

isc Silicon PNP Darlington Power Transistor
2N6054
DESCRIPTION

- Built-in Base-Emitter Shunt Resistors
- Low Collector-Emitter Saturation Voltage
: $V_{CE(sat)} = -2.0V(\text{Max}) @ I_C = -4A$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = -80V(\text{Min})$
- Complement to type 2N6056
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

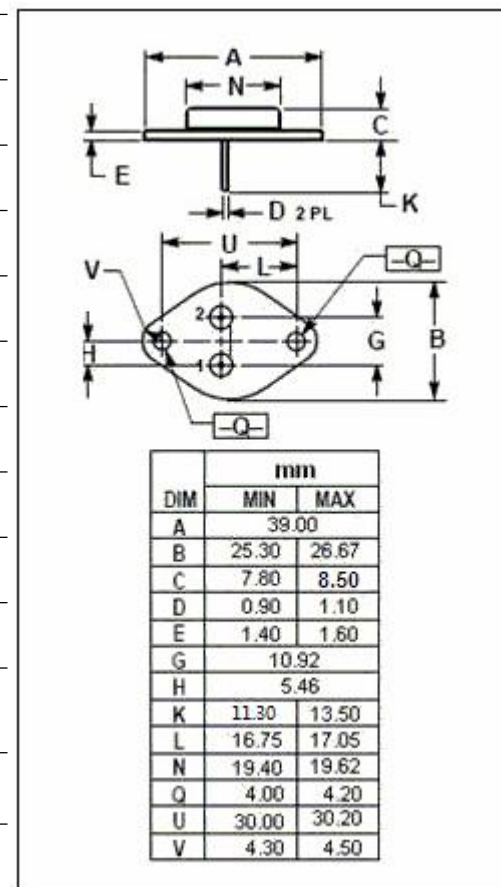
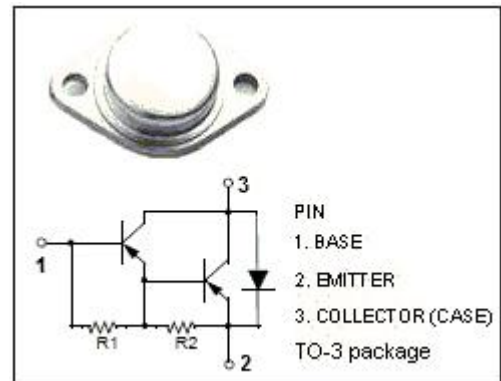
- Designed for general purpose amplifier and low frequency switching applications.

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

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@ $T_C=25^\circ\text{C}$	100	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

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



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ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = -50\text{mA}$; $I_B = 0$	-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

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