

THERMAL DATA

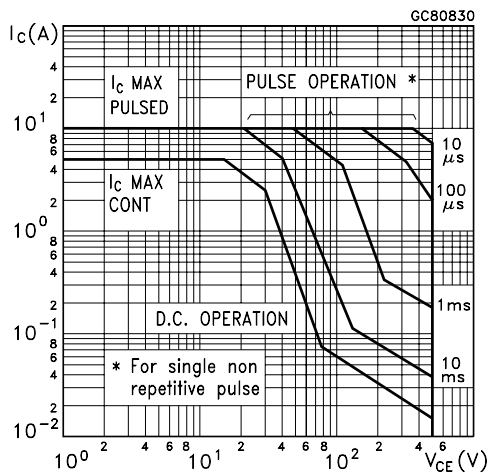
R _{thj-case}	Thermal Resistance Junction-Case	Max	1.65	°C/W
R _{thj-amb}	Thermal Resistance Junction-Ambient	Max	62.5	°C/W

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

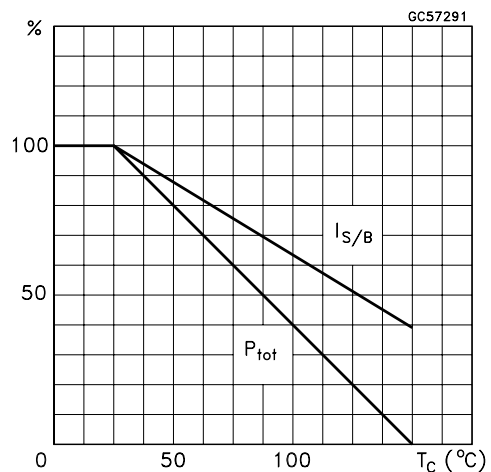
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CES}	Collector Cut-off Current (V _{BE} = 0)	V _{CE} = 1000 V V _{CE} = 1000 V T _j = 125 °C			100 500	μA μA
I _{CEO}	Collector Cut-off Current (I _B = 0)	V _{CE} = 500 V			250	μA
V _{CEO(sus)*}	Collector-Emitter Sustaining Voltage (I _B = 0)	I _C = 100 mA L = 25 mH	500			V
V _{EBO}	Emitter-Base Voltage (I _C = 0)	I _E = 10 mA	9			V
V _{CE(sat)*}	Collector-Emitter Saturation Voltage	I _C = 1 A I _B = 0.2 A I _C = 2 A I _B = 0.4 A I _C = 3 A I _B = 0.6 A			0.5 0.7 1.1	V V V
V _{BE(sat)*}	Base-Emitter Saturation Voltage	I _C = 1 A I _B = 0.2 A I _C = 2 A I _B = 0.4 A I _C = 3 A I _B = 0.6 A			1 1.1 1.2	V V V
h _{FE} *	DC Current Gain	I _C = 10 mA V _{CE} = 5 V I _C = 3 A V _{CE} = 2.5 V	10 6	10	14	
t _s t _f	INDUCTIVE LOAD Storage Time Fall Time	I _C = 2 A I _{B1} = 0.4 A V _{BE(off)} = -5 V R _{BB} = 0 Ω V _{CL} = 250 V L = 200 μH (see figure 1)		1.2 80	1.9 160	μs ns
t _s t _f	INDUCTIVE LOAD Storage Time Fall Time	I _C = 2 A I _{B1} = 0.4 A V _{BE(off)} = -5V R _{BB} = 0 Ω V _{CL} = 250 V L = 200 μH T _j = 125 °C (see figure 1)		1.8 150		μs ns

