



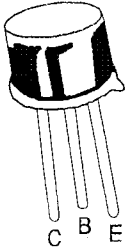
SOLID STATE INC.

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PNP SILICON PLANAR TRANSISTORS

2N4234, 2N4235
2N4236



TO-39
Metal Can Package

General Purpose Transistor

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	2N4234	2N4235	2N4236	UNIT
Collector Emitter Voltage	V_{CEO}	40	60	80	V
Collector Base Voltage	V_{CBO}	40	60	80	V
Emitter Base Voltage	V_{EBO}	7.0			V
Base Current	I_B	200			mA
Collector Current Continuous	I_C	1.0			A
Power Dissipation @ $T_a=25^\circ\text{C}$ Derate Above 25°C	P_D	1.0			W
		5.7			mW/°C
Power Dissipation @ $T_c=25^\circ\text{C}$ Derate Above 25°C	P_D	6.0			W
		34			mW/°C
Operating and Storage Junction Temperature Range	T_j, T_{stg}	- 65 to +200			°C

THERMAL CHARACTERISTICS

Junction to Case	$R_{th(j-c)}$	29	°C/W
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ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless specified otherwise)

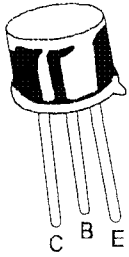
DESCRIPTION	SYMBOL	TEST CONDITION	2N4234	2N4235	2N4236	UNIT
Collector Emitter Voltage	V_{CEO}	$I_C=1\text{mA}, I_B=0$	40	60	80	V
Collector Cut Off Current	I_{CEO}	$V_{CE}=30\text{V}, I_B=0$	1.0			mA
		$V_{CE}=40\text{V}, I_B=0$		1.0		mA
		$V_{CE}=60\text{V}, I_B=0$			1.0	mA
Collector Cut Off Current	I_{CEX}	$V_{CE}=40\text{V}, V_{EB}=1.5\text{V}$	0.1			mA
		$V_{CE}=60\text{V}, V_{EB}=1.5\text{V}$		0.1		mA
		$V_{CE}=80\text{V}, V_{EB}=1.5\text{V}$			0.1	mA
		$T_C=150^\circ\text{C}$				
		$V_{CE}=30\text{V}, V_{EB}=1.5\text{V}$	1.0			mA
		$V_{CE}=40\text{V}, V_{EB}=1.5\text{V}$		1.0		mA
		$V_{CE}=60\text{V}, V_{EB}=1.5\text{V}$			1.0	mA

			MIN	TYP	MAX	
Collector Cut Off Current	I_{CBO}	$V_{CB}=\text{Rated } V_{CBO}, I_E=0$			0.1	mA
Emitter Cut Off Current	I_{EBO}	$V_{EB}=7\text{V}, I_C=0$			0.5	mA
DC Current Gain	h_{FE}	$I_C=100\text{mA}, V_{CE}=1\text{V}$	40			
		$I_C=250\text{mA}, V_{CE}=1\text{V}$	30		150	
		$I_C=500\text{mA}, V_{CE}=1\text{V}$	20			
		$I_C=1\text{A}, V_{CE}=1\text{V}$	10			

*Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

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

SMALL SIGNAL CHARACTERISTICS

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Emitter Saturation Voltage	$*V_{CE(sat)}$	$I_C=1A, I_B=125mA$			0.6	V
Base Emitter Saturation Voltage	$*V_{BE(sat)}$	$I_C=1A, I_B=0.1A$			1.5	V
Base Emitter On Voltage	$*V_{BE(on)}$	$I_C=250mA, V_{CE}=1V$			1.0	V

SMALL SIGNAL CHARACTERISTICS

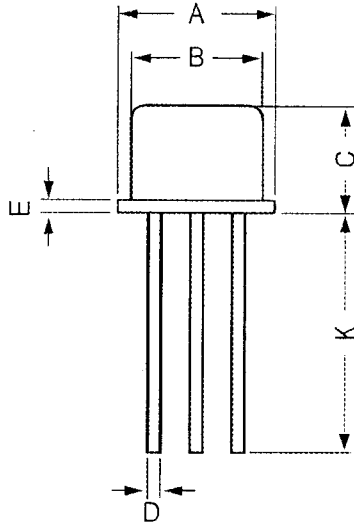
Output Capacitance	C_{obo}	$V_{CB}=10V, I_E=0, f=100KHz$			100	pF
Small Signal Current Gain	h_{fe}	$I_C=50mA, V_{CE}=10V, f=1KHz$	25			
Current Gain Bandwidth Product	f_T	$I_C=100mA, V_{CE}=10V, f=1MHz$	3.0			MHz

*Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$

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2N4236

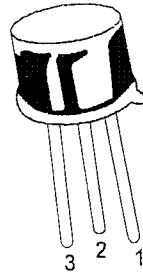
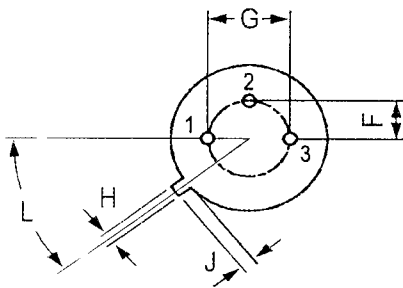
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All dimensions are in mm

DIM	MIN	MAX
A	8.50	9.39
B	7.74	8.50
C	6.09	6.60
D	0.40	0.53
E	—	0.88
F	2.41	2.66
G	4.82	5.33
H	0.71	0.86
J	0.73	1.02
K	12.70	—
L	42 DEG	48 DEG



PIN CONFIGURATION

1. EMITTER
2. BASE
3. COLLECTOR