DESCRIPTION

The MJD31C is available in TO-252 package.

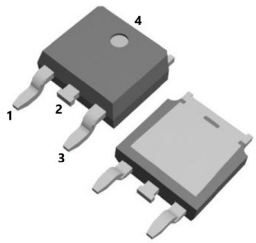
FEATURE

- Complementary to MJD32C

APPLICATION

- Linear and Switching Industrial Application

PIN DESCRIPTION



TO-252

PIN#	DESCRIPTION
1	BASE
2, 4	COLLECTOR
3	EMITTER

ORDERING INFORMATION

Package Type	Part Number
TO-252	MJD31C
SPQ	2,500pcs/Reel
AiT provides all RoHS Compliant Products	

ABSOLUTE MAXIMUM RATINGS

T_a= 25°C, unless otherwise specified.

BV_{CBO}, Collector-Base Voltage		100V
BV_{CEO}, Collector-Emitter Voltage		100V
BV_{EBO}, Emitter-Base Voltage		5V
I_C, Collector Current (DC)		3A
I_{CM}, Collector peak current		5A
P_C, Collector Dissipation	T_a= 25°C	2W
	T_a= 100°C	40W
T_J, Operating Temperature Range		-65℃ ~ + 150℃
T_{STG}, Storage Temperature Range		-65℃ ~ + 150℃

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

ELECTRICAL CHARACTERISTICS

T_A=25℃ unless otherwise specified.

Parameter	Symbol	Condition	Min	Typ.	Max	Unit
Collector-Emitter Sustaining Voltage	$V_{CEO(sus)}$	I_C =300mA, I_B=0	100	-	-	V
Collector Cut-Off Current	I_{CEO}	V_{CE}=60V, I_E=0	-	-	0.30	mA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=5V, I_E=0	-	-	1	mA
Collector Cut-Off Current	I_{CES}	V_{CE}=100V, V_{EB} =0	-	-	0.20	mA
DC Current Gain *	h_{FE}	V_{CE}=4V, I_C=1A	25	-	50	-
		V_{CE}=4V, I_C=3A	10	-	-	
Collector-Emitter Saturation Voltage*	$V_{CE(sat)}$	I_C=3A, I_B=375mA	-	-	1.20	V
Base-Emitter ON Voltage*	$V_{BE(on)}$	V_{CE}=4V, I_C=3A	-	-	1.80	V
Current Gain Bandwidth Product*	f_T	V_{CE}=10V, I_C=500mA	3	-	-	MHz

