1 Absolute maximum ratings

Table 2. Absolute maximum ratings

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-base voltage (I_E = 0)	-100	V
V_{CER}	Collector-emitter voltage (R_{BE} = 1 kΩ)	-100	V
V_{CEO}	Collector-emitter voltage (I_B = 0)	-80	V
V_{EBO}	Emitter-base voltage (I_C = 0)	-5	V
I_C	Collector current	-2	A
I_{CM}	Collector peak current (t_p < ms)	-6	A
P_{TOT}	Total dissipation at T_{case} = 25 °C	25	W
T_{stg}	Storage temperature	-65 to 150	°C
T_J	Max. operating junction temperature	150	°C

2 Electrical characteristics

(T_{case} = 25 °C; unless otherwise specified)

Table 3. Electrical characteristics

Symbol	Parameter	Test conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector cut-off current (I_E = 0)	V_{CB} = -100 V V_{CB} = -100 V T_c= 150 °C		-	-0.1 -2	mA mA
I_{EBO}	Emitter cut-off current (I_C = 0)	V_{EB} = -5 V		-	-1	mA
$V_{CEO(sus)}$(1)	Collector-emitter sustaining voltage (I_B = 0)	I_C = -100 mA	-80	-		V
$V_{CE(sat)}$(1)	Collector-emitter saturation voltage	I_C = -1 A I_B = -0.1 A		-	-0.6	V
$V_{BE(on)}$(1)	Base-emitter on voltage	I_C = -1 A V_{CE} = -2 V		-	-1.3	V
h_{FE}(1)	DC current gain	I_C = -150 mA V_{CE} = -2 V I_C = -1 A V_{CE} = -2 V	40 25	-		

1. Pulsed duration = 300 µs, duty cycle = 1.5 %.

2.1 Electrical characteristic (curves)

Figure 2. Safe operating area

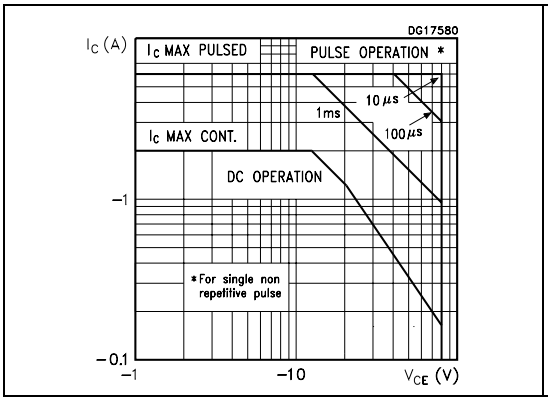


Figure 3. Derating curves

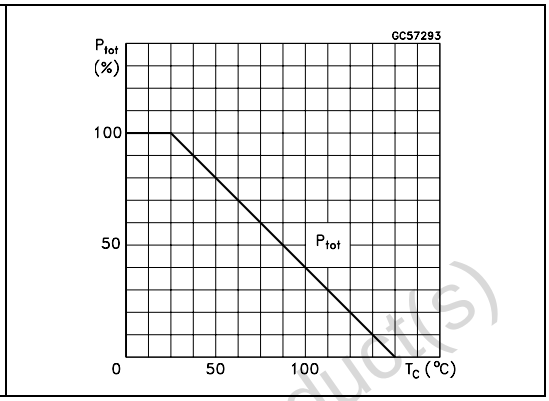


Figure 4. DC current gain (V_{CE} = -2 V)

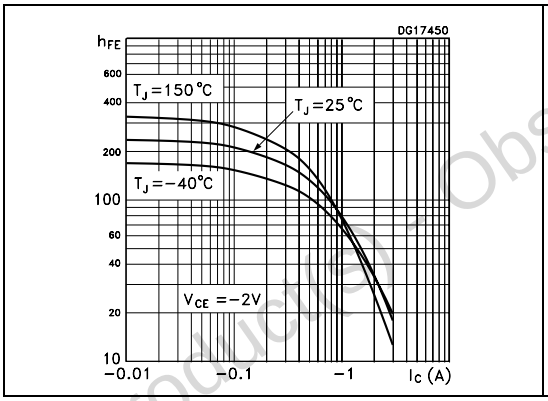


Figure 5. DC current gain (V_{CE} = -4 V)

