

isc Silicon NPN Power Transistor

MJ12004

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 750V(\text{Min})$
- High Switching Speed
- Wide Area of Safe Operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

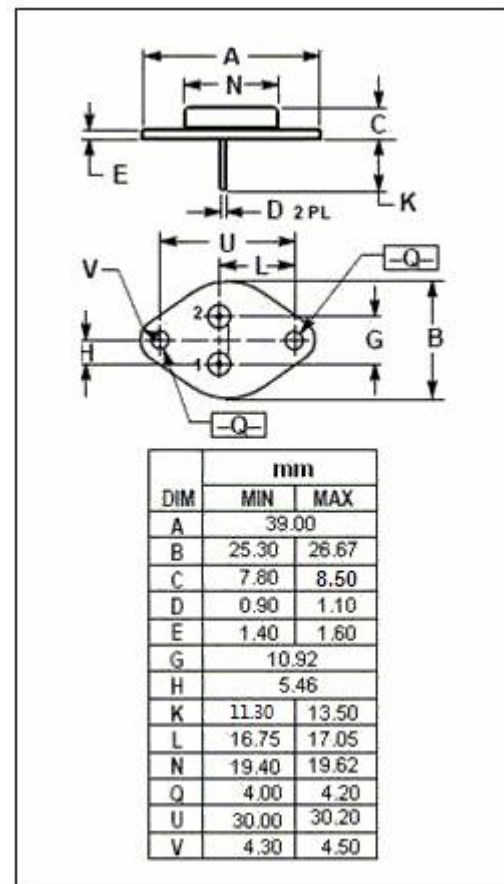
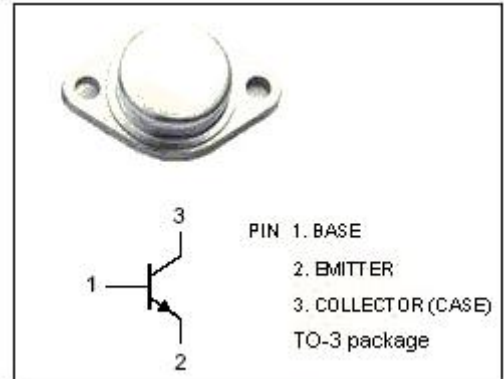
- Designed for use in large screen color deflection circuits.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector- Base Voltage	1500	V
$V_{CEO(SUS)}$	Collector-Emitter Voltage	750	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	5	A
I_B	Base Current-Continuous	4	A
I_E	Emitter Current-Continuous	9	A
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
$R_{th\ j-c}$	Thermal Resistance,Junction to Case	1.25	$^\circ\text{C/W}$



isc Silicon NPN Power Transistor**MJ12004****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sus)}$	Collector-Emitter Sustaining Voltage	$I_C=10\text{mA}$; $I_B=0$	750			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=4.5\text{A}$; $I_B=1.8\text{A}$			5.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=3.5\text{A}$; $I_B=1.5\text{A}$			5.0	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	$I_C=4.5\text{A}$; $I_B=1.8\text{A}$			1.5	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	$I_C=3.5\text{A}$; $I_B=1.5\text{A}$			1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=1500\text{V}$; $I_{BE}=0$			1.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}$; $I_C=0$			1.0	mA
h_{FE}	DC Current Gain	$I_C=0.5\text{A}$; $V_{CE}=5\text{V}$	6			
f_T	Current-Gain—Bandwidth Product	$I_C=0.1\text{A}$; $V_{CE}=5\text{V}$; $f_{test}=1.0\text{MHz}$		4		MHz
C_{OB}	Output Capacitance	$I_E=0$; $V_{CB}=10\text{V}$; $f_{test}=0.1\text{MHz}$		125		pF
t_f	Fall Time	$I_C=4.5\text{A}$; $I_{B1}=1.8\text{A}$; $L_B=8\mu\text{H}$		0.4		μs

isc Silicon NPN Power Transistor**MJ12004****NOTICE:**

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