V_{CE}=1.0V, I_C=500mA	100			
h_{FE}	V_{CE}=1.0V, I_C=1.0A	50			
f_T	V_{CE}=10V, I_C=50mA, f=100MHz	100			MHz
C_{ob}	V_{CB}=10V, I_E=0, f=1.0MHz			15	pF

ELECTRICAL CHARACTERISTICS - D1: (T_A=25°C)

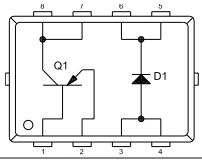
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_R	V_R=5.0V			10	µA
I_R	V_R=8.0V			20	µA
I_R	V_R=15V			50	µA
BV_R	I_R=100µA	40			V
V_F	I_F=10mA			0.29	V
V_F	I_F=100mA			0.36	V
V_F	I_F=500mA			0.45	V
V_F	I_F=1.0A			0.55	V
C_J	V_R=4.0V, f=1.0MHz		50		pF

TLM832D CASE - MECHANICAL OUTLINE



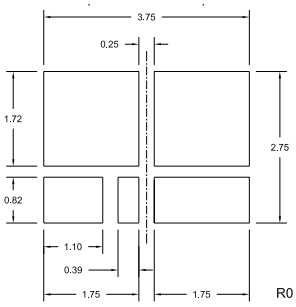
DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.007	0.012	0.170	0.300
B	-	0.005	-	0.125
C	0.114	0.122	2.900	3.100
D	0.075	0.083	1.900	2.100
E	0.006	0.010	0.150	0.250
F	0.026	0.030	0.650	0.750
G	0.031	0.039	0.800	1.000
H	0.000	0.002	0.000	0.050
J	0.009	0.013	0.240	0.340
K	0.006	0.014	0.160	0.360
L	0.008	0.018	0.200	0.450
M	0.013		0.325	
N	0.026		0.650	
P	0.040	0.048	1.010	1.210
Q	0.004		0.100	
R	0.032	0.040	0.820	1.020
S	0.017	0.025	0.430	0.630

TLM832D (REV: R2)



LEAD CODE:
1) Base Q1
2) Emitter Q1
3) Anode D1
4) Anode D1
5) Cathode D1
6) Cathode D1
7) Collector Q1
8) Collector Q1

SUGGESTED MOUNTING PADS
For Maximum Power Dissipation
(Dimensions in mm)



For standard mounting refer to TLM832D Package Details

MARKING CODE: CFD

* Note:
- Exposed pad P1 common to pins 7 and 8
- Exposed pad P2 common to pins 5 and 6

R2 (19-February 2010)