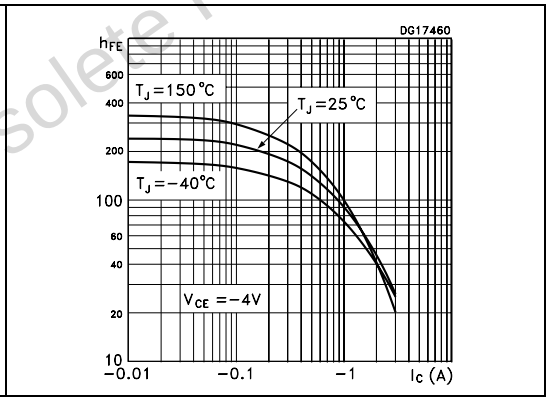


Figure 6. Collector-emitter saturation voltage

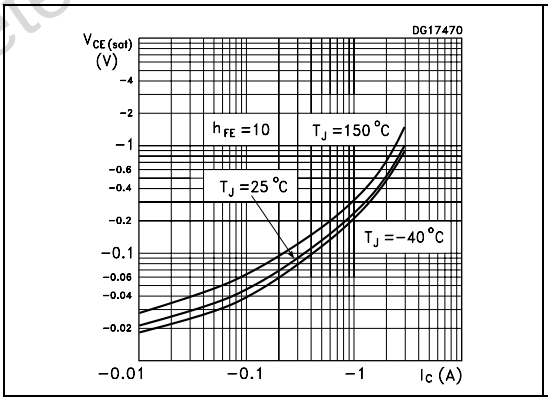


Figure 7. Base-emitter saturation voltage

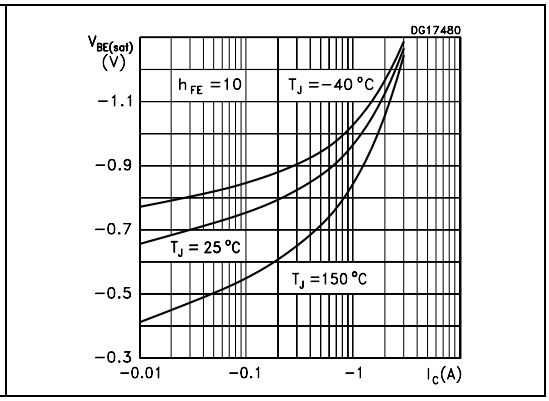


Figure 8. Base-emitter on voltage

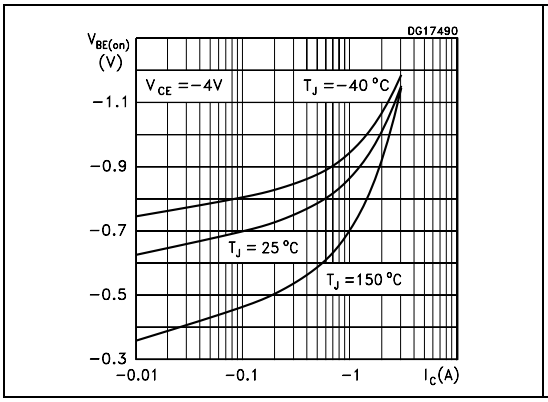


Figure 9. Resistive load switching time (on)

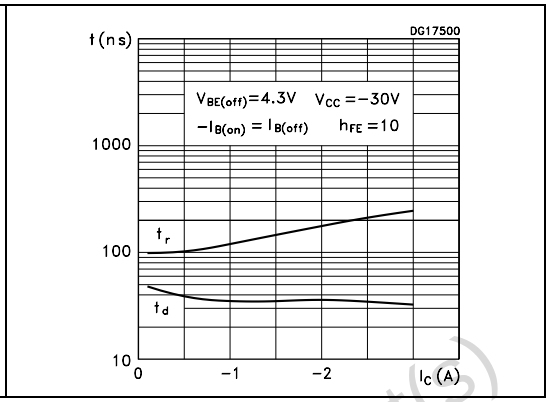
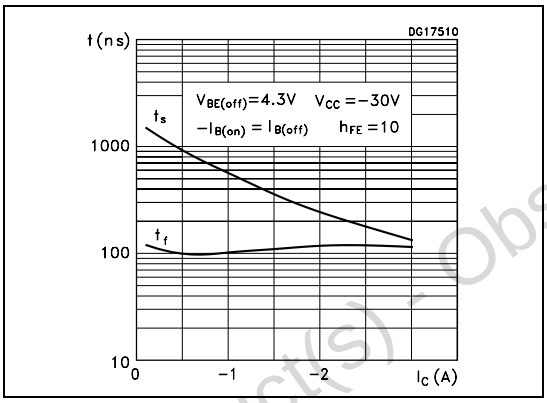
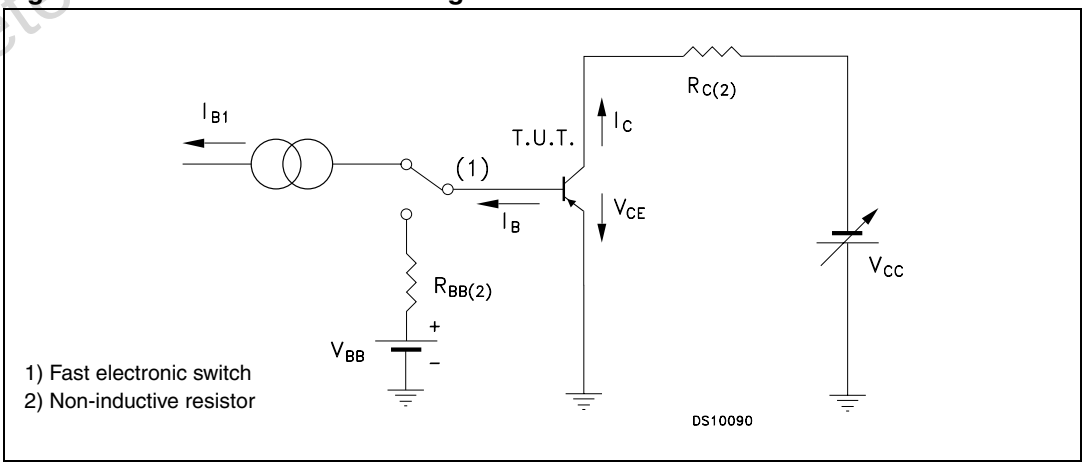


