

2N4237
2N4238
2N4239

**SILICON
NPN TRANSISTORS**



TO-39 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N4237, 2N4238, and 2N4239 are silicon NPN transistors mounted in a hermetically sealed metal case, designed for power amplifier, power driver, and switching power supply applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: ($T_C=25^\circ\text{C}$ unless otherwise noted)

	SYMBOL	2N4237	2N4238	2N4239	UNITS
Collector-Base Voltage	V_{CBO}	50	80	100	V
Collector-Emitter Voltage	V_{CEO}	40	60	80	V
Emitter-Base Voltage	V_{EBO}		6.0		V
Continuous Collector Current	I_C		3.0		A
Continuous Base Current	I_B		0.5		A
Power Dissipation	P_D		6.0		W
Operating and Storage Junction Temperature	T_J, T_{stg}		-65 to +200		$^\circ\text{C}$
Thermal Resistance	θ_{JC}		29.2		$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS: ($T_C=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=\text{Rated } V_{CBO}$		100	μA
I_{CEV}	$V_{CE}=45\text{V}, V_{EB}=1.5\text{V}$ (2N4237)		100	μA
I_{CEV}	$V_{CE}=75\text{V}, V_{EB}=1.5\text{V}$ (2N4238)		100	μA
I_{CEV}	$V_{CE}=90\text{V}, V_{EB}=1.5\text{V}$ (2N4239)		100	μA
I_{CEV}	$V_{CE}=30\text{V}, V_{EB}=1.5\text{V}, T_C=150^\circ\text{C}$ (2N4237)		1.0	mA
I_{CEV}	$V_{CE}=50\text{V}, V_{EB}=1.5\text{V}, T_C=150^\circ\text{C}$ (2N4238)		1.0	mA
I_{CEV}	$V_{CE}=70\text{V}, V_{EB}=1.5\text{V}, T_C=150^\circ\text{C}$ (2N4239)		1.0	mA
I_{CEO}	$V_{CE}=\text{Rated } V_{CEO}$		700	μA
I_{EBO}	$V_{EB}=6.0\text{V}$		500	μA
BV_{CEO}	$I_C=100\text{mA}$ (2N4237)	40		V
BV_{CEO}	$I_C=100\text{mA}$ (2N4238)	60		V
BV_{CEO}	$I_C=100\text{mA}$ (2N4239)	80		V
$V_{CE(\text{SAT})}$	$I_C=500\text{mA}, I_B=50\text{mA}$		0.3	V
$V_{CE(\text{SAT})}$	$I_C=1.0\text{A}, I_B=0.1\text{A}$		0.6	V
$V_{BE(\text{SAT})}$	$I_C=1.0\text{A}, I_B=0.1\text{A}$		1.5	V
$V_{BE(\text{ON})}$	$V_{CE}=1.0\text{V}, I_C=250\text{mA}$		1.0	V

R3 (26-March 2015)

2N4237
2N4238
2N4239

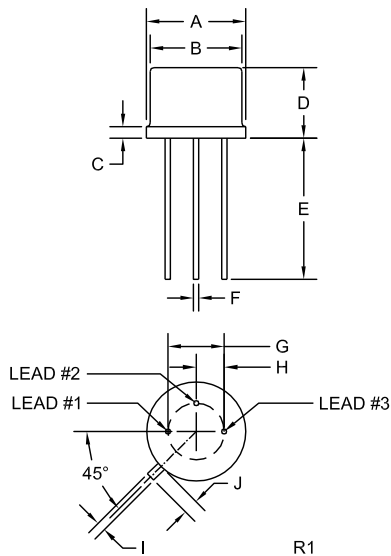
SILICON
NPN TRANSISTORS



ELECTRICAL CHARACTERISTICS - Continued: ($T_C=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
h_{FE}	$V_{CE}=1.0\text{V}$, $I_C=50\text{mA}$	30		
h_{FE}	$V_{CE}=1.0\text{V}$, $I_C=250\text{mA}$	30	250	
h_{FE}	$V_{CE}=1.0\text{V}$, $I_C=500\text{mA}$	30		
h_{FE}	$V_{CE}=1.0\text{V}$, $I_C=1.0\text{A}$	15		
h_{fe}	$V_{CE}=10\text{V}$, $I_C=100\text{mA}$, $f=1.0\text{kHz}$	30		
f_T	$V_{CE}=10\text{V}$, $I_C=100\text{mA}$, $f=1.0\text{kHz}$	2.0		MHz
C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, $f=100\text{kHz}$		100	pF

TO-39 CASE - MECHANICAL OUTLINE



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.335	0.370	8.51	9.40
B (DIA)	0.315	0.335	8.00	8.51
C	-	0.040	-	1.02
D	0.240	0.260	6.10	6.60
E	0.500	-	12.70	-
F (DIA)	0.016	0.021	0.41	0.53
G (DIA)	0.200		5.08	
H	0.100		2.54	
I	0.028	0.034	0.71	0.86
J	0.029	0.045	0.74	1.14

TO-39 (REV: R1)

LEAD CODE:

