

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 80V(\text{Min})$
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 1.0V(\text{Max.}) @ I_C = 2A$
- Complement to Type 2N5954

APPLICATIONS

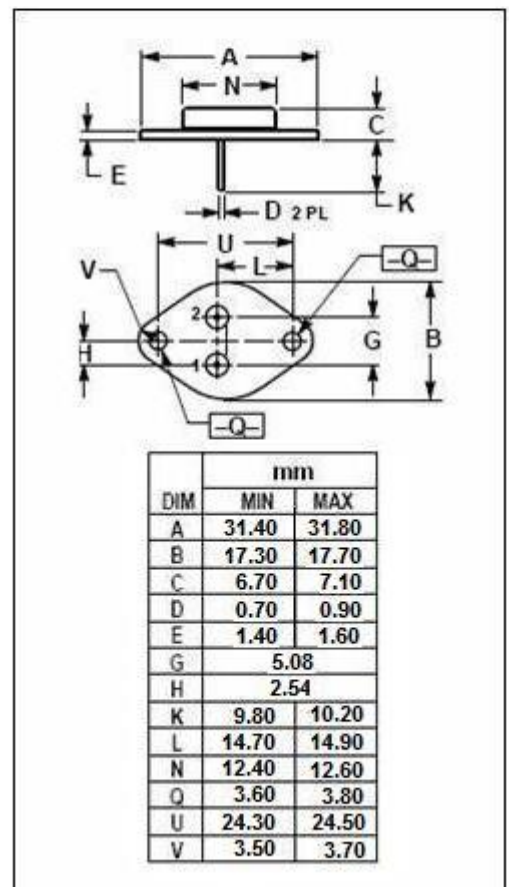
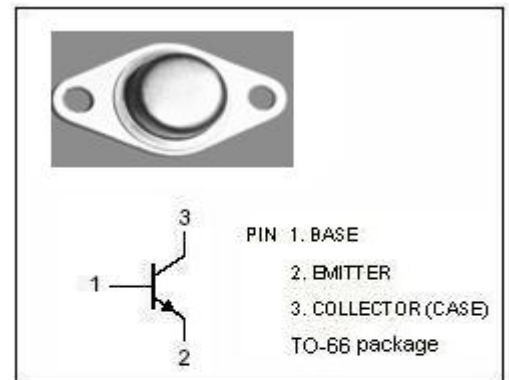
- Designed for general purpose amplifier and switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	90	V
V_{CEV}	Collector-Emitter Voltage $V_{BE} = 1.5V$	90	V
V_{CEO}	Collector-Emitter Voltage $R_{BE} = 100 \Omega$	85	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	6	A
I_B	Base Current-Continuous	2	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	40	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	4.3	$^\circ\text{C/W}$



ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C= 50\text{mA}; I_B= 0$	80			V
V_{CER}	Collector-Emitter Sustaining Voltage	$I_C= 100\text{mA}; R_{BE}= 100\ \Omega$	85			V
V_{CEV}	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	$I_C= 2\text{A}; I_B= 0.2\text{A}$			1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C= 6\text{A}; I_B= 1.2\text{A}$			2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C= 2\text{A}; V_{CE}= 4\text{V}$			2.0	V
I_{CEV}	Collector Cutoff Current	$V_{CE}= 85\text{V}; V_{BE(off)}= 1.5\text{V}$ $V_{CE}= 85\text{V}; V_{BE(off)}= 1.5\text{V}; T_C=150^\circ\text{C}$			0.1 2.0	mA
I_{CEO}	Collector Cutoff Current	$V_{CE}= 65\text{V}; I_B= 0$			1.0	mA
I_{CER}	Collector Cutoff Current	$V_{CE}= 75\text{V}; R_{BE}= 100\ \Omega$			0.1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 5\text{V}; I_C= 0$			0.1	mA
h_{FE-1}	DC Current Gain	$I_C= 2\text{A}; V_{CE}= 4\text{V}$	20		100	
h_{FE-2}	DC Current Gain	$I_C= 6\text{A}; V_{CE}= 4\text{V}$	5			
f_T	Current-Gain—Bandwidth Product	$I_C= 1.0\text{A}; V_{CE}= 4\text{V}, f_{test}= 1\text{MHz}$	5			MHz