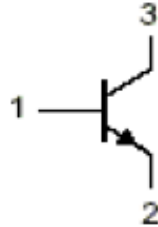
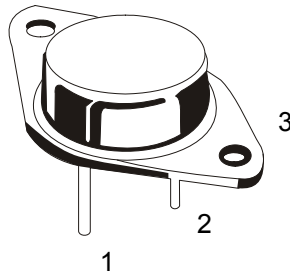


NPN SILICON POWER TRANSISTOR

MJ12005



PIN
1. BASE
2. EMITTER
3. COLLECTOR (CASE)

TO-3
Metal Can Package

DESCRIPTION

- Collector-Emitter Sustaining Voltage : $V_{CEO(SUS)} = 750V(\text{Min})$
- High Switching Speed
- Wide Area of Safe Operation

APPLICATION

- Designed for use in CRT deflection circuits.

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

PARAMETER	SYMBOL	VALUE	UNIT
Collector - Base Voltage	V_{CBO}	1500	V
Collector - Emitter Voltage	$V_{CEO(SUS)}$	750	V
Emitter - Base Voltage	V_{EBO}	5	V
Collector Current - Continuous	I_C	8	A
Base Current - Continuous	I_B	4	A
Emitter Current - Continuous	I_E	12	A
Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	P_C	100	W

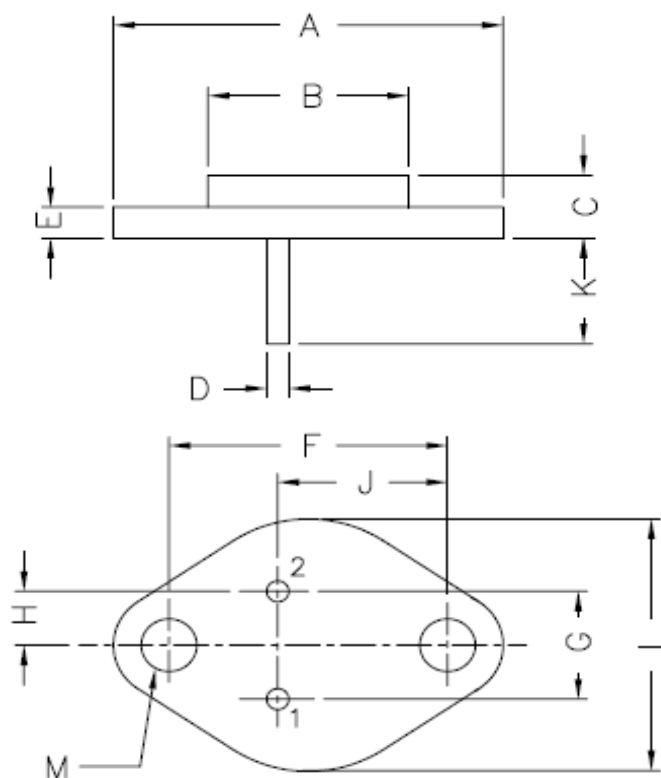
THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	MAX	UNIT
Thermal Resistance, Junction to Case	$R_{th j-c}$	1.25	$^\circ\text{C/W}$

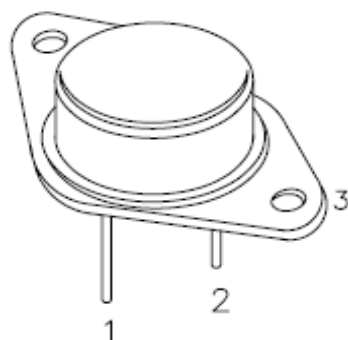
ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise specified)

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP.	MAX	UNIT
Collector - Emitter Sustaining Voltage	$V_{CEO(SUS)}$	$I_C = 10\text{mA} ; I_B = 0$	750			V
Collector - Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 5\text{A} ; I_B = 1\text{A}$			5.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 5\text{A} ; I_B = 1\text{A}$			1.5	V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 1500\text{V} ; I_E = 0$			0.5	mA
Emitter Cutoff Voltage	I_{EBO}	$V_{EB} = 5\text{V} ; I_C = 0$			0.1	mA
Fall Time	t_r	$I_C = 5\text{A} , I_{B1} = 1\text{A} ; L_B = 8 \mu\text{H}$			1.0	μs

TO-3 Metal Can Package Outline and Dimension



DIM	MIN	MAX
A	—	39,37
B	—	22,22
C	6,35	8,50
D	0,96	1,09
E	—	1,77
F	29,90	30,4
G	10,69	11,18
H	5,20	5,72
J	16,64	17,15
K	11,15	12,25
L	—	26,67
M	3,84	4,19



PIN CONFIGURATION:-

1. BASE
2. EMITTER
3. COLLECTOR



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Customer Notes

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

DISCLAIMER

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD is believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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