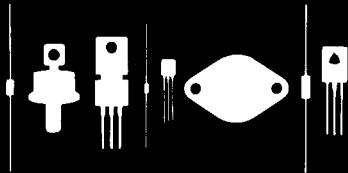


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145 Adams Avenue  
Hauppauge, New York 11788



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	$^\circ\text{C}/\text{W}$

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	$\mu\text{A}$
$I_{EB0}$	$V_{EB}=8.0\text{V}$		10	$\mu\text{A}$
$BV_{CB0}$	$I_C=1.0\text{mA}$	140		V
$BV_{CE0}$	$I_C=10\text{mA}$	120		V
$BV_{EB0}$	$I_E=10\mu\text{A}$	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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