

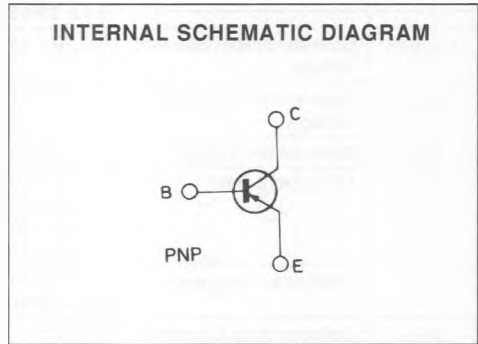
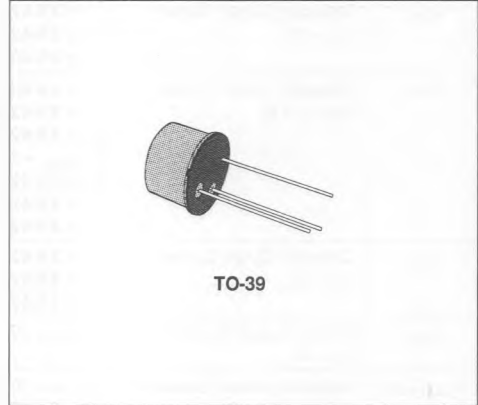
MEDIUM POWER GENERAL PURPOSE TRANSISTORS

DESCRIPTION

The 2N4234, 2N4235 and 2N4236 are silicon epitaxial planar PNP transistors mounted in Jedec TO-39 metal case.

They are intended for use in switching and amplifier applications.

The complementary NPN types are the 2N4237, and 2N4238 and 2N4239 respectively.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	2N4234	2N4235	2N4236	Unit
V_{CBO}	Collector-base Voltage ($I_E = 0$)	- 40	- 60	- 80	V
V_{CEO}	Collector-emitter Voltage ($I_B = 0$)	- 40	- 60	- 80	V
V_{EBO}	Emitter-base Voltage ($I_C = 0$)		- 7		V
I_C	Collector Current		- 3		A
I_B	Base Current		- 0.2		A
P_{TOT}	Total Power Dissipation at $T_{case} \leq 25^\circ\text{C}$ $T_{amb} \leq 25^\circ\text{C}$		6		W
			1		W
T_{stg}	Storage Temperature		- 65 to 200		$^\circ\text{C}$
T_J	Junction Temperature		200		$^\circ\text{C}$

THERMAL DATA

$R_{th\ j\ case}$	Thermal Resistance Junction-case	Max	29	°C/W
$R_{th\ j\ amb}$	Thermal Resistance Junction-ambient	Max	175	°C/W

ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cutoff Current ($I_E = 0$)	for 2N4234 $V_{CE} = -40V$ for 2N4235 $V_{CE} = -60V$ for 2N4236 $V_{CE} = -80V$			- 0.1 - 0.1 - 0.1	mA mA mA
I_{CEV}	Collector Cutoff Current ($V_{BE} = 1.5$)	for 2N4234 $V_{CE} = -40V$ for 2N4235 $V_{CE} = -60V$ for 2N4236 $V_{CE} = -80V$ $T_{case} = 150^{\circ}C$ for 2N4234 $V_{CE} = -30V$ for 2N4235 $V_{CE} = -40V$ for 2N4236 $V_{CE} = -60V$			- 0.1 - 0.1 - 0.1 - 1 - 1 - 1	mA mA mA mA mA mA
I_{CEO}	Collector Cutoff Current ($I_B = 0$)	for 2N4234 $V_{CE} = -30V$ for 2N4235 $V_{CE} = -40V$ for 2N4236 $V_{CE} = -60V$			- 1 - 1 - 1	mA mA mA
I_{EBO}	Emitter Cutoff Current ($I_C = 0$)	$V_{EB} = 7V$			- 0.5	mA
$V_{CEO(sus)}^*$	Collector-emitter Sustaining Voltage ($I_B = 0$)	$I_C = -100mA$ for 2N4234 for 2N4235 for 2N4236	- 40 - 60 - 80			V V V
$V_{CE(sat)}^*$	Collector-emitter Saturation Voltage	$I_C = -1A$ $I_B = -100mA$			- 0.6	V
$V_{BE(sat)}^*$	Base-emitter Saturation Voltage	$I_C = -1A$ $I_B = -100mA$			- 1.5	V
V_{BE}^*	Base-emitter Voltage	$I_C = -0.25A$ $V_{CE} = -1V$			- 1	V
h_{FE}^*	DC Current Gain	$I_C = -100mA$ $V_{CE} = -1V$ $I_C = -250mA$ $V_{CE} = -1V$ $I_C = -500mA$ $V_{CE} = -1V$ $I_C = -1A$ $V_{CE} = -1V$	40 30 20 10		150	
f_T	Transistion Frequency	$I_C = -100mA$ $V_{CE} = -10V$ $f = 1MHz$	3			MHz
C_{CBO}	Collector-base Capacitance	$I_E = 0$ $V_{CB} = -10V$ $f = 100KHz$			100	pF
h_{fe}	Small Signal Current Gain	$I_C = -50mA$ $V_{CE} = -10V$ $f = 1KHz$	25			

* Pulsed : pulse duration = 300 μ s, duty cycle \leq 2%.