- 1) Emitter
- 2) Base
- 3) Collector

MARKING: FULL PART NUMBER

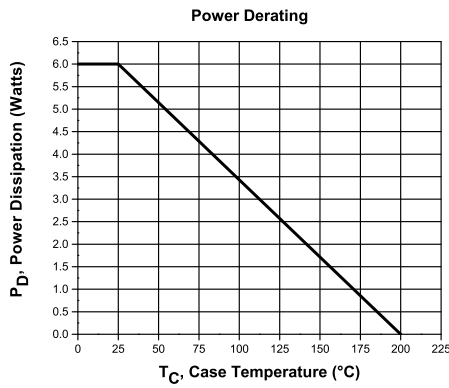
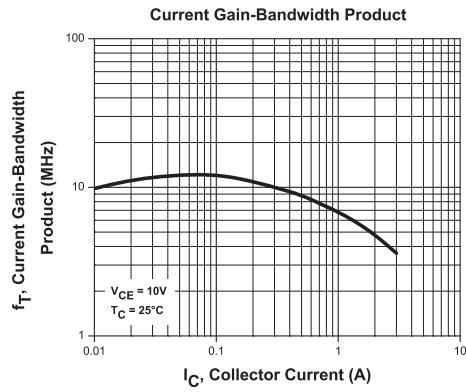
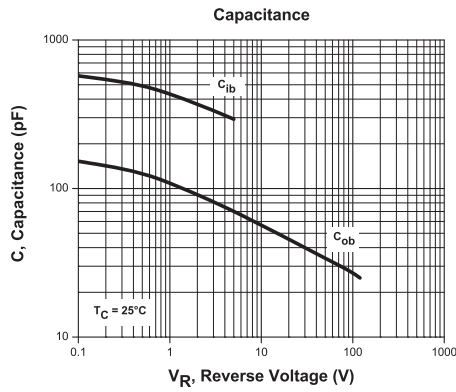
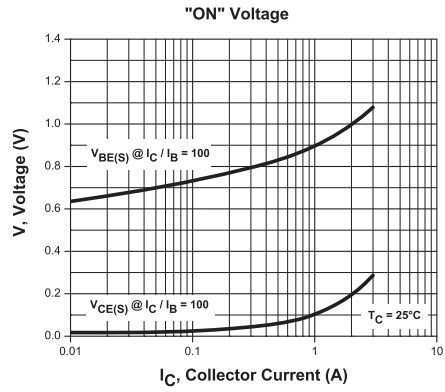
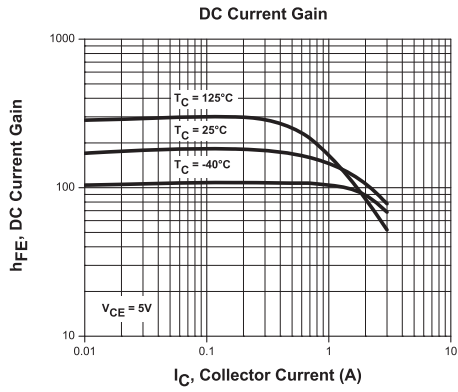
R3 (26-March 2015)

2N4237
2N4238
2N4239

SILICON
NPN TRANSISTORS



TYPICAL ELECTRICAL CHARACTERISTICS



R3 (26-March 2015)



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

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centrasemi.com

Worldwide Field Representatives:
www.centrasemi.com/wwreps

Worldwide Distributors:
www.centrasemi.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.centrasemi.com/terms

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Bipolar Transistors - BJT category](#):

Click to view products by [Central Semiconductor manufacturer](#):

Other Similar products are found below :

[619691C](#) [MCH4017-TL-H](#) [BC546/116](#) [BC557/116](#) [BSW67A](#) [NTE158](#) [NTE187A](#) [NTE195A](#) [NTE2302](#) [NTE2330](#) [NTE63](#) [C4460](#)
[2SA1419T-TD-H](#) [2SA1721-O\(TE85L,F\)](#) [2SA2126-E](#) [2SB1204S-TL-E](#) [2SC5488A-TL-H](#) [2SD2150T100R](#) [SP000011176](#) [FMMTA92QTA](#)
[2N2369ADCSM](#) [2N5769](#) [2SC2412KT146S](#) [2SC5490A-TL-H](#) [2SD1816S-TL-E](#) [2SD1816T-TL-E](#) [CMXT2207 TR](#) [CPH6501-TL-E](#)
[MCH4021-TL-E](#) [US6T6TR](#) [NJL0281DG](#) [732314D](#) [CMXT3906 TR](#) [CPH3121-TL-E](#) [CPH6021-TL-H](#) [873787E](#) [IMZ2AT108](#) [UMX21NTR](#)
[MCH6102-TL-E](#) [NJL0302DG](#) [2N3583](#) [2SA1434-TB-E](#) [2SC3143-4-TB-E](#) [2SD1621S-TD-E](#) [NTE103](#) [30A02MH-TL-E](#) [NSV40301MZ4T1G](#)
[NTE101](#) [NTE13](#) [NTE15](#)