

**isc Silicon NPN Power Transistor**

**2N6254**

**DESCRIPTION**

- Excellent Safe Operating Area
- DC Current Gain- $h_{FE} = 20-70 @ I_C = 5A$
- Collector-Emitter Saturation Voltage-  
:  $V_{CE(sat)} = 0.5V(Max) @ I_C = 5A$

**APPLICATIONS**

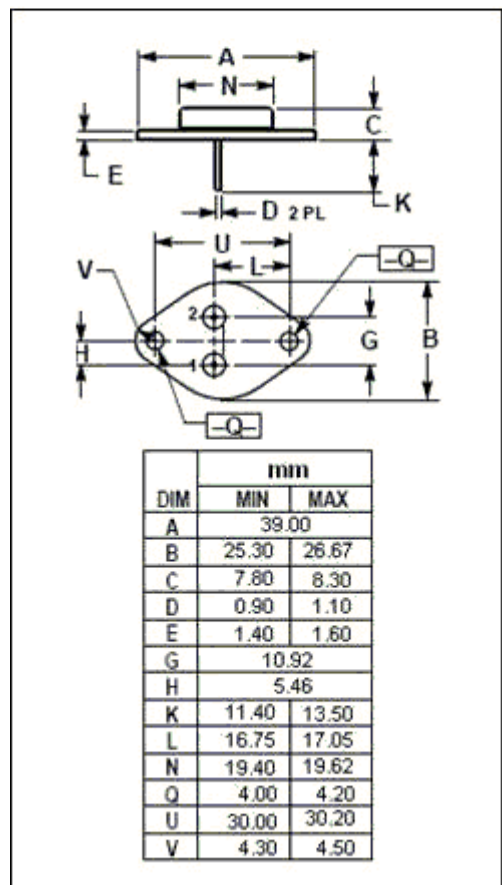
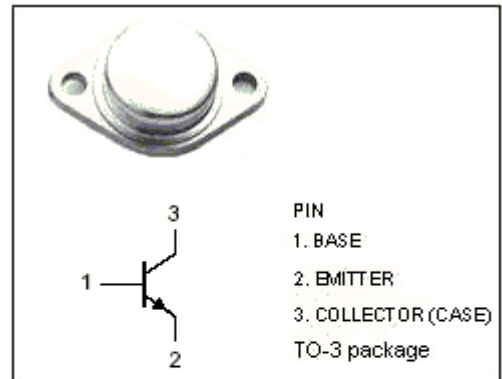
- Series and shunt regulators
- High-fidelity amplifiers
- Power-switching circuits
- Solenoid drivers
- Low-frequency inverters

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	100	V
$V_{CER}$	Collector-Emitter Voltage $R_{BE} = 100 \Omega$	85	V
$V_{CEO}$	Collector-Emitter Voltage	80	V
$V_{CEV}$	Collector-Emitter Voltage $V_{BE} = -1.5V$	90	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	15	A
$I_B$	Base Current	7	A
$P_C$	Collector Power Dissipation @ $T_C = 25^{\circ}C$	150	W
$T_J$	Junction Temperature	200	$^{\circ}C$
$T_{stg}$	Storage Temperature	-65~200	$^{\circ}C$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	1.17	$^{\circ}C/W$



**isc Silicon NPN Power Transistor****2N6254****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CE0(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=200\text{mA}; I_B=0$	80		V
$V_{CER(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=200\text{mA}; R_{BE}=100\ \Omega$	85		V
$V_{CEV(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=100\text{mA}; V_{BE}=-1.5\text{V}$	90		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=0.5\text{A}$		0.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=15\text{A}; I_B=3\text{A}$		4.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=5\text{A}; V_{CE}=2\text{V}$		1.5	V
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=60\text{V}; I_B=0$		1.0	mA
$I_{CEX}$	Collector Cutoff Current	$V_{CE}=100\text{V}; V_{BE(off)}=-1.5\text{V}$ $V_{CE}=100\text{V}; V_{BE(off)}=-1.5\text{V}; T_C=150^{\circ}\text{C}$		0.5 5.0	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=7\text{V}; I_C=0$		0.5	mA
$h_{FE-1}$	DC Current Gain	$I_C=5\text{A}; V_{CE}=2\text{V}$	20	70	
$h_{FE-2}$	DC Current Gain	$I_C=15\text{A}; V_{CE}=4\text{V}$	5		
$I_{s/b}$	Second Breakdown Collector Current with Base Forward Biased	$V_{CE}=80\text{V}, t=1.0\text{s}, \text{Nonrepetitive}$	1.87		A