TYPICAL CHARACTERISTICS

Fig 1. DC Current Gain

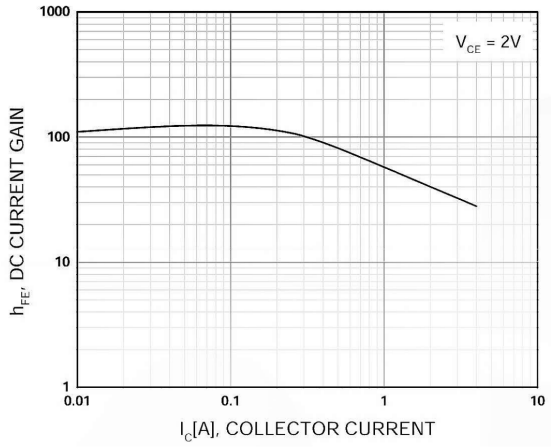


Fig 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

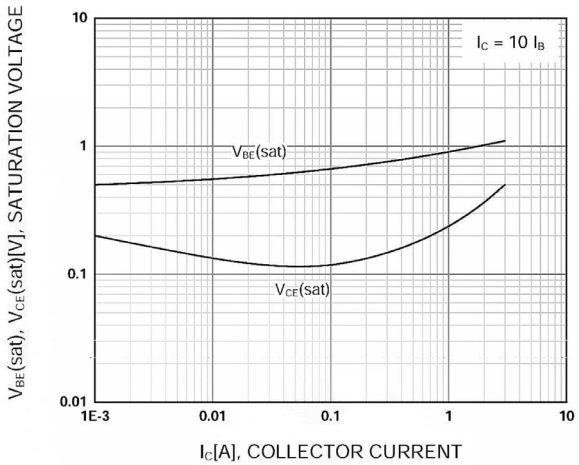


Fig 3. Collector Capacitance

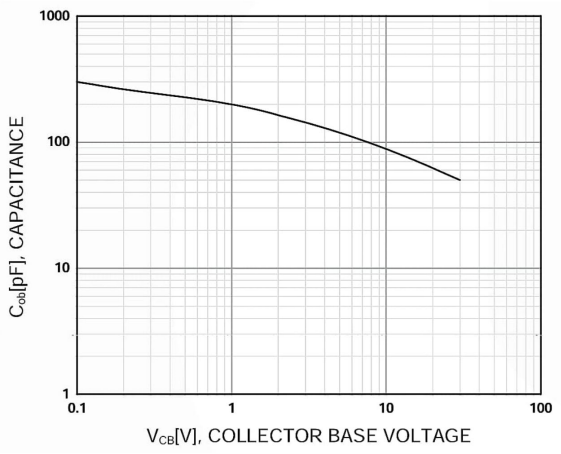


Fig 6. Safe Operating

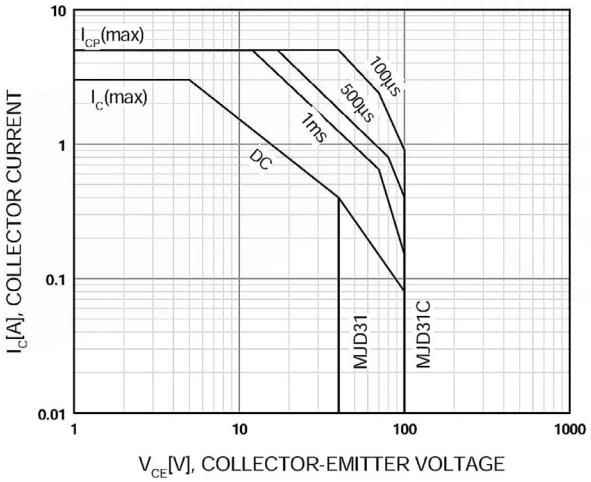


Fig 5. Turn Off Time

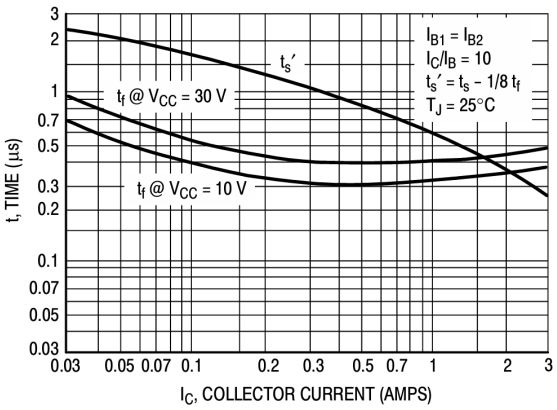
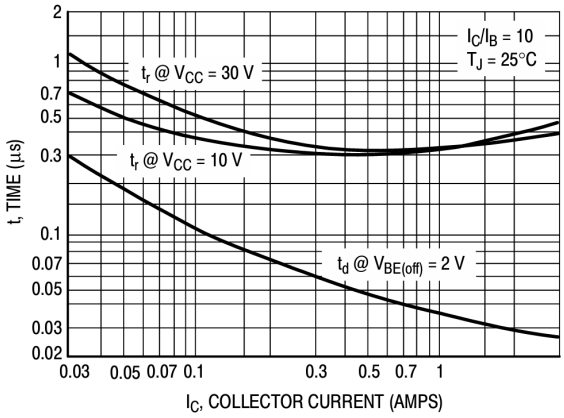
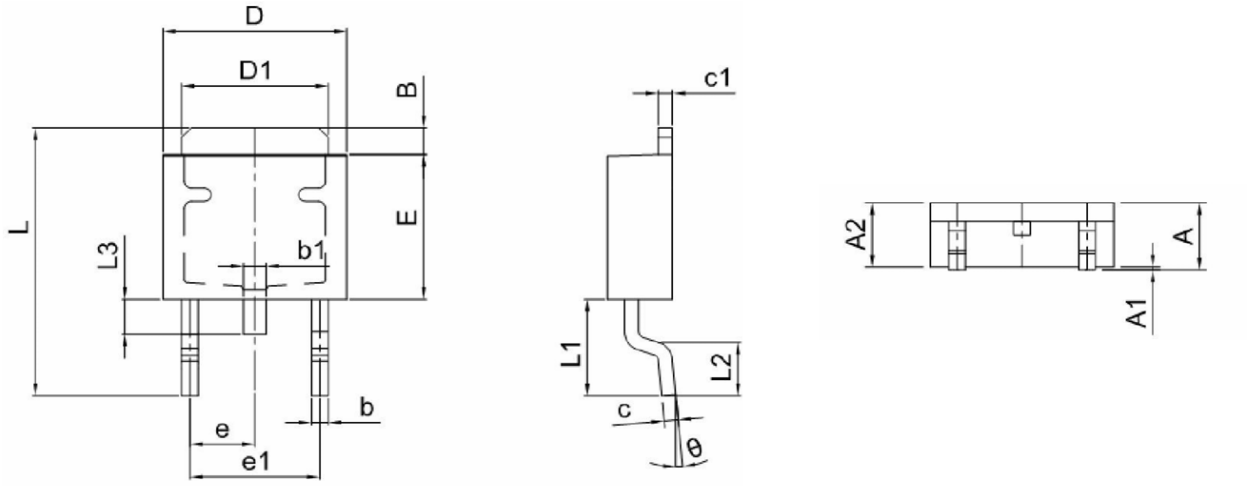


Fig 6. Turn On Time



PACKAGE INFORMATION

Dimension in TO-252 (Unit: mm)



SYMBOL	MILLIMETERS	
	Min.	Max.
A	2.200	2.500
A1	0.000	0.120
A2	2.200	2.400
B	1.200	1.600
b	0.500	0.700
b1	0.700	0.900
c	0.400	0.600
c1	0.400	0.600
D	6.350	6.650
D1	5.200	5.400
E	5.400	5.700
e	2.200	2.400
e1	4.400	4.800
L	10.000	11.000
L1	2.700	3.100
L2	1.400	1.800
L3	0.900	1.500

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