

**isc Silicon PNP Darlingtion Power Transistor**

**2N6054**

**DESCRIPTION**

- Built-in Base-Emitter Shunt Resistors
- Low Collector-Emitter Saturation Voltage-  
:  $V_{CE(sat)} = -2.0V(\text{Max.})@I_C = -4.0A$
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = -80V(\text{Min})$
- Complement to type 2N6056

**APPLICATIONS**

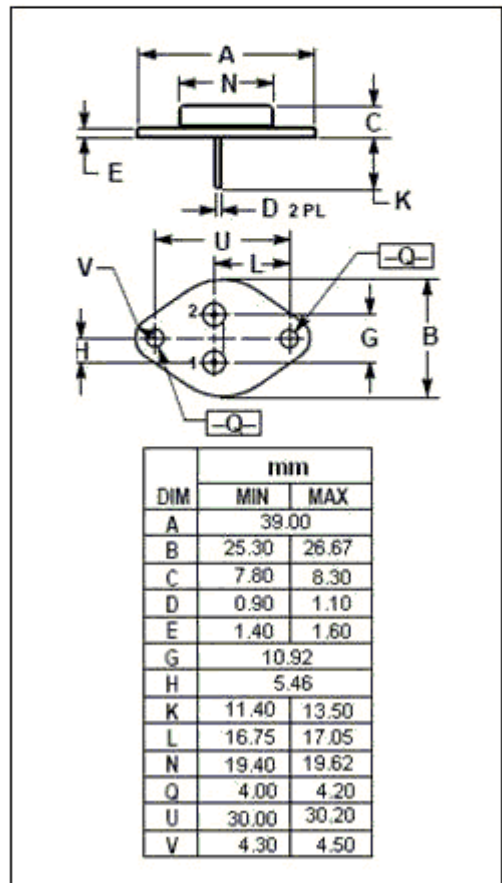
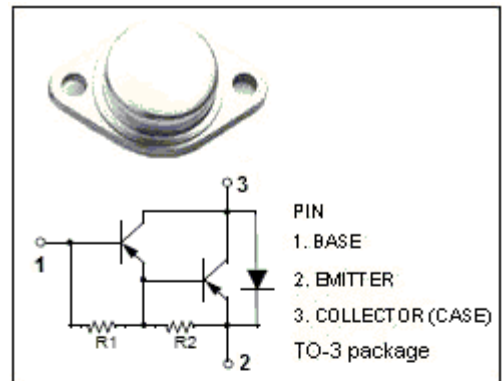
- Designed for general purpose amplifier and low frequency switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-80	V
$V_{CEO}$	Collector-Emitter Voltage	-80	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current -Continuous	-8	A
$I_{CM}$	Collector Current-Peak	-16	A
$I_B$	Base Current	-120	mA
$P_C$	Collector Power Dissipation@ $T_C=25^\circ C$	100	W
$T_J$	Junction Temperature	200	$^\circ C$
$T_{stg}$	Storage Temperature	-65~200	$^\circ C$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	ThermalResistance, Junction to Case	1.75	$^\circ C/W$



**isc Silicon PNP Darlington Power Transistor****2N6054****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CE0(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = -100\text{mA}$ ; $I_B = 0$	-80		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C = -4\text{A}$ ; $I_B = -16\text{mA}$		-2.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C = -8\text{A}$ ; $I_B = -80\text{mA}$		-3.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -8\text{A}$ ; $I_B = -80\text{mA}$		4.0	V
$V_{BE(on)}$	Base-Emitter On voltage	$I_C = -4\text{A}$ ; $V_{CE} = -3\text{V}$		-2.8	V
$I_{CEO}$	Collector Cutoff current	$V_{CE} = -40\text{V}$ ; $I_B = 0$		-0.5	mA
$I_{CEX}$	Collector Cutoff current	$V_{CE} = -80\text{V}$ ; $V_{BE(off)} = -1.5\text{V}$ $V_{CE} = -80\text{V}$ ; $V_{BE(off)} = -1.5\text{V}$ , $T_C = 150^\circ\text{C}$		-0.5 -5.0	mA
$I_{EBO}$	Emitter Cut-off current	$V_{EB} = -5\text{V}$ ; $I_C = 0$		-2.0	mA
$h_{FE-1}$	DC Current Gain	$I_C = -4\text{A}$ ; $V_{CE} = -3\text{V}$	750	18000	
$h_{FE-2}$	DC Current Gain	$I_C = -8\text{A}$ ; $V_{CE} = -3\text{V}$	100		
$C_{OB}$	Output Capacitance	$I_E = 0$ ; $V_{CB} = -10\text{V}$ ; $f_{test} = 0.1\text{MHz}$		350	pF