

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N3439

2N3440

Silicon NPN Transistor

JEDEC TO39 Case

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N3439 and 2N3440 are Silicon NPN Transistors designed for consumer and industrial line-operated applications.

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

		<u>2N3439</u>	<u>2N3440</u>	<u>Unit</u>
Collector-Base Voltage	V_{CBO}	450	300	V
Collector-Emitter Voltage	V_{CEO}	350	250	V
Emitter-Base Voltage	V_{EBO}	7.0	7.0	V
Collector Current	I_C	1.0	1.0	A
Base Current	I_B	0.5	0.5	A
Power Dissipation	P_T	1.0	1.0	W
Operating Temperature	T_J	-65 to 200		$^\circ\text{C}$
Storage Temperature	T_{stg}	-65 to 200		$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

<u>Symbol</u>	<u>Test Conditions</u>		<u>Min.</u>	<u>Max</u>	<u>Unit</u>
I_{CBO}	$V_{CB} = 360\text{V}$	2N3439		20	μA
I_{CBO}	$V_{CB} = 250\text{V}$	2N3440		20	μA
I_{CEO}	$V_{CE} = 300\text{V}$	2N3439		20	μA
I_{CEO}	$V_{CE} = 200\text{V}$	2N3440		50	μA
I_{EBO}	$V_{EBO} = 6$	Both		20	μA
V_{CEO}	$I_C = 50\text{mA}$	2N3439	350		V
V_{CEO}	$I_C = 50\text{mA}$	2N3440	250		V
$V_{CE}(s)$	$I_C = 50\text{mA}$, $I_B = 4\text{mA}$	Both		0.5	V
$V_{BE}(s)$	$I_C = 50\text{mA}$, $I_B = 4\text{mA}$	Both		1.3	V
h_{FE}	$V_{CE} = 10\text{V}$, 2mA	2N3439	30		-
h_{FE}	$V_{CE} = 10\text{V}$, 20mA	Both	40	160	-
f_t	$V_{CE} = 10\text{V}$, $I_C = 10\text{mA}$, $f = 5\text{MHZ}$	Both	15		MHZ
C_{ob}	$V_{CB} = 10\text{V}$, $f = 1\text{MHZ}$	Both		10	pf
C_{ib}	$V_{EB} = 5\text{V}$, $f = 1\text{MHZ}$	Both		75	pf