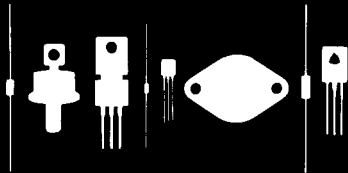


Central  
Semiconductor Corp.

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145 Adams Avenue  
Hauppauge, New York 11788



2N4863

NPN SILICON TRANSISTOR

JEDEC TO-39 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N4863 type is an epitaxial planar silicon NPN transistor designed for high voltage, inductive load switching applications.

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

	SYMBOL		UNIT
Collector-Base Voltage	$V_{CB0}$	140	V
Collector-Emitter Voltage	$V_{CE0}$	120	V
Collector Current	$I_C$	2.0	A
Power Dissipation ( $T_C=100^\circ\text{C}$ )	$P_D$	4.0	W
Operating and Storage			
Junction Temperature	$T_J, T_{stg}$	-65 to +200	$^\circ\text{C}$
Thermal Resistance	$\theta_{JC}$	25	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
$I_{CB0}$	$V_{CB}=60\text{V}$		100	nA
$I_{CEV}$	$V_{CE}=140\text{V}, V_{EB}=0.5\text{V}$		10	$\mu\text{A}$
$I_{CE0}$	$V_{CE}=60\text{V}$		10	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=8.0\text{V}$		10	$\mu\text{A}$
$BV_{CB0}$	$I_C=1.0\text{mA}$	140		V
$BV_{CE0}$	$I_C=10\text{mA}$	120		V
$BV_{EBO}$	$I_E=10\mu\text{A}$	8.0		V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		0.2	V
$V_{CE(SAT)}$	$I_C=2.0\text{A}, I_B=200\text{mA}$		1.5	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=500\text{mA}$		1.2	V
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=500\text{mA}$	50	150	
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=2.0\text{A}$	15		
$f_T$	$V_{CE}=20\text{V}, I_C=100\text{mA}$	50		MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		50	pF
$t_{on}$	$V_{CC}=30\text{V}, I_C=1.0\text{A}, I_{B1}=I_{B2}=100\text{mA}$	0.3 TYP		$\mu\text{s}$
$t_{off}$	$V_{CC}=30\text{V}, I_C=1.0\text{A}, I_{B1}=I_{B2}=100\text{mA}$		1.7	$\mu\text{s}$

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## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### 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

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### DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2<sup>nd</sup> 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

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### 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).

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### CONTACT US

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