THERMAL DATA

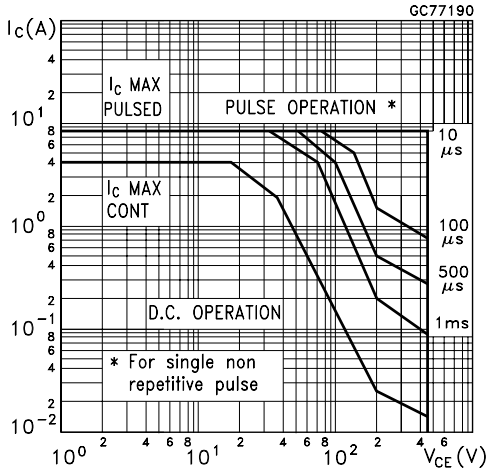
$R_{thj\text{-}case}$	Thermal Resistance Junction-Case Max	1.78	°C/W
$R_{thj\text{-}amb}$	Thermal Resistance Junction-Ambient Max	70	°C/W

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

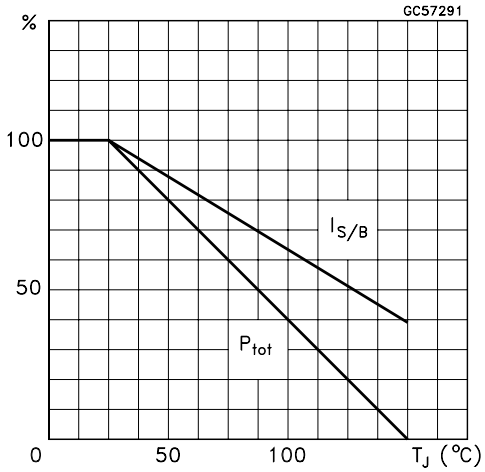
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CES}	Collector Cut-off Current (V_{BE} = 0)	V_{CE} = 850 V V_{CE} = 850 V T_j = 125 °C			100 500	µA µA
I_{EBO}	Emitter Cut-off Current (I_C = 0)	V_{EB} = 9 V			100	µA
$V_{CEO(sus)}$*	Collector-Emitter Sustaining Voltage (I_B = 0)	I_C = 100 mA L = 25 mH	450			V
$V_{CE(sat)}$*	Collector-Emitter Saturation Voltage	I_C = 1 A I_B = 0.2 A I_C = 2.5 A I_B = 0.5 A		0.13	0.5 1.1	V V
$V_{BE(sat)}$*	Base-Emitter Saturation Voltage	I_C = 1 A I_B = 0.2 A I_C = 2.5 A I_B = 0.5 A			1.1 1.3	V V
h_{FE}*	DC Current Gain	I_C = 5 A V_{CE} = 10 V I_C = 10 mA V_{CE} = 5 V	4 10			
V_{CEW}	Maximum Collector Emitter Voltage Without Snubber	I_C = 6 A R_{BB} = 0 Ω V_{BB} = -2.5 V L = 50µH t_p = 10 µs	450			V
t_s t_f	INDUCTIVE LOAD Storage Time Fall Time	I_C = 2.5 A $I_{B(on)}$ = 0.5 A $V_{BE(off)}$ = -5 V R_{BB} = 0 Ω V_{CL} = 300 V L = 1 mH		0.7 50	1.5 100	µs ns
V_f	Diode Forward Voltage	I_C = 2 A			1.5	V

