

## PNP 2N3636 – 2N3637

### SILICON PLANAR RF TRANSISTORS

The 2N3636 and 2N3637 are PNP transistors mounted in TO-39 metal case. They are intended for high voltage switching and Low Power Amplifier. Compliance to RoHS

#### ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings	Value	Unit
$V_{CEO}$	Collector-Emitter Voltage ( $I_b = 0$ )	-175	V
$V_{CBO}$	Collector-Base Voltage ( $I_e = 0$ )	-175	V
$V_{EBO}$	Emitter-Base Voltage ( $I_c = 0$ )	-5	V
$I_C$	Collector Current	-1	A
$P_D$	Total Power Dissipation	$T_{amb} = 25^\circ\text{C}$	1
		$T_{case} = 25^\circ\text{C}$	5
$T_J$	<i>Junction Temperature</i>	200	$^\circ\text{C}$
$T_{Stg}$	Storage Temperature Range	-65 to +200	$^\circ\text{C}$
$T_{amb}$	Operating Ambient Temperature	-65 to +150	$^\circ\text{C}$

#### ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -100\text{ V}, I_E = 0$	-	-	-100	nA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -3\text{ V}, I_C = 0$	-	-	-50	nA
$V_{CEO}$	Collector Emitter Breakdown Voltage (*)	$I_C = -10\text{ mA}, I_B = 0$	-175	-	-	V
$V_{CBO}$	Collector Base Breakdown Voltage	$I_C = -100\text{ }\mu\text{A}, I_E = 0$	-175	-	-	V
$V_{EBO}$	Emitter Base Breakdown Voltage	$I_E = -10\text{ mA}, I_C = 0$	-5	-	-	V

## PNP 2N3636 – 2N3637

### ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit	
$h_{FE}$	DC Current Gain (*)	$I_C = -0.1 \text{ mA}$ $V_{CE} = -10 \text{ V}$	2N3636	40	-	-	-
			2N3637	80	-	-	
		$I_C = -1 \text{ mA}$ $V_{CE} = -10 \text{ V}$	2N3636	45	-	-	
			2N3637	90	-	-	
		$I_C = -10 \text{ mA}$ $V_{CE} = -10 \text{ V}$	2N3636	50	-	-	
			2N3637	100	-	-	
		$I_C = -50 \text{ mA}$ $V_{CE} = -10 \text{ V}$	2N3636	50	-	150	
	2N3637	100	-	300			
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C = -10 \text{ mA}, I_B = -1 \text{ mA}$		-	-	0.3	V
		$I_C = -50 \text{ mA}, I_B = -5 \text{ mA}$		-	-	0.5	
$V_{BE(SAT)}$	Base-Emitter saturation Voltage (*)	$I_C = -10 \text{ mA}, I_B = -1 \text{ mA}$		-	-	0.8	V
		$I_C = -50 \text{ mA}, I_B = -5 \text{ mA}$		-	-	0.9	
$f_T$	Transition frequency	$I_C = -30 \text{ mA}, V_{CE} = -30 \text{ V}$ $f = 100 \text{ MHz}$	2N3636	150	-	-	MHz
			2N3637	200	-	-	
$C_{ob}$	Output Capacitance	$I_E = 0, V_{CB} = -20 \text{ V}, f = 100 \text{ kHz}$		-	-	10	pF
$C_{ib}$	Input Capacitance	$I_C = 0, V_{EB} = -1 \text{ V}, f = 100 \text{ kHz}$		-	-	75	PF

### SWITCHING TIMES

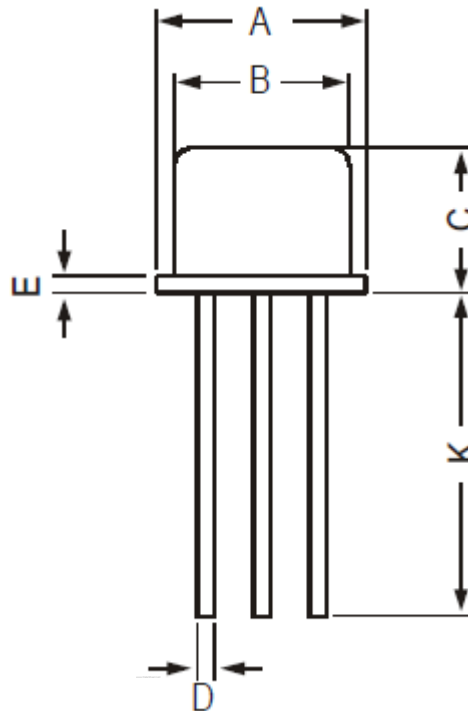
Symbol	Ratings	Value	Unit
$t_{on}$	Turn-on time	400	ns
$t_{off}$	Turn-off time		
		600	

(\*) Pulse conditions :  $t_p < 300 \mu\text{s}, \delta = 1.5\%$

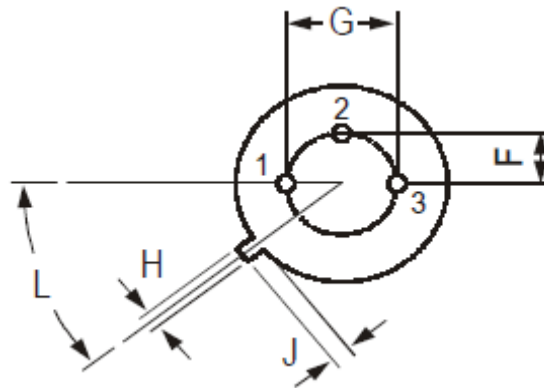
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### MECHANICAL DATA CASE TO-39

DIMENSIONS (mm)		
	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°	48°



Pin 1 :	Emitter
Pin 2 :	Base
Pin 3 :	Collector
Case :	Collector



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