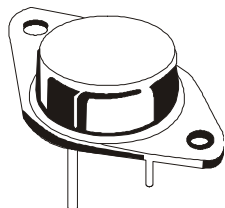




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SILICON PLANAR POWER TRANSISTORS



2N3055 NPN

MJ2955 PNP

TO-3

Metal Can Package

General Purpose Switching and Amplifier Applications

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNITS
Collector Base Voltage	V_{CBO}	100	V
Collector Emitter Voltage	V_{CEO}	60	V
Collector Emitter Voltage($R_{BE}=100\Omega$)	V_{CER}	70	V
Emitter Base Voltage	V_{EBO}	7	V
Collector Current Continuous	I_C	15	A
Base Current	I_B	7	A
Power Dissipation @ $T_c=25^\circ\text{C}$	P_{tot}	115	W
Derate Above 25°C		0.657	W/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_j, T_{stg}	- 65 to +200	$^\circ\text{C}$

THERMAL RESISTANCE

Junction to Case	$R_{th(j-c)}$	1.52	$^\circ\text{C/W}$
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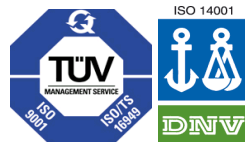
ELECTRICAL CHARACTERISTICS ($T_c=25^\circ\text{C}$ unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
Collector Emitter Sustaining Voltage	$V_{CEO(sus)}^*$	$I_C=200\text{mA}, I_B=0$	60		V
Collector Emitter Sustaining Voltage	$V_{CER(sus)}^*$	$I_C=200\text{mA}, R_{BE}=100\Omega$	70		V
Collector Cut off Current	I_{CEX}	$V_{CE}=100\text{V}, V_{BE}=(\text{off})=1.5\text{V}$ $T_c=150^\circ\text{C}$ $V_{CE}=100\text{V}, V_{BE}=(\text{off})=1.5\text{V}$		1.0 5.0	mA
Collector Cut off Current	I_{CEO}	$V_{CE}=30\text{V}, I_B=0$		0.7	mA
Emitter Cut off Current	I_{EBO}	$V_{BE}=7\text{V}, I_C=0$		5.0	mA
Collector Emitter Saturation Voltage	$V_{CE(\text{Sat})}^*$	$I_C=4\text{A}, I_B=400\text{mA}$ $I_C=10\text{A}, I_B=3.3\text{A}$		1.1 3.0	V
Base Emitter on Voltage	$V_{BE(\text{on})}^*$	$I_C=4\text{A}, V_{CE}=4\text{V}$		1.5	V
DC Current Gain	h_{FE}^*	$I_C=4\text{A}, V_{CE}=4\text{V}$ $I_C=10\text{A}, V_{CE}=4\text{V}$	20 5	70	



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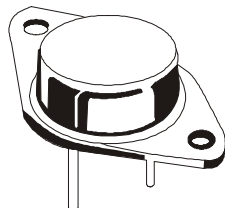
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SILICON PLANAR POWER TRANSISTOR

