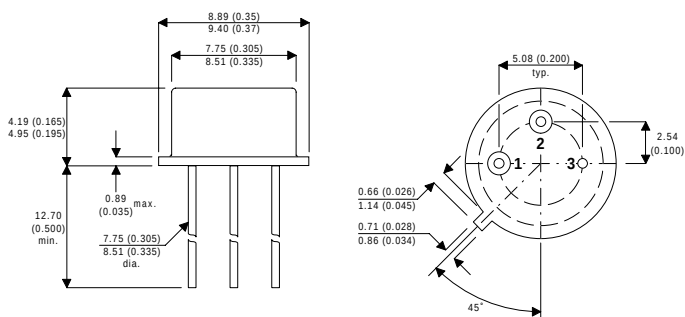


MECHANICAL DATA

Dimensions in mm (inches)



TO-39

Pin 1 – Emitter

Pin 2 – Base

Pin 3 – Collector

HIGH SPEED MEDIUM VOLTAGE SWITCHES

DESCRIPTION

The 2N4036 is a silicon epitaxial planar PNP transistors in jedec TO-39 metal case intended for use in switching applications.

ABSOLUTE MAXIMUM RATINGS

$T_{CASE} = 25^{\circ}C$ unless otherwise stated

		2N4036
V_{CBO}	Collector – Base Voltage ($I_E = 0$)	-90V
V_{CEX}	Collector – Emitter Voltage ($V_{BE} = 1.5V$)	-85V
V_{EBO}	Emitter – Base Voltage ($I_C = 0$)	-6V
I_C	Continuous Collector Current	-1A
I_B	Base Current	0.5
P_{tot}	Total Dissipation at $T_{amb} \leq 25^{\circ}C$	1
	$T_{case} \leq 25^{\circ}C$	7
T_{stg}	Operating and Storage Temperature Range	-65 to +200°C
T_j	Junction temperature	200°C

THERMAL DATA

$R_{thj-case}$	Thermal Resistance Junction-case	Max	25	°C/W
$R_{thj-amb}$	Thermal Resistance Junction-ambient	Max	175	°C/W

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut Off Current $V_{CB} = -60V$ $I_E = 0$			-20	nA
I_{CEO}	Collector Cut Off Current $V_{CE} = -30V$ $I_B = 0$			-0.5	μA
I_{EBO}	Emitter Cut Off Current $V_{EB} = -5V$ $I_C = 0$			-20	nA
$V_{CE(sat)}$	Collector Emitter Saturation Voltage $I_C = -150mA$ $I_B = -15mA$			-0.65	V
V_{BE}	Base Emitter Saturation Voltage $I_C = -150mA$ $V_{CE} = -10V$			-1.1	V
$V_{(BR)CBO}$	Collector Base Breakdown Voltage $I_C = -100\mu A$ $I_E = 0$	-90			V
$V_{(BR)CEX}$	Collector Emitter Breakdown Voltage $I_C = -10mA$ $V_{BE} = 1.5V$	-85			V
$V_{(BR)CER}$	Collector Emitter Breakdown Voltage $I_C = -10mA$ $R_{BE} = 200\Omega$	-85			V
$V_{(BR)CEO}$	Collector Emitter Breakdown Voltage $I_C = -10mA$ $I_B = 0$	-65			V
$V_{(BR)EBO}$	Emitter Base Breakdown Voltage $I_C = 0$ $I_E = -100\mu A$	-7			
h_{FE}	DC Current Gain $I_C = -0.1mA$ $V_{CE} = -10V$ $I_C = -150mA$ $V_{CE} = -10V$ $I_C = -500mA$ $V_{CE} = -10V$	20 40 20		140	
f_T	Transistion Frequency $I_C = -50mA$ $V_{CE} = -10v$ $f = 20MHz$	60			MHz
C_{EBO}	Emitter Base Capacitance $I_E = 0$ $V_{CB} = -0.5V$ $f = 1MHz$			90	pF
C_{CBO}	Collector Base Capacitance $I_E = 0$ $V_{CB} = -10V$ $f = 1MHz$			30	pF
t_{on}	Turn On Time $I_C = -150mA$ $V_{CC} = -30V$ $I_{B1} = -15mA$			110	ns
t_{off}	Turn Off Time $I_C = -150mA$ $V_{CC} = -30V$ $I_{B1} = -I_{B2} = 15mA$			700	ns

* Pulse test $t_p = 300\mu s$, $\delta = 1\%$