THERMAL DATA

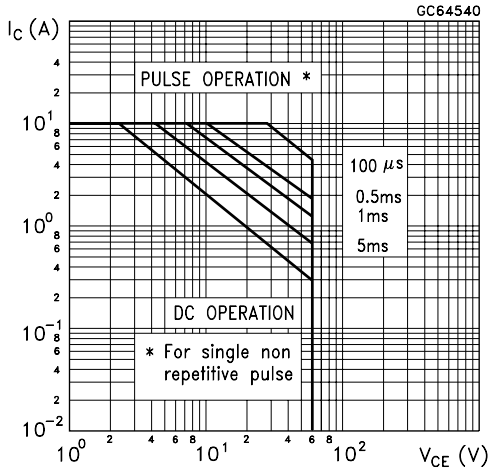
$R_{thj\text{-}case}$	Thermal Resistance Junction-case	Max	6.25	°C/W
$R_{thj\text{-}amb}$	Thermal Resistance Junction-ambient	Max	100	°C/W

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

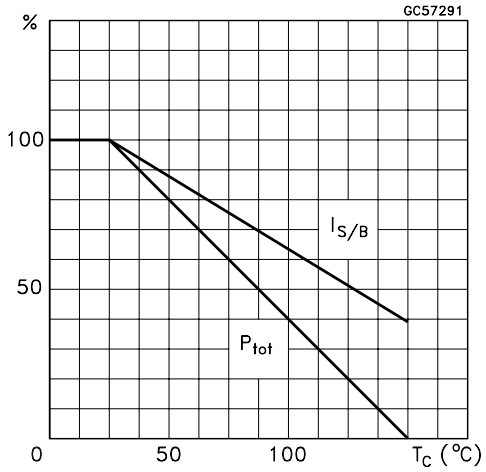
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CEX}	Collector Cut-off Current (V_{BE} = -1.5 V)	V_{CE} = 70 V V_{CE} = 70 V T_j = 150 °C			20 2	µA mA
I_{CBO}	Collector Cut-off Current (I_E = 0)	V_{CB} = 70 V V_{CB} = 70 V T_j = 150 °C			20 2	µA mA
I_{CEO}	Collector Cut-off Current (I_B = 0)	V_{CE} = 30 V			50	µA
I_{EBO}	Emitter Cut-off Current (I_C = 0)	V_{EB} = 5 V			0.5	mA
$V_{CEO(sus)}$*	Collector-Emitter Sustaining Voltage (I_B = 0)	I_C = 30 mA	60			V
$V_{CE(sat)}$*	Collector-Emitter Saturation Voltage	I_C = 4 A I_B = 0.4 A I_C = 10 A I_B = 3.3 A			1.1 8	V V
$V_{BE(on)}$*	Base-Emitter Voltage	I_C = 4 A V_{CE} = 4 V			1.8	V
h_{FE}*	DC Current Gain	I_C = 4 A V_{CE} = 4 V I_C = 10 A V_{CE} = 4 V	20 5		100	
f_T	Transition Frequency	I_C = 0.5 A V_{CE} = 10 V f = 500 KHz	2			MHz

* Pulsed: Pulse duration = 300 µs, duty cycle 1.5 %
For PNP type voltage and current values are negative.

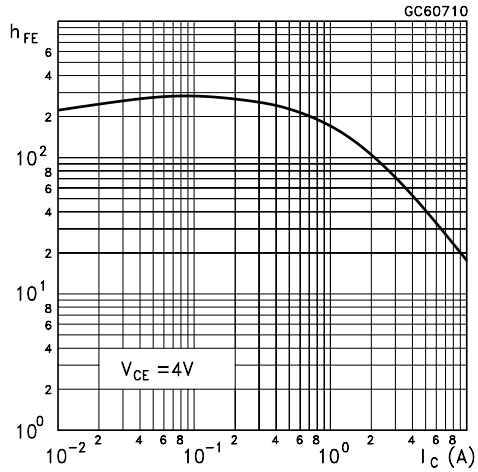
Safe Operating Area



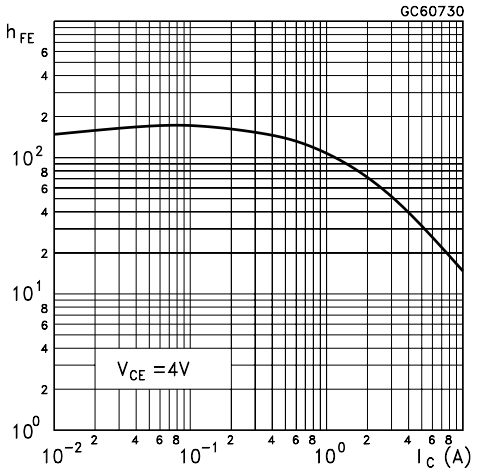
Derating Curves



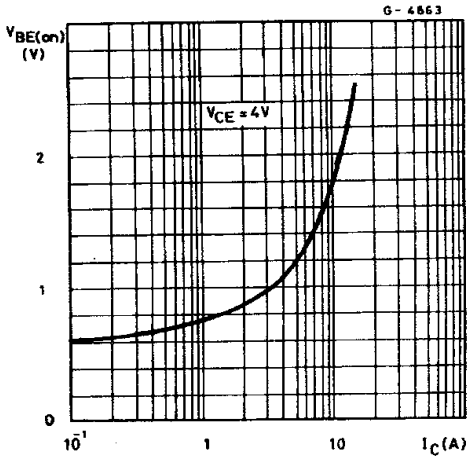
DC Current Gain (NPN type)