2N3055 NPN
MJ2955 PNP

TO-3
Metal Can Package



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

Second Breakdown

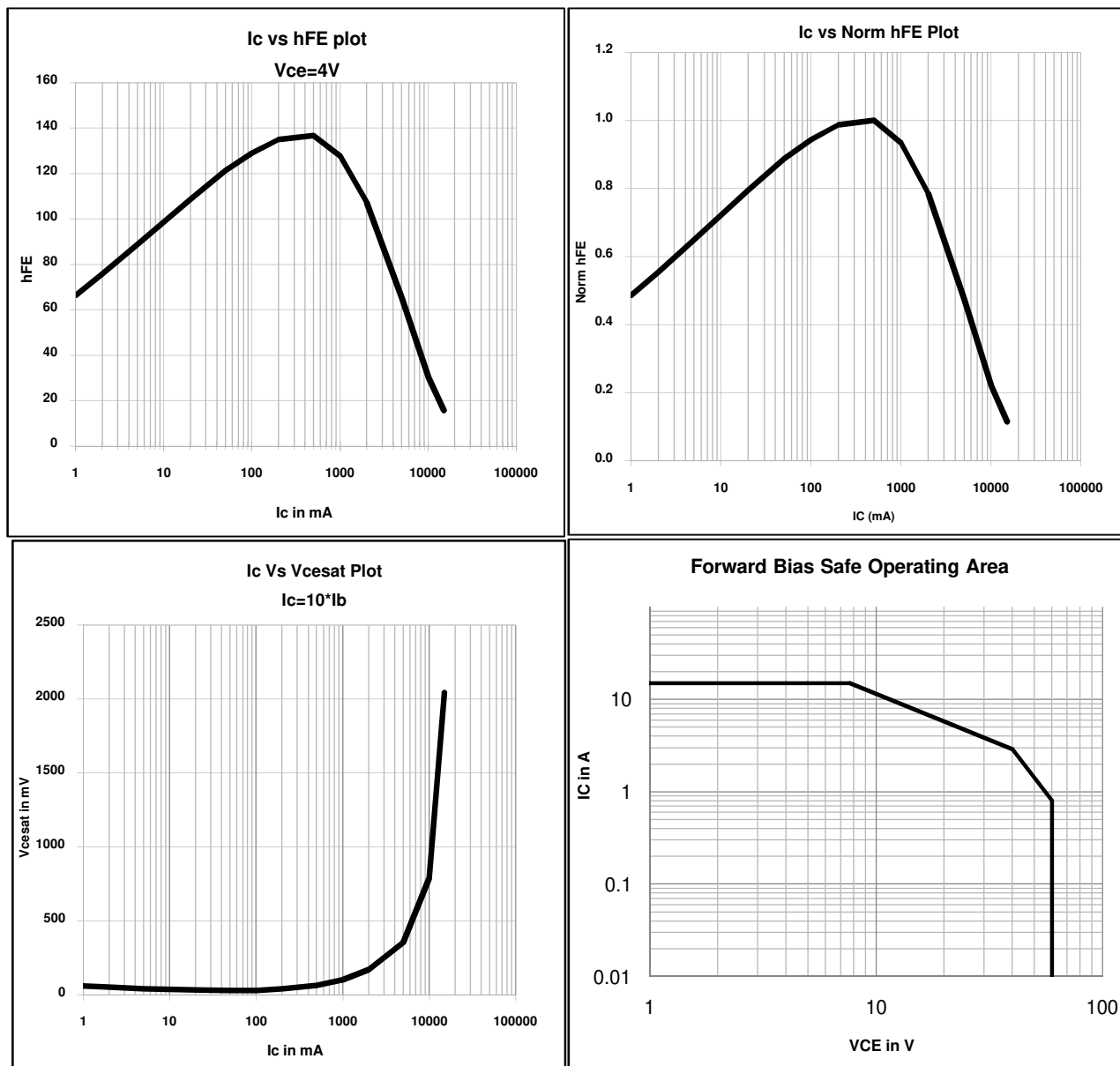
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
Second Breakdown Collector Current with Base Forward Biased	$I_{S/b}$	$V_{CE}=40\text{V}, t=1.0\text{ s}, \text{Nonrepetitive}$	2.87		A

Dynamic Characteristics

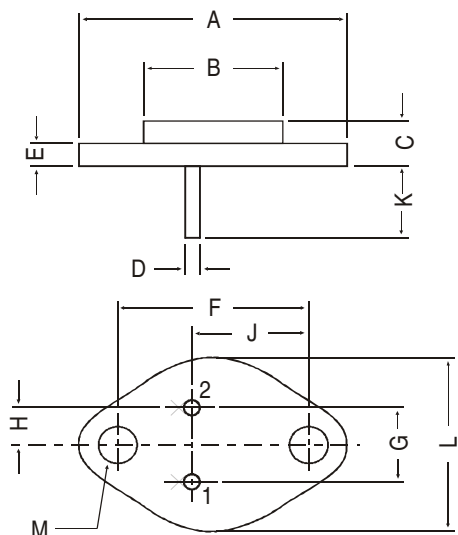
Current Gain - Bandwidth Product	f_T	$I_C=0.5\text{A}, V_{CE}=10\text{V}, f=1\text{MHz}$	2.5		MHz
Small Signal Current Gain	h_{fe}	$I_C=1\text{A}, V_{CE}=4\text{V}, f=1\text{KHz}$	15	120	
Small Signal Current Gain Cutoff Frequency	$f_{h_{fe}}$	$I_C=1\text{A}, V_{CE}=4\text{V}, f=1\text{KHz}$	10		KHz

*Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

CHARACTERISTICS PLOTS

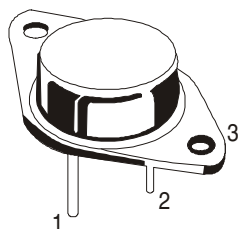


TO-3 Metal Can Package



All dimensions in mm.

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



PIN CONFIGURATION

1. BASE
2. EMITTER
3. COLLECTOR

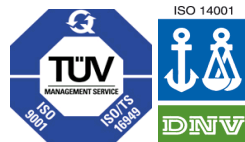
Packing Detail

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



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Notes

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 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 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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