

isc Silicon NPN Power Transistor

MJ12002

DESCRIPTION

- Collector-Emitter Voltage-
 $V_{CEX} = 1500V$
- Forward Bias safe Safe Operation Area
- Switching Time with Inductive Load

APPLICATIONS

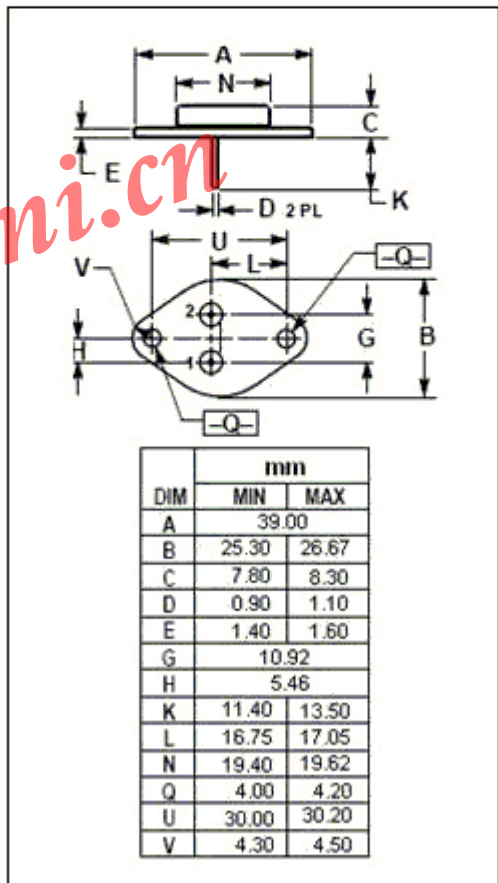
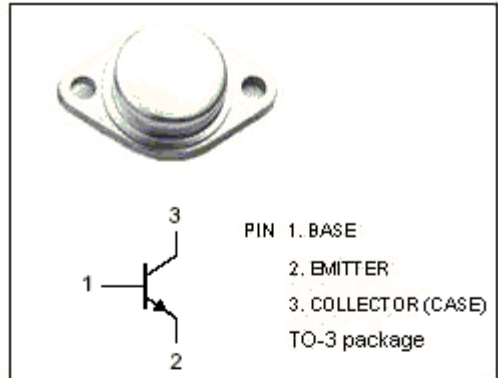
- Designed for use in large screen color deflection circuits.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CEX}	Collector-Emitter Voltage	1500	V
$V_{CEO(SUS)}$	Collector-Emitter Voltage	750	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	2.5	A
I_B	Base Current-Continuous	2	A
I_E	Emitter Current-Continuous	4.5	A
P_C	Collector Power Dissipation@ $T_C=25^{\circ}C$	75	W
T_J	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature	-65~150	$^{\circ}C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance,Junction to Case	1.67	$^{\circ}C/W$



isc Silicon NPN Power Transistor**MJ12002****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	$I_C=50\text{mA}$; $I_B=0$	750			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 2\text{A}$; $I_B= 1.8\text{A}$			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 2\text{A}$; $I_B= 1.8\text{A}$			1.5	V
I_{CES}	Collector Cutoff Current	$V_{CE}= 1500\text{V}$; $V_{BE}= 0$			1.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 5\text{V}$; $I_C=0$			0.1	mA
h_{FE}	DC Current Gain	$I_C= 0.5\text{A}$; $V_{CE}= 5\text{V}$		10.5		
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	$I_E= 0$; $V_{CB}= 10\text{V}$; $f_{test}=0.1\text{MHz}$		50		pF
t_f	Fall Time	$I_C= 2\text{A}$, $I_{B1}= 1\text{A}$; $L_B= 12\ \mu\text{H}$		0.65	1.0	μs