Figure 10. Resistive load switching time (off)



2.2 Test circuit

Figure 11. Resistive load switching test circuit



3 Package mechanical data

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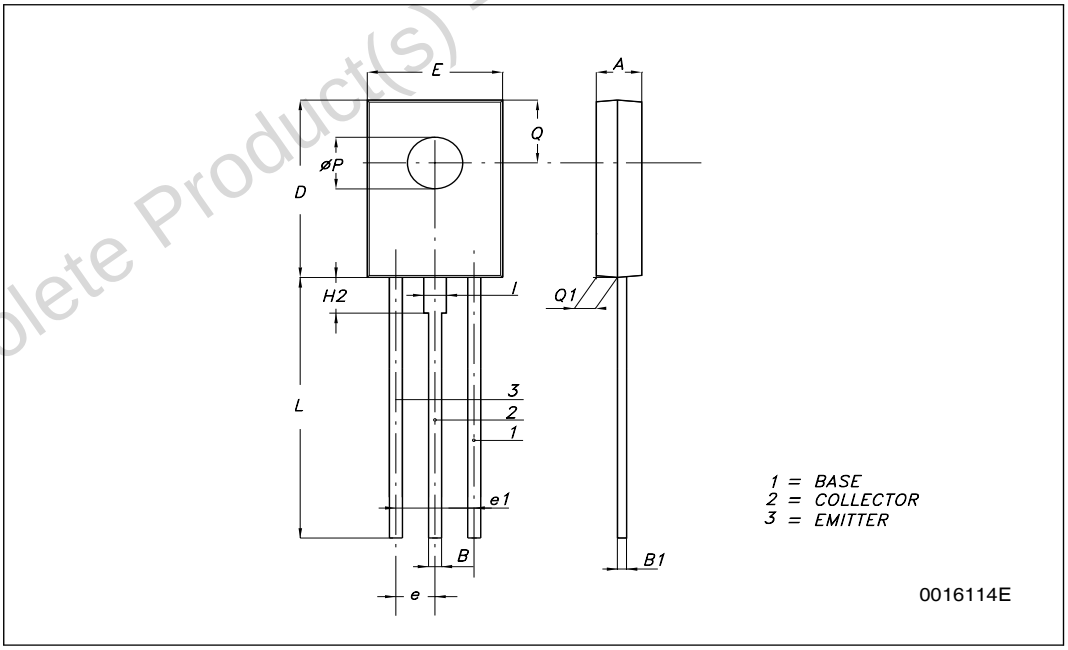
SOT-32 (TO-126) mechanical data

DIM.	mm.		
	MIN.	TYP	MAX.
A	2.4		2.9
B	0.64		0.88
B1	0.39		0.63
D	10.5		11.05
E	7.4		7.8
e	2.04	2.29	2.54
e1	4.07	4.58	5.08
L	15.3		16
P	2.9		3.2
Q		3.8	
Q1	1		1.52
H2		2.15	
I		1.27	



4 Revision History

Table 4. Document revision history

Date	Revision	Changes
03-Jun-2009	1	Initial release

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