New Jersey Semi-Conductor Products, Inc.

20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

TELEPHONE: (973) 376-2922
(212) 227-6005
FAX: (973) 376-8960

2N4296
2N4298
2N4299

NPN SILICON
POWER TRANSISTOR

TO-66

MAXIMUM RATINGS ($T_C = 25^oC$)

	SYMBOL	2N4296	2N4298	2N4299	UNITS
Collector-Base Voltage	V_{CBO}	350	500	350	V
Collector-Emitter Voltage	V_{CEO}	250	350	250	V
Emitter-Base Voltage	V_{EBO}		4.0		V
Collector Current	I_C		1.0		A
Base Current	I_B		250		mA
Power Dissipation	P_D		20		W
Operating and Storage Junction Temperature	T_J, T_{stg}		-65 to +175		^oC
Thermal Resistance	Θ_{JC}		7.5		$^oC/W$

ELECTRICAL CHARACTERISTICS ($T_C = 25^oC$ unless otherwise noted)

		2N4296		2N4298		2N4299		
SYMBOL	TEST CONDITIONS	MIN	MAX	MIN	MAX	MIN	MAX	UNITS
I_{CEV}	$V_{CE} = 150V$, $V_{EB} = 1.5$, $T_C = 135^oC$		600		600		600	μA
I_{CBO}	$V_{CE} = 350V$		100		-		100	μA
I_{CBO}	$V_{CE} = 500V$		-		100		-	μA
I_{EBO}	$V_{BE} = 4.0V$		100		100		100	μA
BV_{CEO}	$I_C = 50mA$	200		350		250		V
$V_{CE(SAT)}$	$I_C = 50mA$, $I_B = 5.0mA$		0.9		0.9		0.75	V
$V_{BE(SAT)}$	$I_C = 50mA$, $I_B = 5.0mA$		1.5		1.5		1.5	V
$V_{BE(ON)}$	$V_{CE} = 10V$, $I_C = 100mA$		0.9		0.9		0.9	V
h_{FE}	$V_{CE} = 10V$, $I_C = 5.0mA$	35		20		35		
h_{FE}	$V_{CE} = 10V$, $I_C = 50mA$	50	150	25	75	50	150	
h_{FE}	$V_{CE} = 10V$, $I_C = 100mA$	35		20		35		
f_T	$V_{CE} = 10V$, $I_C = 20mA$, $f = 5MHz$	20		20		20		MHz
$I_{S/b}$	$V_{CE} = 200V$	75		75		75		mA
C_{cb}	$V_{CB} = 100V$, $I_C = 0$, $f = 0.1$ TO $1.0MHz$		6.0		6.0		6.0	pF
t_{on}	$V_{CC} = 100V$, $I_C = 100mA$, $I_{B1} = -I_{B2} = 10mA$		7.0		7.0		7.0	μs
t_{off}	$V_{CC} = 200V$, $I_C = 100mA$, $I_{B1} = -I_{B2} = 10mA$		10		10		10	μs