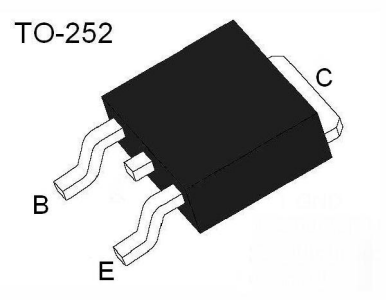
NPN TO-252 Plastic-Encapsulate Transistors

Applications

Linear and switching industrial application

Features

• Complementary to MJD32C



Absolute Maximum Rating (Ta=25℃)

Parameter		Symbol	Value	Unit
Collector-Base Voltage		BV_{CBO}	100	V
Collector-Emitter Voltage		BV_{CEO}	100	V
Emitter-Base Voltage		BV_{EBO}	5	V
Collector Current(DC)		I_C	3	A
Collector peak current		I_{CM}	5	A
Collector Dissipation	Ta =25 ℃	P_C	2	W
	Tc =25 ℃		40	
Junction Temperature		T_j	150	℃
Storage Temperature		T_{stg}	-65～150	℃

Electrical Characteristics (Ta=25℃)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
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_E = 0			0.3	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_{BE} = 0			0.2	mA
DC current gain*	h_{FE}	V_{CE}= 4V， I_C= 1A V_{CE}= 4V， I_C= 3A	25 10			
Collector-emitter saturation voltage*	$V_{CE(sat)}$	I_C = 3A， I_B =375mA			1.2	V
Base-Emitter ON Voltage*	$V_{BE\ (on)}$	V_{CE}= 4V， I_C= 3A			1.8	V
Current Gain Bandwidth Product*	f_T	V_{CE}=10V, I_C=500mA	3.0			MHz

