

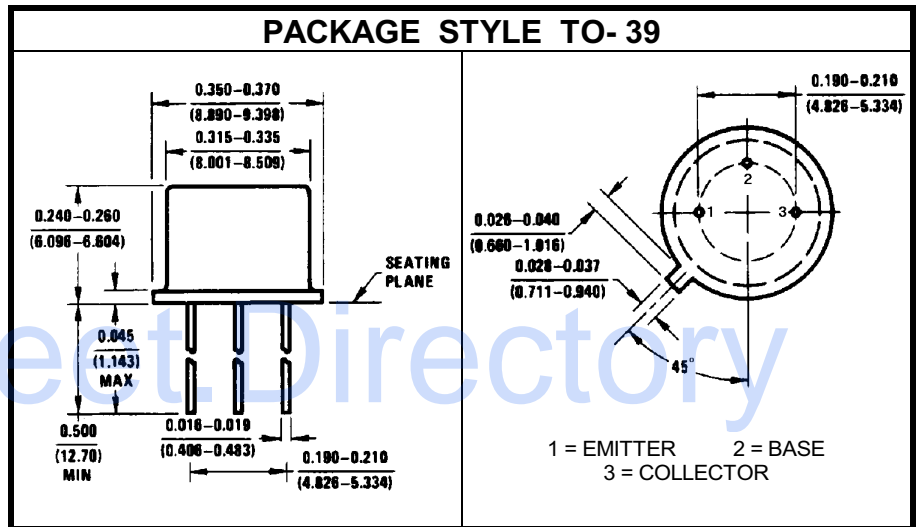
SILICON NPN TRANSISTOR

DESCRIPTION:

The **2N2193A** is Designed for General Purpose Amplifier and Switching Applications.

MAXIMUM RATINGS

I_C	1.0 A
V_{CE}	50 V
V_{CB}	80 V
P_{DISS}	2.8 W @ $T_C = 25^\circ\text{C}$
T_J	-65°C to $+200^\circ\text{C}$
T_{STG}	-65°C to $+200^\circ\text{C}$
θ_{JC}	62.5°C/W


CHARACTERISTICS $T_C = 25^\circ\text{C}$

SYMBOL	TEST CONDITIONS		MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{CEO}	$I_C = 25\text{ mA}$		50			V
BV_{CBO}	$I_C = 100\ \mu\text{A}$		80			V
I_{CBO}	$V_{CB} = 60\text{ V}$	$T_A = 25^\circ\text{C}$			0.010	μA
I_{CBO}	$V_{CB} = 60\text{ V}$	$T_A = 150^\circ\text{C}$			25	μA
BV_{EBO}	$I_E = 100\ \mu\text{A}$		8.0			V
I_{EBO}	$V_{EB} = 5.0\text{ V}$				0.050	μA
h_{FE}	$V_{CE} = 10\text{ V}$	$I_C = 100\ \mu\text{A}$	15			---
		$I_C = 10\text{ mA}$	30		120	
		$I_C = 10\text{ mA}$	20			
	$V_{CE} = 1.0\text{ V}$	$I_C = 150\text{ mA}$	40		120	
		$I_C = 150\text{ mA}$	30			
		$I_C = 500\text{ mA}$	20		100	
$V_{CE(SAT)}$	$I_C = 150\text{ mA}$	$I_B = 15\text{ mA}$			0.25	V
$V_{BE(SAT)}$	$I_C = 150\text{ mA}$	$I_B = 15\text{ mA}$			1.3	V



f_t	$V_{CE} = 10\text{ V}$	$I_C = 50\text{ mA}$	$f = 20\text{ MHz}$	50			MHz
C_{ob}	$V_{CB} = 10\text{ V}$		$f = 1.0\text{ MHz}$			20	pF
C_{ib}	$V_{EB} = 0.5\text{ V}$		$f = 1.0\text{ MHz}$			60	pF
t_r						70	nS
t_s						150	nS
t_f						50	nS

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