

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N5189

NPN SILICON
POWER TRANSISTOR

JEDEC TO-39 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N5189 type is a NPN Silicon Epitaxial Planar Transistors designed for core driver and high current switching applications.

MAXIMUM RATINGS ($T_C = 25^\circ\text{C}$)

	<u>SYMBOL</u>		<u>UNITS</u>
Collector-Base Voltage	V_{CB0}	60	V
Collector-Emitter Voltage	V_{CEO}	35	V
Emitter-Base Voltage	V_{EBO}	5.0	V
Power Dissipation	P_D	5.0	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +200	$^\circ\text{C}$
Thermal Resistance	θ_{JC}	35	$^\circ\text{C}/\text{W}$

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

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>MAX</u>	<u>UNITS</u>
I_{CBO}	$V_{CB} = 30\text{V}$		0.5	μA
BV_{CBO}	$I_C = 100\mu\text{A}$	60		V
BV_{CEO}	$I_C = 10\text{mA}$	35		V
BV_{CEO}	$I_E = 100\mu\text{A}$	5.0		V
$V_{CE(SAT)}$	$I_C = 1.0\text{A}, I_B = 100\text{mA}$		1.0	V
$V_{BE(SAT)}$	$I_C = 1.0\text{A}, I_B = 100\text{mA}$		1.5	V
h_{FE}	$V_{CE} = 1.0\text{V}, I_C = 100\text{mA}$	30		
h_{FE}	$V_{CE} = 1.0\text{V}, I_C = 500\text{mA}$	35		
h_{FE}	$V_{CE} = 1.0\text{V}, I_C = 1.0\text{A}$	15		
f_T	$V_{CE} = 10\text{V}, I_C = 50\text{mA}, f = 100\text{MHz}$	250		MHz
t_{on}	$V_{CC} = 10.7\text{V}, I_C = 1.0\text{A}, I_{B1} = 100\text{mA}$		40	ns
t_{off}	$V_{CC} = 10.7\text{V}, I_C = 1.0\text{A}, I_{B1} = I_{B2} = 100\text{mA}$		70	ns
C_{ob}	$V_{CB} = 10\text{V}, I_E = 0, f = 1.0\text{MHz}$		12	pF

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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