Galaxy Microelectronics

Production specification

Epitaxial Planar PNP Transistor MJD42C

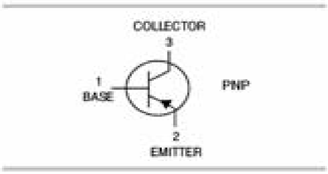
FEATURES

- Low formed for surface mount application.
- Electrically similar to popular and TIP42C.
- Straight Lead.

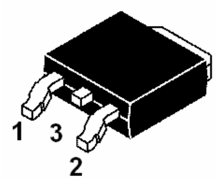
Lead-free

APPLICATIONS

- General purpose amplifier.
- Low speed switching applications.



TO-251



TO-252

MAXIMUM RATING operating temperature range applies unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Volage	-100	V
V_{CEO}	Collector-Emitter Voltage	-100	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-6	A
I_{CP}	Collector Current -Peak	-10	A
I_B	Base Current	-2	A
P_C	Collector Power Dissipation	1.5	W
$R_{\theta JC}$	Thermal Resistance,Junciton to Case	6.25	℃/W
$R_{\theta JA}$	Thermal Resistance,Junciton to Ambient	71.4	℃/W
T_j ,T_{stg}	Junction and Storage temperature range	-65 to +150	℃

ELECTRICAL CHARACTERISTICS@ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-emitter sustaining voltage	V_{CEO}(sus)	I_C=-30mA,I_B=0	-100		V
Collector cut-off current	I_{CEO}	V_{CE}=-60V,I_B=0		-50	uA
Collector cut-off current	I_{CES}	V_{CE}=-100V,V_{BE}=0		-10	uA
Emitter cut-off current	I_{EBO}	V_{EB}=-5V,I_C=0		-0.5	mA
DC current gain	h_{FE}	V_{CE}=-4V,I_C=-0.3A V_{CE}=-4V,I_C=-3A	30 15	 75	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-6A,I_B=-600mA		-1.5	V
Base-emitter on voltage	$V_{BE(on)}$	V_{CE}=-6V,I_C=-4A		-2	V
Transition frequency	f_T	V_{CE}=-10V,I_C=-0.5A	3		MHz