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

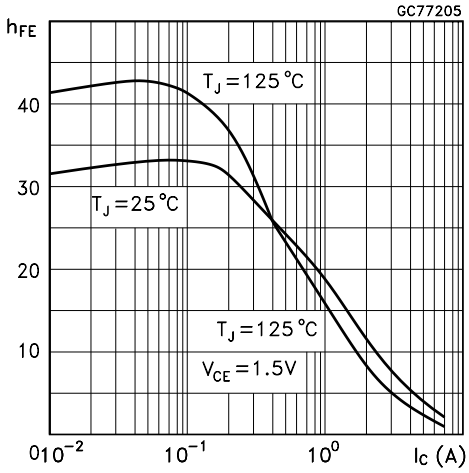
Safe Operating Areas



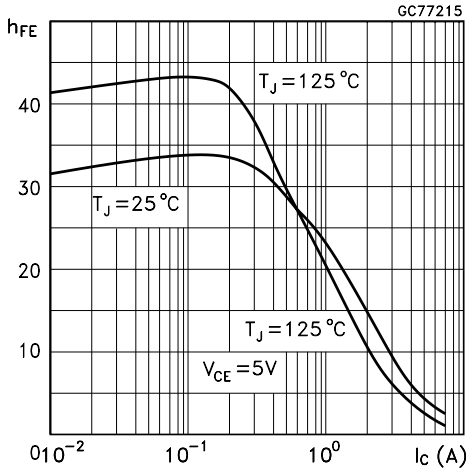
Derating Curve



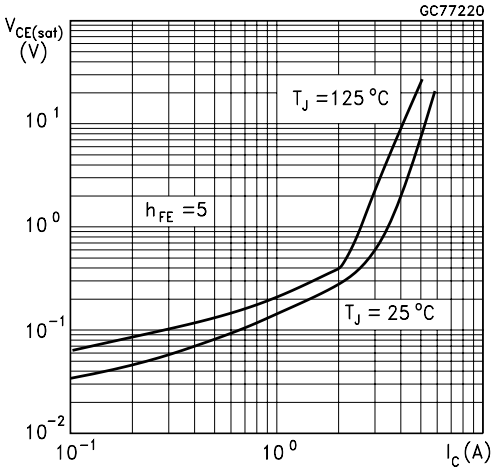
DC Current Gain



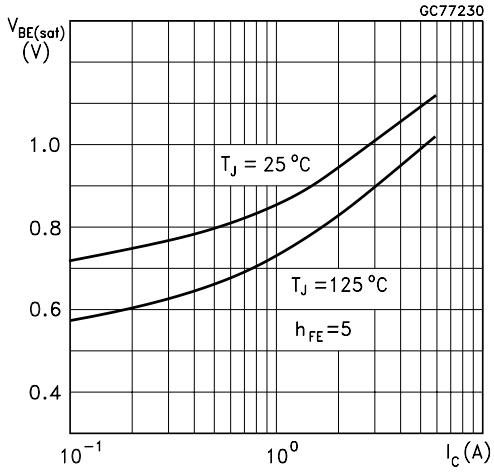
DC Current Gain



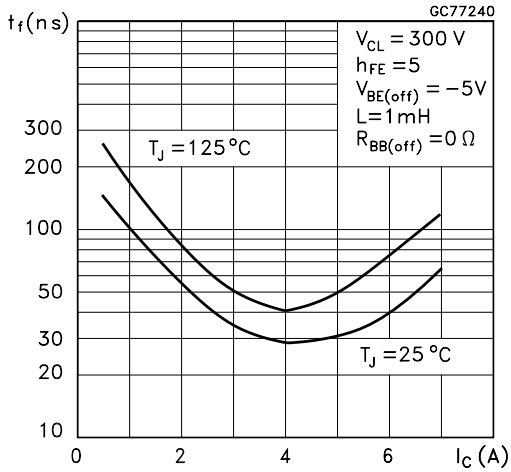
Collector Emitter Saturation Voltage



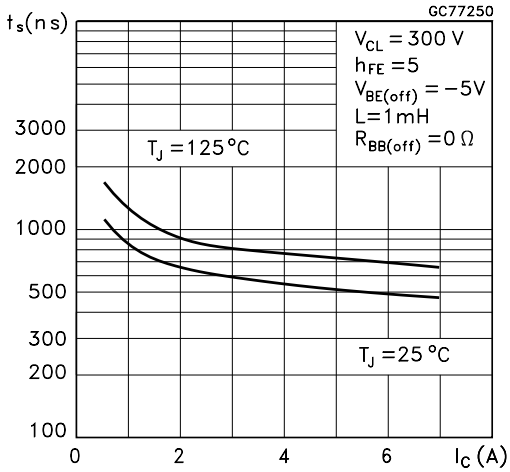
Base Emitter Saturation Voltage



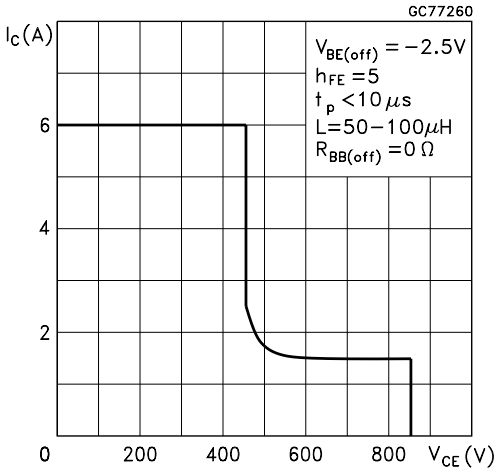
Inductive Fall Time



Inductive Storage Time

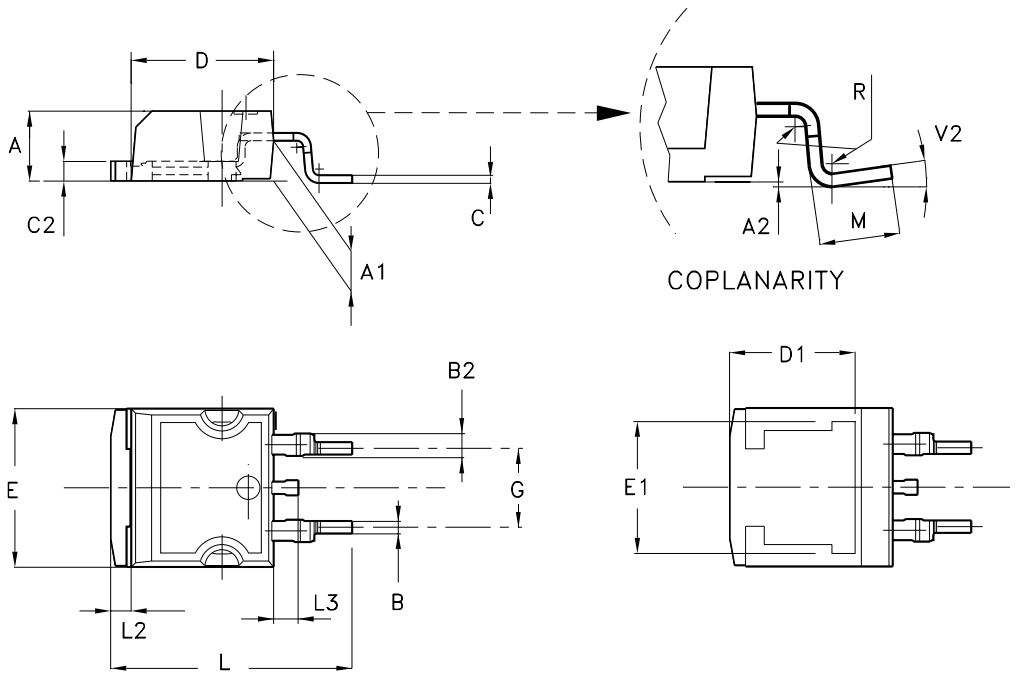


Reverse Biased SOA



TO-263 (D^2PAK) MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	4.40		4.60	0.173		0.181
A1	2.49		2.69	0.098		0.106
A2	0.03		0.23	0.001		0.009
B	0.70		0.93	0.027		0.036
B2	1.14		1.70	0.044		0.067
C	0.45		0.60	0.017		0.023
C2	1.23		1.36	0.048		0.053
D	8.95		9.35	0.352		0.368
D1		8.00			0.315	
E	10.00		10.40	0.393		0.409
E1		8.50			0.334	
G	4.88		5.28	0.192		0.208
L	15.00		15.85	0.590		0.624
L2	1.27		1.4	0.050		0.055
L3	1.40		1.75	0.055		0.068
M	2.40		3.2	0.094		0.126
R		0.40			0.016	
V2	0^o		8^o	0^o		8^o



- Weight : 1.38 g (typ.)
- The planaty of the slug must be within 30 µm

P011P6/G