* Pulsed: Pulse duration = 300 μs, duty cycle 1.5 %

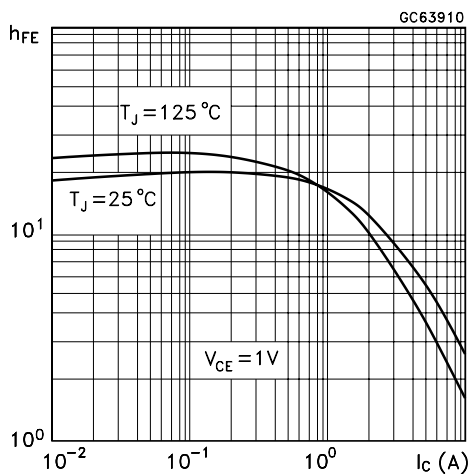
Safe Operating Areas



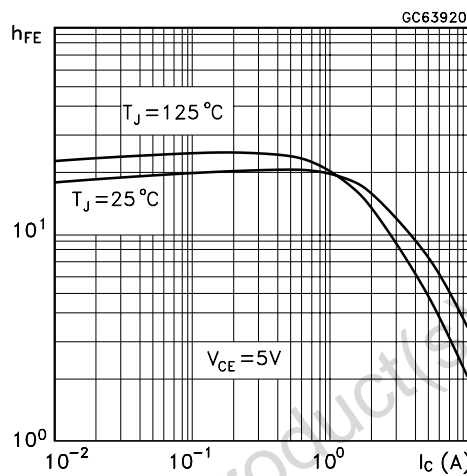
Derating Curve



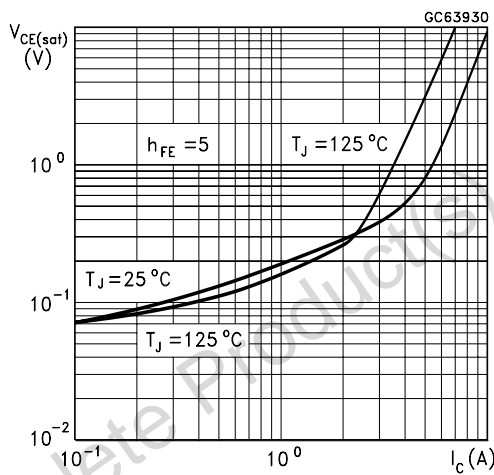
DC Current Gain



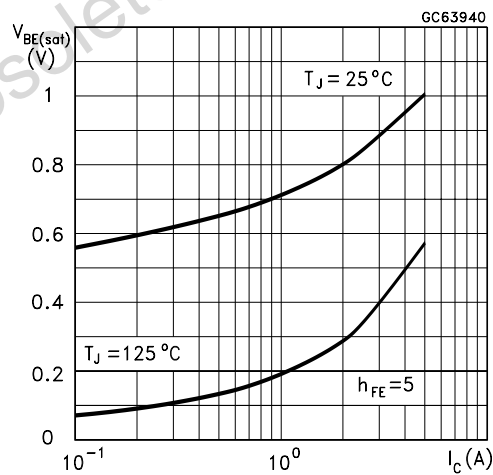
DC Current Gain



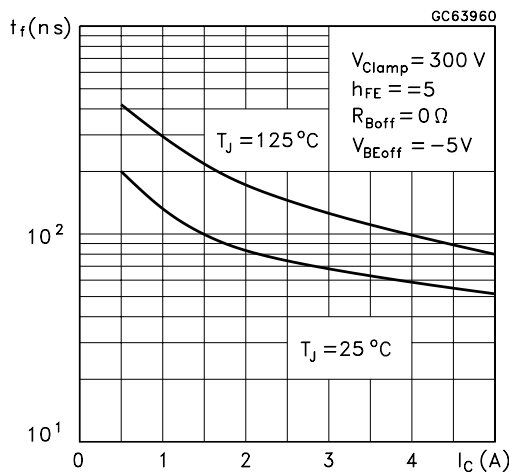
Collector Emitter Saturation Voltage



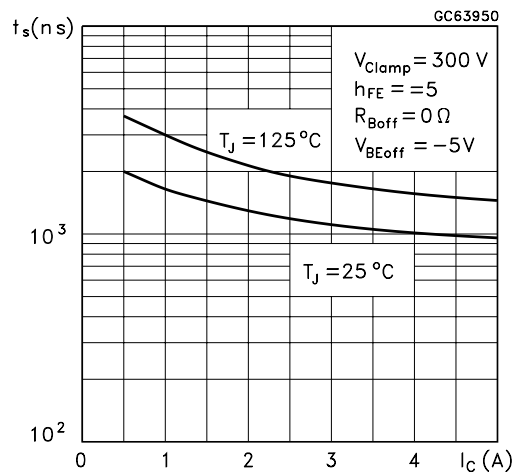
Base Emitter Saturation Voltage



Inductive Load Fall Time



Inductive Load Storage Time



Reverse Biased SOA

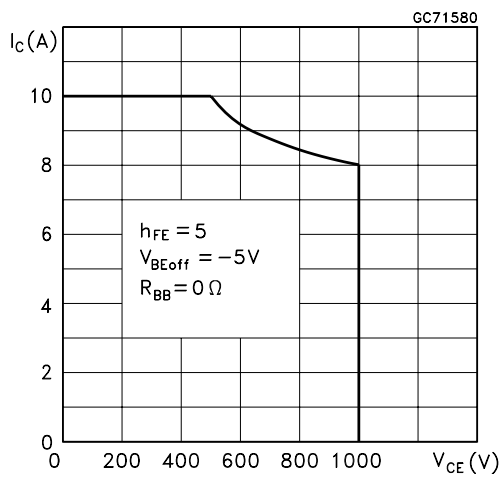
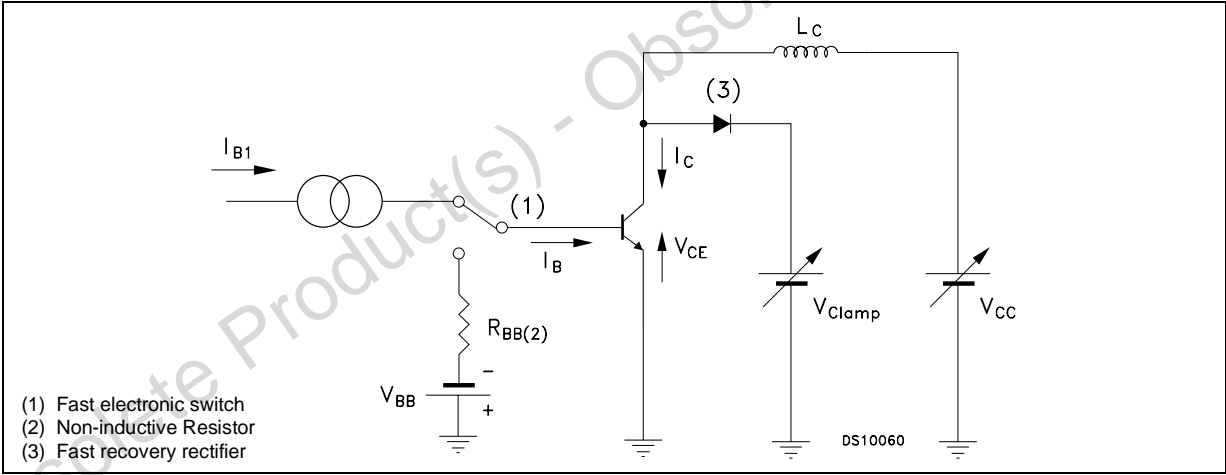
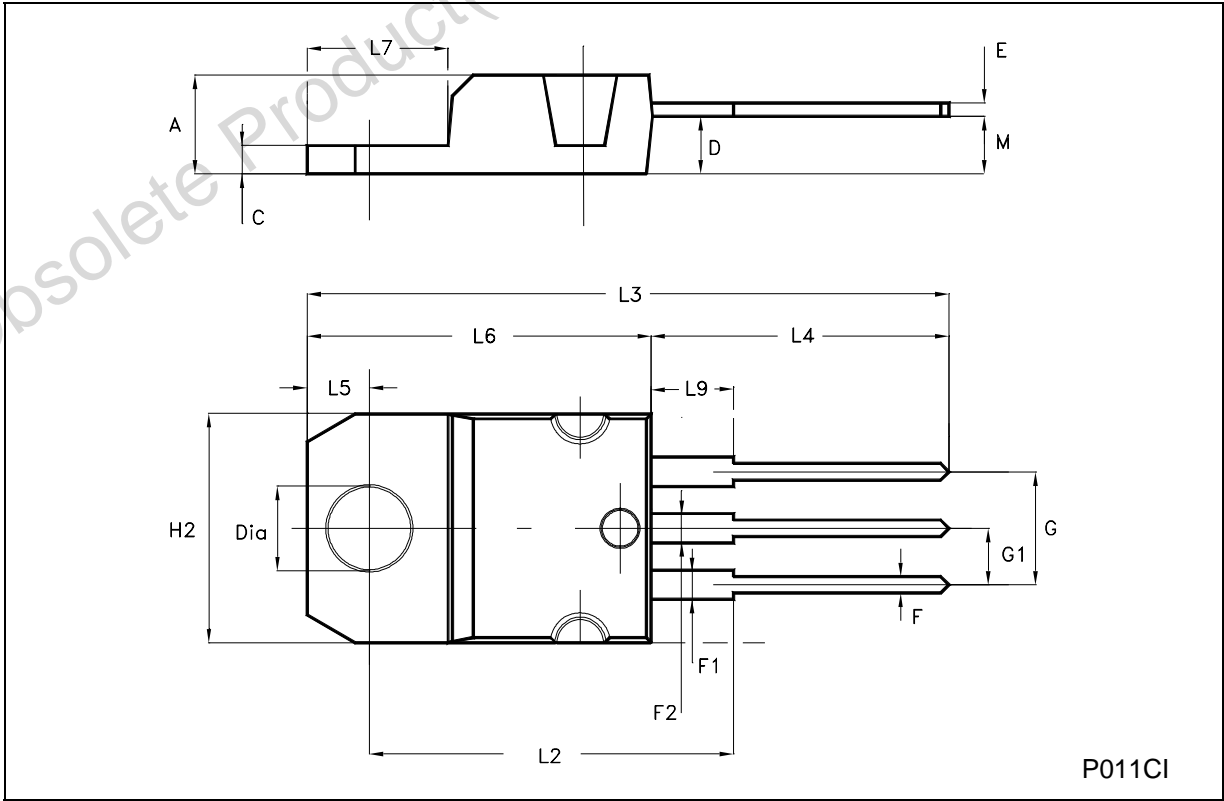


Figure 1: Inductive Load Switching Test Circuit



TO-220 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	4.40		4.60	0.173		0.181
C	1.23		1.32	0.048		0.052
D	2.40		2.72	0.094		0.107
E	0.49		0.70	0.019		0.027
F	0.61		0.88	0.024		0.034
F1	1.14		1.70	0.044		0.067
F2	1.14		1.70	0.044		0.067
G	4.95		5.15	0.194		0.202
G1	2.40		2.70	0.094		0.106
H2	10.00		10.40	0.394		0.409
L2		16.40			0.645	
L4	13.00		14.00	0.511		0.551
L5	2.65		2.95	0.104		0.116
L6	15.25		15.75	0.600		0.620
L7	6.20		6.60	0.244		0.260
L9	3.50		3.93	0.137		0.154
M		2.60			0.102	
DIA.	3.75		3.85	0.147		0.151



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