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

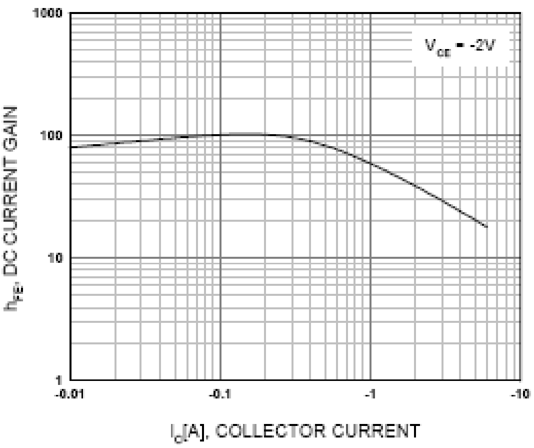


Figure 1. DC current Gain

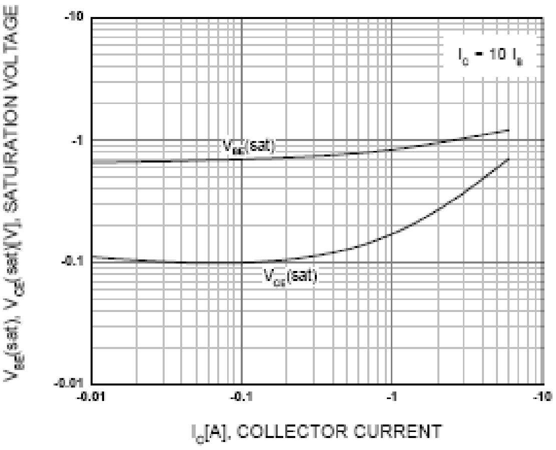


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

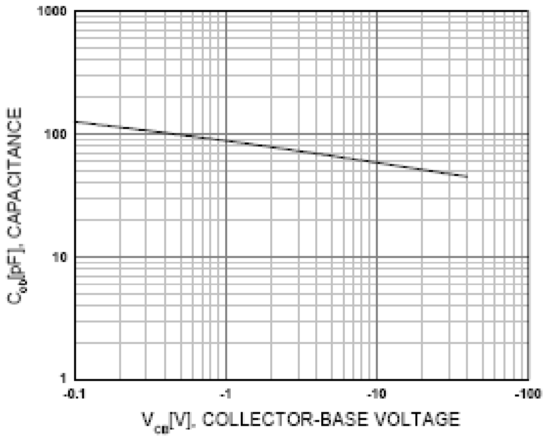


Figure 3. Collector Capacitance

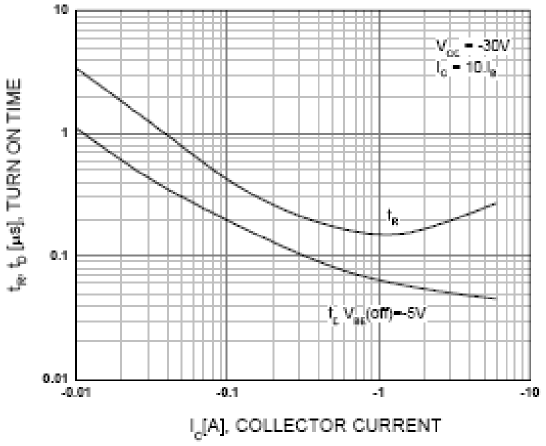


Figure 4. Turn On Time

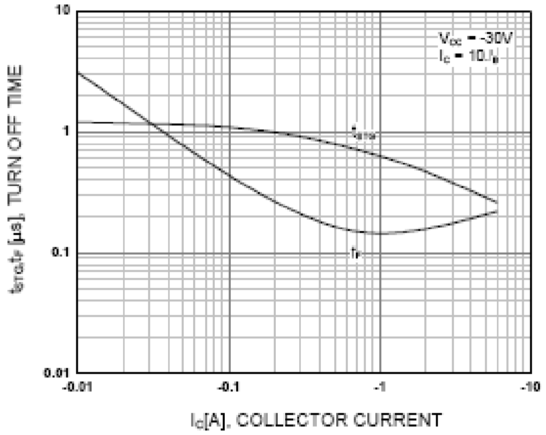


Figure 5. Turn Off Time

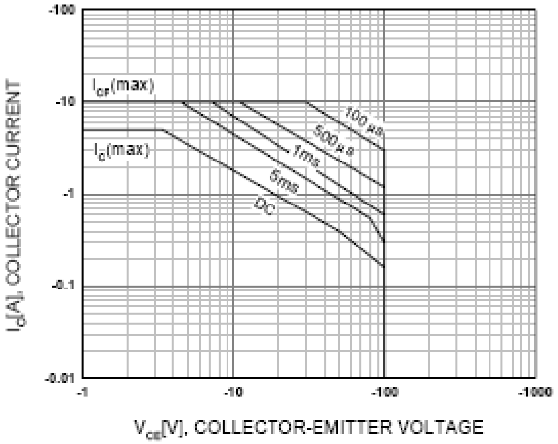
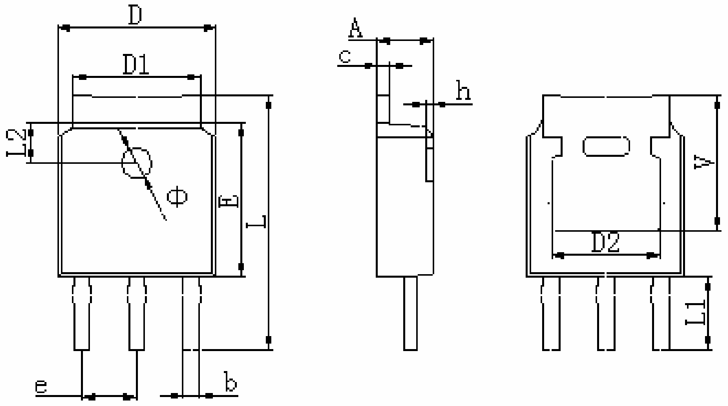


Figure 6. Safe Operating Area

PACKAGE OUTLINE

Plastic surface mounted package TO-251



TO-251		
A	2.200	2.400
b	0.500	0.700
c	0.460	0.580
D	6.500	6.700
D1	5.100	5.460
D2	4.830 Typ.	
E	6.000	6.200
e	2.186	2.386
L	12.000	12.600
L1	5.100 Typ.	
L2	1.400	1.700
Φ	1.100	1.300
h	0.000	0.300
V	5.350 Typ.	
All Dimensions in mm		

PACKAGE OUTLINE

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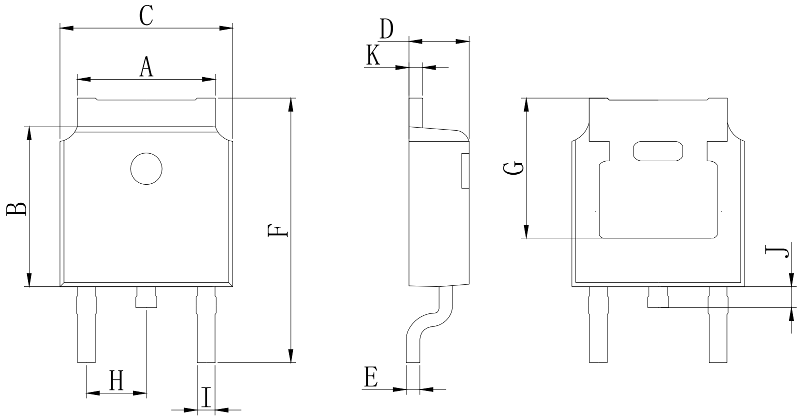

TO-252		
A	4.95	5.59
B	5.40	6.63
C	6.05	7.10
D	2.20	2.40
E	0.40	0.61
F	8.80	10.60
G	5.35 Typ.	
H	1.98	2.59
I	0.50	0.90
J	0.50	1.20
K	0.45	0.89
All Dimensions in mm		

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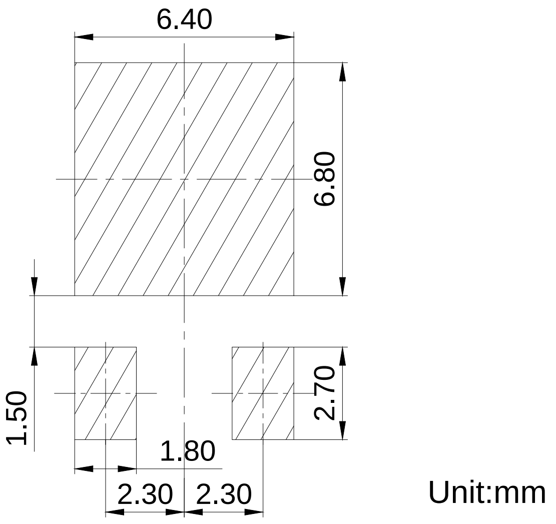
SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
MJD42C	TO-251/252	80PCS/Tube
	TO-252	2500PCS/Tape&Reel