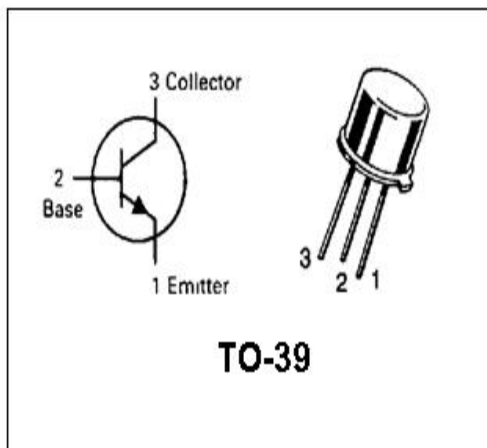


**DESCRIPTION**

- Collector Current-  $I_C = 0.8A$
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 40V(\text{Min})$

**APPLICATIONS**

- Designed for general-purpose switching and linear amplification.



**ABSOLUTE MAXIMUM RATINGS( $T_a = 25^\circ C$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	75	V
$V_{CEO}$	Collector-Emitter Voltage	40	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current-Continuous	0.8	A
$I_{BM}$	Base Current-Peak	0.2	A
$P_C$	Collector Power Dissipation@ $T_C = 25^\circ C$	0.8	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature	-65~150	$^\circ C$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	187.5	K/W

**ELECTRICAL CHARACTERISTICS**

T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> =10mA ; I <sub>B</sub> =0	40		V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> =1mA ; I <sub>C</sub> =0	6		V
V <sub>CE(sat)-1*</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 150mA; I <sub>B</sub> = 15mA		0.3	V
V <sub>CE(sat)-2*</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 500mA; I <sub>B</sub> = 50mA		1.0	V
V <sub>BE(sat)-1*</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 150mA; I <sub>B</sub> = 15mA		1.2	V
V <sub>BE(sat)-2*</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 500mA; I <sub>B</sub> = 50mA		2.0	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 50V; I <sub>E</sub> =0		1.3	uA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 6V; I <sub>C</sub> =0		30	nA
h <sub>FE-1*</sub>	DC Current Gain	I <sub>C</sub> = 0.1mA ; V <sub>CE</sub> = 10V	35		
h <sub>FE-2*</sub>	DC Current Gain	I <sub>C</sub> = 1mA ; V <sub>CE</sub> = 10V	50		
h <sub>FE-3*</sub>	DC Current Gain	I <sub>C</sub> = 10mA ; V <sub>CE</sub> = 10V	75		
h <sub>FE-4*</sub>	DC Current Gain	I <sub>C</sub> = 150mA ; V <sub>CE</sub> = 10V	100	300	
h <sub>FE-5*</sub>	DC Current Gain	I <sub>C</sub> = 500mA ; V <sub>CE</sub> = 10V	30		
f <sub>T</sub>	Current Gain-Bandwidth Product	I <sub>C</sub> = 20mA ; V <sub>CE</sub> = 20V; f <sub>test</sub> = 100MHz	300		MHz
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0 ; V <sub>CB</sub> = 10V; f <sub>test</sub> = 1.0MHz		8	pF

\* Pulsed: Pulse duration = 300 μs, duty cycle 3 1 %

Switching Times

t <sub>d</sub>	Delay Time	I <sub>C</sub> = 150mA; I <sub>B1</sub> = -I <sub>B2</sub> = 15mA		10	ns
t <sub>r</sub>	Rise Time			25	ns
t <sub>stg</sub>	Storage Time			200	ns
t <sub>f</sub>	Fall Time			60	ns