* Pulse Test : PW≤300μs, Duty cycle≤2%

Electrical characteristics

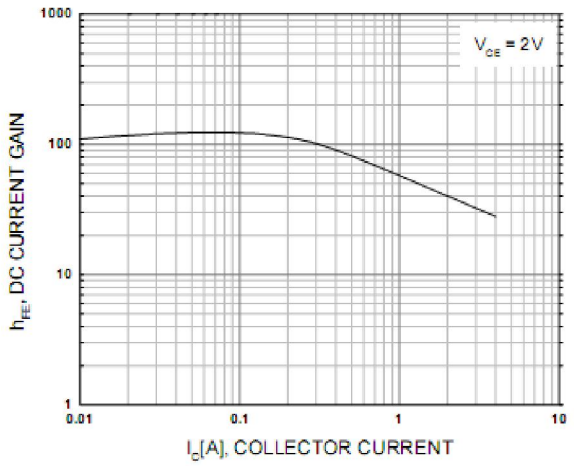


Figure 1. DC current Gain

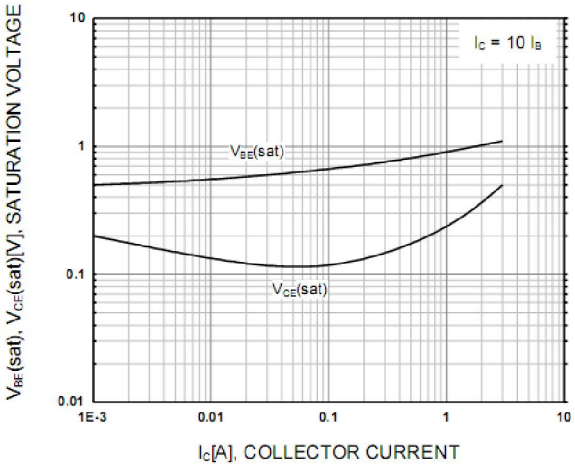


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

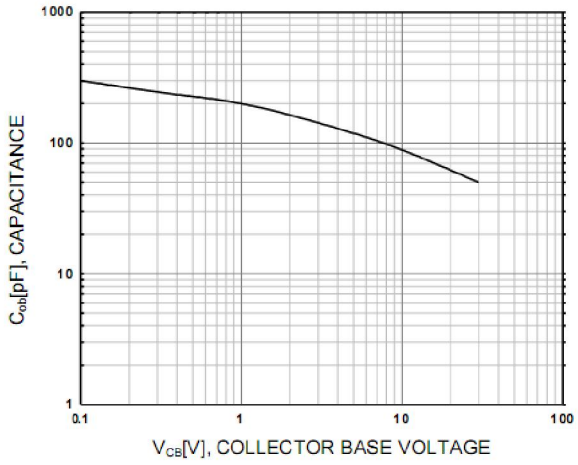


Figure 3. Collector Capacitance

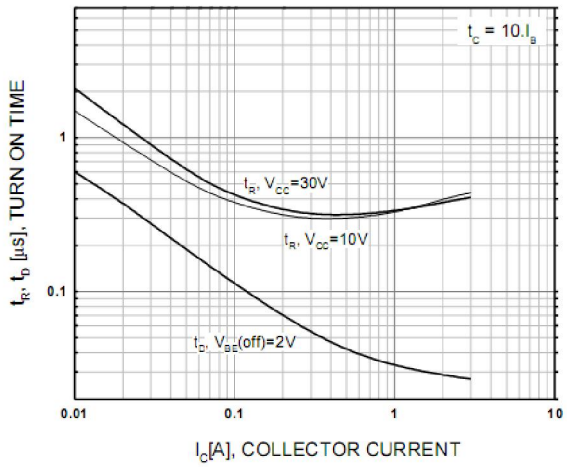


Figure 4. Turn On Time

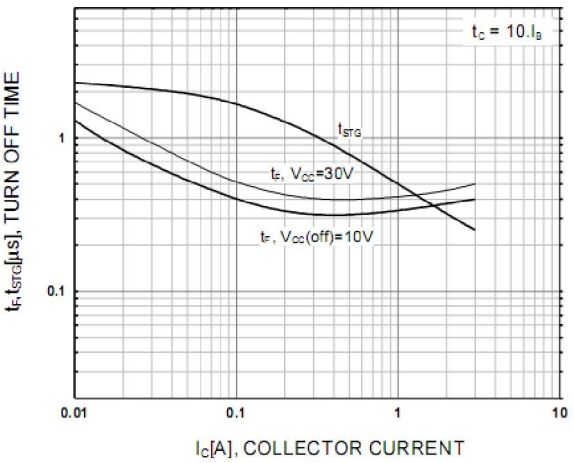


Figure 5. Turn Off Time

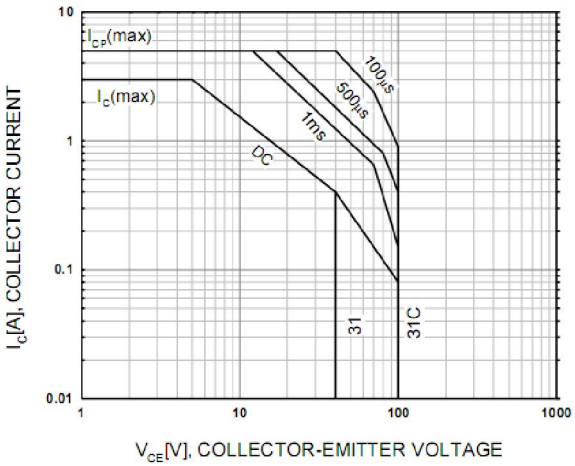
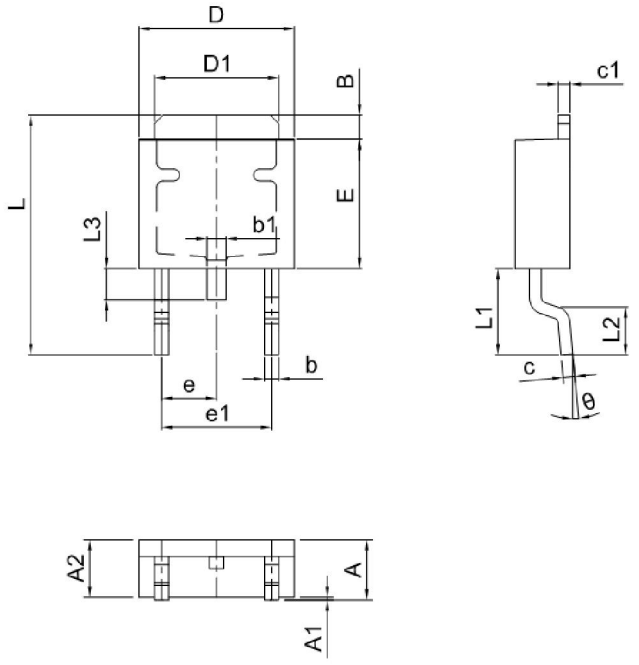


Figure 6. Safe Operating

Package Dimensions



Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	2.20	2.50	0.087	0.098
A1	0.00	0.12	0.000	0.005
A2	2.20	2.40	0.087	0.094
B	1.20	1.60	0.047	0.063
b	0.50	0.70	0.020	0.028
b1	0.70	0.90	0.028	0.035
c	0.40	0.60	0.016	0.024
c1	0.40	0.60	0.016	0.024
D	6.35	6.65	0.250	0.262
D1	5.20	5.40	0.205	0.213
E	5.40	5.70	0.213	0.224
e	2.20	2.40	0.087	0.094
e1	4.40	4.80	0.173	0.189
L	9.60	10.20	0.378	0.402
L1	2.70	3.10	0.106	0.122
L2	1.40	1.80	0.055	0.071
L3	0.90	1.50	0.035	0.059