

New Jersey Semi-Conductor Products, Inc.

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2N6253

Silicon NPN Power Transistor

DESCRIPTION

- Excellent Safe Operating Area
- DC Current Gain- $h_{FE}=20-70@I_C = 3A$
- Collector-Emitter Saturation Voltage-
: $V_{CE(sat)}=1.0V(\text{Max})@I_C = 3A$

APPLICATIONS

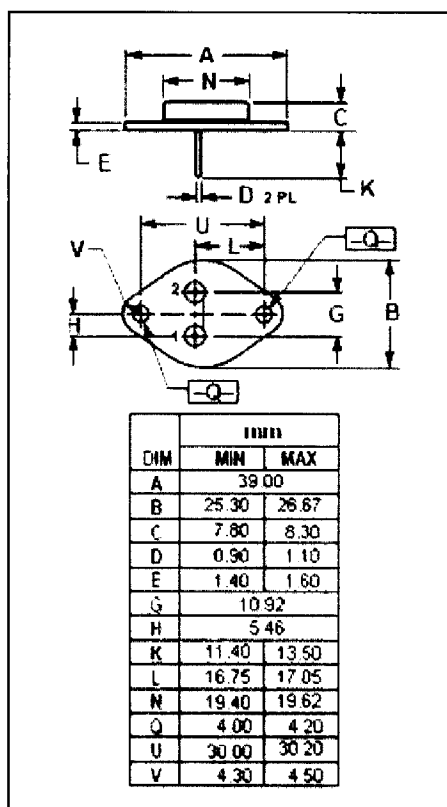
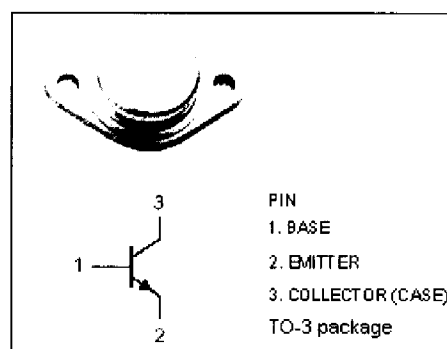
- Series and shunt regulators
- High-fidelity amplifiers
- Power-switching circuits
- Solenoid drivers
- Low-frequency inverters

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	55	V
V_{CER}	Collector-Emitter Voltage $R_{BE}=100\Omega$	55	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{CEV}	Collector-Emitter Voltage $V_{BE}=-1.5V$	55	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	15	A
I_B	Base Current	7	A
P_C	Collector Power Dissipation@ $T_C=25^\circ\text{C}$	115	W
T_J	Junction Temperature	200	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~200	$^\circ\text{C}$

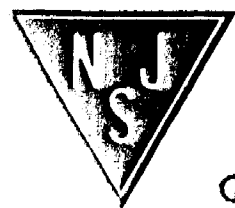
THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.5	$^\circ\text{C/W}$



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Quality Semi-Conductors



Silicon NPN Power Transistor**2N6253****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CE0(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=200\text{mA}; I_B=0$	45		V
$V_{CEr(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=200\text{mA}; R_{BE}=100\ \Omega$	55		V
$V_{CEV(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=100\text{mA}; V_{BE}=-1.5\text{V}$	55		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=3\text{A}; I_B=0.3\text{A}$		1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=15\text{A}; I_B=5\text{A}$		4.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=3\text{A}; V_{CE}=4\text{V}$		1.7	V
I_{CEO}	Collector Cutoff Current	$V_{CE}=25\text{V}; I_B=0$		1.5	mA
I_{CEX}	Collector Cutoff Current	$V_{CE}=55\text{V}; V_{BE(off)}=-1.5\text{V}$ $V_{CE}=50\text{V}; V_{BE(off)}=-1.5\text{V}; T_C=150^\circ\text{C}$		2.0 10	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$		10	mA
h_{FE-1}	DC Current Gain	$I_C=3\text{A}; V_{CE}=4\text{V}$	20	70	
h_{FE-2}	DC Current Gain	$I_C=15\text{A}; V_{CE}=4\text{V}$	3		
$I_{s/b}$	Second Breakdown Collector Current with Base Forward Biased	$V_{CE}=45\text{V}; t=1.0\text{s}; \text{Nonrepetitive}$	2.55		A