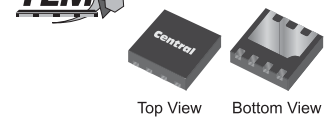
CTLT853-M833S

SURFACE MOUNT
HIGH CURRENT
NPN SILICON TRANSISTOR



Top View Bottom View

TLM833S CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CTLT853-M833S is a high performance 6.0A High Current NPN Transistor designed for applications where small size and operational efficiency are prime requirements. With a maximum power dissipation of 4.5W, and a very small package footprint, this device is 80% smaller than a comparible SOT-223 device. This leadless package design has a power density at least twice that of equivalent package devices.

MARKING CODE: CHA3S

APPLICATIONS:

- Motor control
- Load switches
- Display drives
- Relay drives

FEATURES:

- High Power Density
- High Current (6.0A)
- Low $V_{CE(SAT)}$ (340mV MAX @ 5.0A)
- High Thermal Efficiency
- 3 x 3mm TLM™ case

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**		**UNITS**
Collector-Base Voltage	V_{CBO}	200	V
Collector-Emitter Voltage	V_{CEO}	100	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Continuous Collector Current	I_C	6.0	A
Power Dissipation (Note 1)	P_D	4.5	W
Power Dissipation (Note 2)	P_D	4.0	W
Power Dissipation (Note 3)	P_D	2.5	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C
Thermal Resistance (Note 1)	Θ_{JA}	27.78	°C/W
Thermal Resistance (Note 2)	Θ_{JA}	31.25	°C/W
Thermal Resistance (Note 3)	Θ_{JA}	50.00	°C/W

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

SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_{CBO}	V_{CB}=150V			10	nA
I_{CBO}	V_{CB}=150V, T_A=100°C			1.0	μA
I_{CER}	V_{CE}=150V, R_{BE}≤1.0kΩ			10	nA
I_{EBO}	V_{EB}=6.0V			10	nA
BV_{CBO}	I_C=100μA	200	220		V
BV_{CER}	I_C=10mA, R_{BE}≤1.0kΩ	200	210		V
BV_{CEO}	I_C=10mA	100	110		V
BV_{EBO}	I_E=100μA	6.0	8.0		V
$V_{CE(SAT)}$	I_C=100mA, I_B=5.0mA		22	50	mV
$V_{CE(SAT)}$	I_C=2.0A, I_B=100mA		135	170	mV
$V_{CE(SAT)}$	I_C=5.0A, I_B=500mA			340	mV
$V_{BE(SAT)}$	I_C=5.0A, I_B=500mA			1.25	V

Notes: (1) Ceramic or aluminum core PC Board with copper mounting pad area of 75 mm^2
(2) FR-4 Epoxy PC Board with copper mounting pad area of 75 mm^2
(3) FR-4 Epoxy PC Board with copper mounting pad area of 25 mm^2

R0 (29-November 2011)

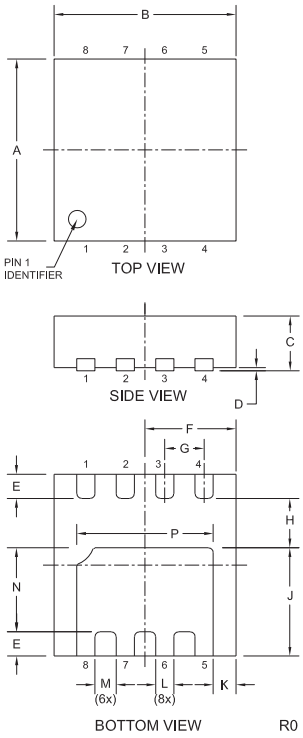
CTLT853-M833S

SURFACE MOUNT
HIGH CURRENT
NPN SILICON TRANSISTOR

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
h_{FE}	V_{CE}=2.0V, I_C=10mA	100			
h_{FE}	V_{CE}=2.0V, I_C=2.0A	100	200	300	
h_{FE}	V_{CE}=2.0V, I_C=4.0A	50	100		
h_{FE}	V_{CE}=2.0V, I_C=10A	20	30		
f_T	V_{CE}=10V, I_C=100mA, f=50MHz		190		MHz
C_{ob}	V_{CB}=10V, I_E=0, f=1.0MHz		38		pF

TLM833S CASE - MECHANICAL OUTLINE



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.112	0.124	2.85	3.15
B	0.112	0.124	2.85	3.15
C	0.031	0.039	0.80	1.00
D	0.000	0.002	0.00	0.05
E	0.012	0.020	0.30	0.50
F	0.056	0.062	1.43	1.57
G	0.026		0.65	
H	0.030	0.033	0.75	0.85
J	0.065	0.073	1.65	1.85
K	0.012	0.016	0.30	0.40
L	0.010	0.014	0.25	0.35
M	0.012	0.016	0.30	0.40
N	0.047	0.057	1.20	1.45
P	0.081	0.091	2.07	2.32

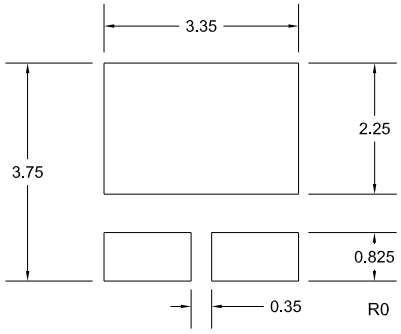
TLM833S (REV:R0)

LEAD CODE:

1) Emitter
2) Emitter
3) Base
4) N.C.
5) Collector
6) Collector
7) Collector
8) Collector

MARKING CODE: CHA3S

REQUIRED MOUNTING PADS
(Dimensions in mm)



Failure to use this mouning pad layout may result in damage to device.

R0 (29-November 2011)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES

PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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www.centralsemi.com/wwreps

Worldwide Distributors:
www.centralsemi.com/wwdistributors

For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: www.centralsemi.com/terms

http://www.centralsemi.com

Product End of Life Notification

PDN ID:	PDN01120
Notification Date:	3/20/19
Last Buy Date:	9/20/19
Last Shipment Date	3/20/20

Summary:The following devices in the TLM833S package are discontinued and now classified as End of Life (EOL).

Although Central Semiconductor Corp. makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by other manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's ongoing Product Management Process. Any replacement products are noted below. The effective date for placing last purchase orders will be six (6) months from the date of this notice and twelve (12) months from the notice date for final shipments, and minimum order quantities may apply. The last purchase and shipment dates may be extended if inventory is available.

Central Part Number	Replacement
CEN1320 BK	N/A, Stock Only
CEN1320 TR	N/A, Stock Only
CEN1372 BK	N/A, Stock Only
CEN1372 TR	N/A, Stock Only
CTLSH3-30M833S BK	N/A, Stock Only
CTLSH3-30M833S TR	N/A, Stock Only
CTLT853-M833S BK	N/A, Stock Only
CTLT853-M833S TR	N/A, Stock Only
CTLT953-M833S BK	N/A, Stock Only
CTLT953-M833S TR	N/A, Stock Only

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. Please email your requests to engineering@centralsemi.com.

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor Corp. will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.