2N3738
2N3739

SILICON
NPN POWER TRANSISTOR



TO-66 CASE

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N3738 and 2N3739 are silicon epitaxial NPN power transistors designed for high voltage amplifier applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_C=25°C)	**SYMBOL**	**2N3738**	**2N3739**	**UNITS**
Collector-Base Voltage	V_{CBO}	250	325	V
Collector-Emitter Voltage	V_{CEO}	225	300	V
Emitter-Base Voltage	V_{EBO}	6.0		V
Continuous Collector Current	I_C	1.0		A
Peak Collector Current	I_{CM}	2.0		A
Continuous Base Current	I_B	0.5		A
Peak Base Current	I_{BM}	1.0		A
Power Dissipation	P_D	20		W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +200		°C
Thermal Resistance	Θ_{JC}	7.5		°C/W

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

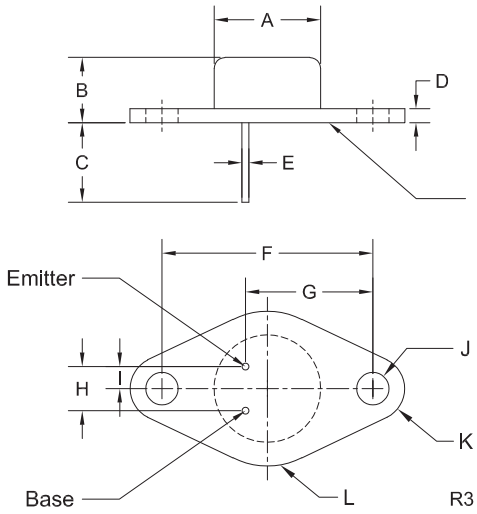
SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**UNITS**
I_{CBO}	V_{CB}=Rated V_{CBO}		0.1	mA
I_{CEV}	V_{CE}=250V, V_{BE}=1.5V (2N3738)		0.5	mA
I_{CEV}	V_{CE}=300V, V_{BE}=1.5V (2N3739)		0.5	mA
I_{CEV}	V_{CE}=125V, V_{BE}=1.5V, T_C=100°C (2N3738)		1.0	mA
I_{CEV}	V_{CE}=200V, V_{BE}=1.5V, T_C=100°C (2N3739)		1.0	mA
I_{CEO}	V_{CE}=125V (2N3738)		0.25	mA
I_{CEO}	V_{CE}=200V (2N3739)		0.25	mA
I_{EBO}	V_{EB}=6.0V		0.1	mA
BV_{CEO}	I_C=5.0mA, (2N3738)	225		V
BV_{CEO}	I_C=5.0mA, (2N3739)	300		V
$V_{CE(SAT)}$	I_C=250mA, I_B=25mA		2.5	V
$V_{BE(ON)}$	V_{CE}=10V, I_C=100mA		1.0	V
h_{FE}	V_{CE}=10V, I_C=50mA	30		
h_{FE}	V_{CE}=10V, I_C=100mA	40	200	
h_{FE}	V_{CE}=10V, I_C=250mA	25		
h_{fe}	V_{CE}=20V, I_C=100mA, f=1.0kHz	35		
f_T	V_{CE}=10V, I_C=100mA, f=10MHz	10		MHz
C_{ob}	V_{CB}=100V, I_E=0, f=100kHz		20	pF

R1 (2-September 2014)

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TO-66 CASE - MECHANICAL OUTLINE



Seating Plane:
The seating plane must be within 0.001" concave to 0.004" convex within 0.600" diameter from the center of the device.

MARKING:
FULL PART NUMBER

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A (DIA)	0.470	0.500	11.94	12.70
B	0.250	0.340	6.35	8.64
C	0.360	-	9.14	-
D	0.050	0.075	1.27	1.91
E (DIA)	0.028	0.034	0.71	0.86
F	0.956	0.964	24.28	24.48
G	0.570	0.590	14.48	14.99
H	0.190	0.210	4.83	5.33
I	0.093	0.107	2.36	2.72
J (DIA)	0.142	0.152	3.61	3.86
K (RAD)	0.141		3.58	
L (RAD)	0.345		8.76	

TO-66 (REV:R3)

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

Corporate Headquarters & Customer Support Team

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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:	PDN01247
Notification Date:	9/01/22
Last Buy Date:	3/01/23
Last Shipment Date	9/01/23

Summary:The following transistors are discontinued and now classified as of 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 Portfolio Management. 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.

*** All Plating types (PBFREE,TIN/LEAD) for each item listed are included in this notice.**

Central Part Number	Suggested Replacement
BCY79-VIII	N/A
CEN853	N/A
CZT32C BK	N/A
CZT32C TR	N/A
2N3583	N/A
2N3584	N/A
2N3585	N/A
2N3738	N/A
2N3740	N/A
2N3741	N/A
2N3741A	N/A
2N4299	N/A
2N4900	N/A
2N6107	N/A
2N6317	N/A
2N6318	N/A
2N6467	N/A
2N6468	N/A

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. If you would like assistance, please visit https://my.centralsemi.com/submit-inquiry?type=ER to submit an online inquiry.

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.