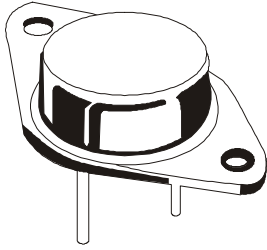


NPN HIGH VOLTAGE SILICON POWER TRANSISTOR

BU109



**TO-3
Metal Can Package**

HORIZONTAL DEFLECTION OUTPUT STAGE OF TVs and CRTs

ABSOLUTE MAXIMUM RATINGS (Ta=25°C unless specified otherwise)

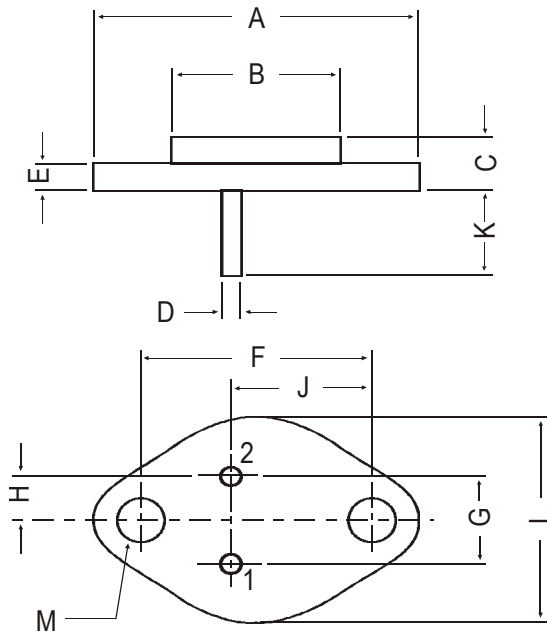
DESCRIPTION	SYMBOL	VALUE	UNITS
Collector Emitter Voltage	V_{CEO}	150	V
Collector Base Voltage	V_{CBO}	330	V
Emitter Base Voltage	V_{EBO}	6.0	V
Collector Emitter Voltage ($V_{BE} = -1.5V$)	V_{CEV}	330	V
Collector Current	I_C	7.0	A
Collector Peak Current (Repetitive)	I_{CM}	10.0	A
Collector Peak Current (t=10ms)	I_{CM}	15.0	A
Base Current	I_B	4.0	A
Total Power Dissipation@ $T_c \leq 25^\circ C$	P_{tot}	60	W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-65 To +150	°C
THERMAL RESISTANCE			
Junction to Ambient	$R_{th(j-a)}$	70	°C/W
Junction to Case	$R_{th(j-c)}$	2.08	°C/W

ELECTRICAL CHARACTERISTICS (Ta=25°C unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
Collector Cut off Current	I_{CES}	$V_{CE}=330V, V_{BE}=0$		5.0	mA
		$V_{CE}=200V, V_{BE}=0$		100	µA
	I_{CES}	$V_{CE}=200V, V_{BE}=0$ $T_C=150^\circ C$		1.0	mA
Emitter Cut off Current	I_{EBO}	$V_{EB}=6V, I_C=0$		1.0	mA
Collector Emitter Saturation Voltage	$V_{CE(Sat)}$ *	$I_C=5A, I_B=0.5A$		1.0	V
Base Emitter Saturation Voltage	$V_{BE(Sat)}$ *	$I_C=5A, I_B=0.5A$		1.2	V
Transition Frequency	f_T	$I_C=0.5A, V_{CE}=10V$	10		MHz
Turn off Time	t_{off}	$I_C=5A, I_B \text{ end} = 0.5A$		0.75	us

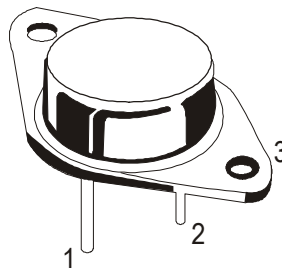
*Pulse Test: Pulse Duration=300ms, Duty Cycle =1.5%

TO-3 Metal Can Package



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	30.40
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

All dimensions in mm.



- PIN CONFIGURATION
1. BASE
 2. EMITTER
 3. COLLECTOR

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-3	100 pcs/pkt	1.3 kg/100 pcs	12.5" x 8" x 1.8"	0.1K	17" x 11.5" x 21"	2K	27.5 kgs

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete 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 are 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 Discrete 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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