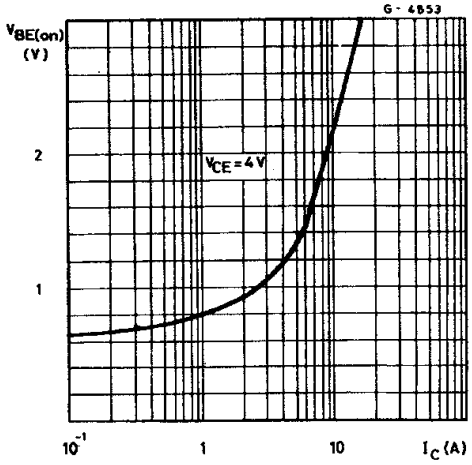
DC Current Gain (PNP type)



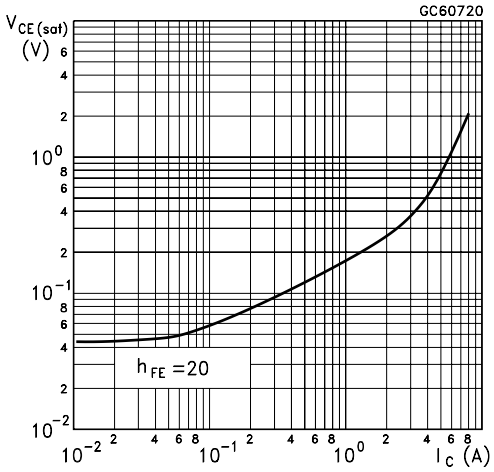
DC Transconductance (NPN type)



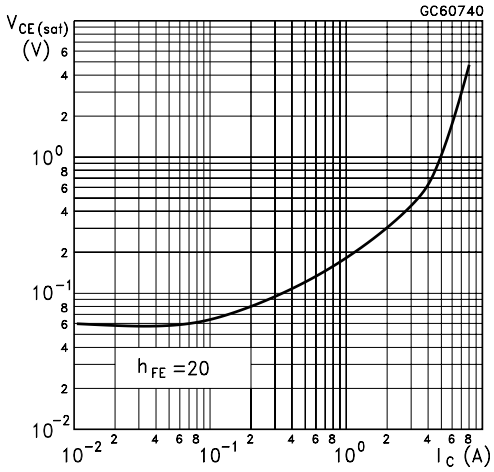
DC Transconductance (PNP type)



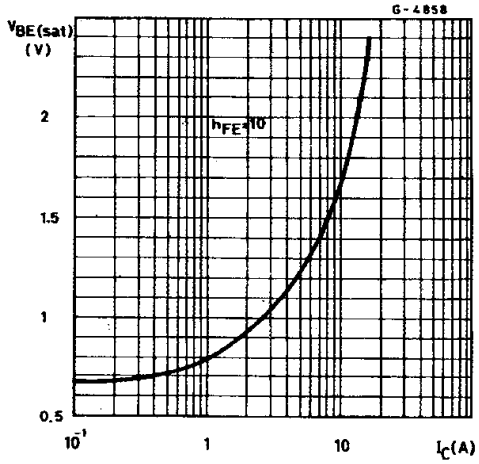
Collector-Emitter Saturation Voltage (NPN type)



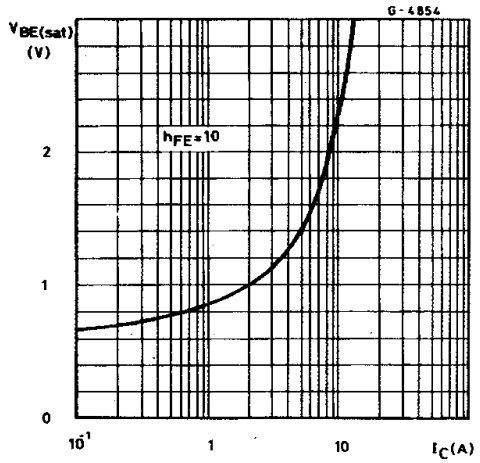
Collector-Emitter Saturation Voltage (PNP type)



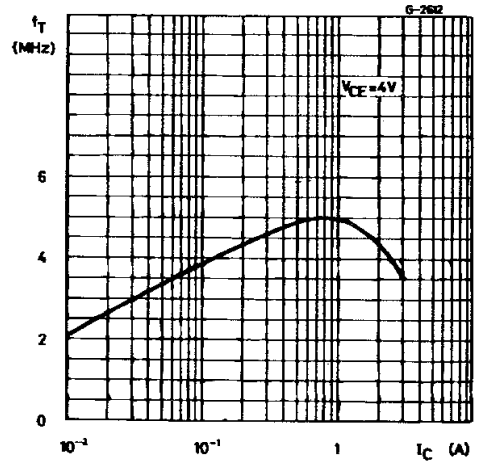
Base-Emitter Saturation Voltage (NPN type)



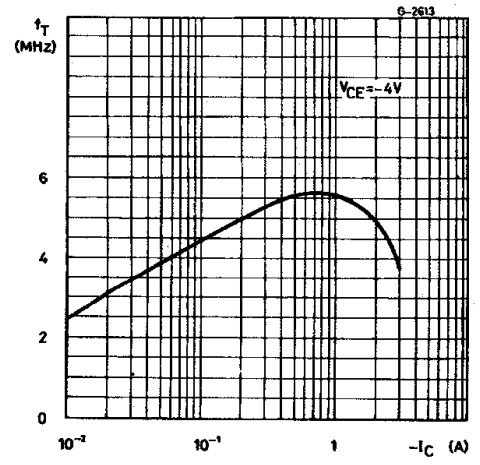
Base-Emitter Saturation Voltage (PNP type)



Transition Frequency (NPN type)

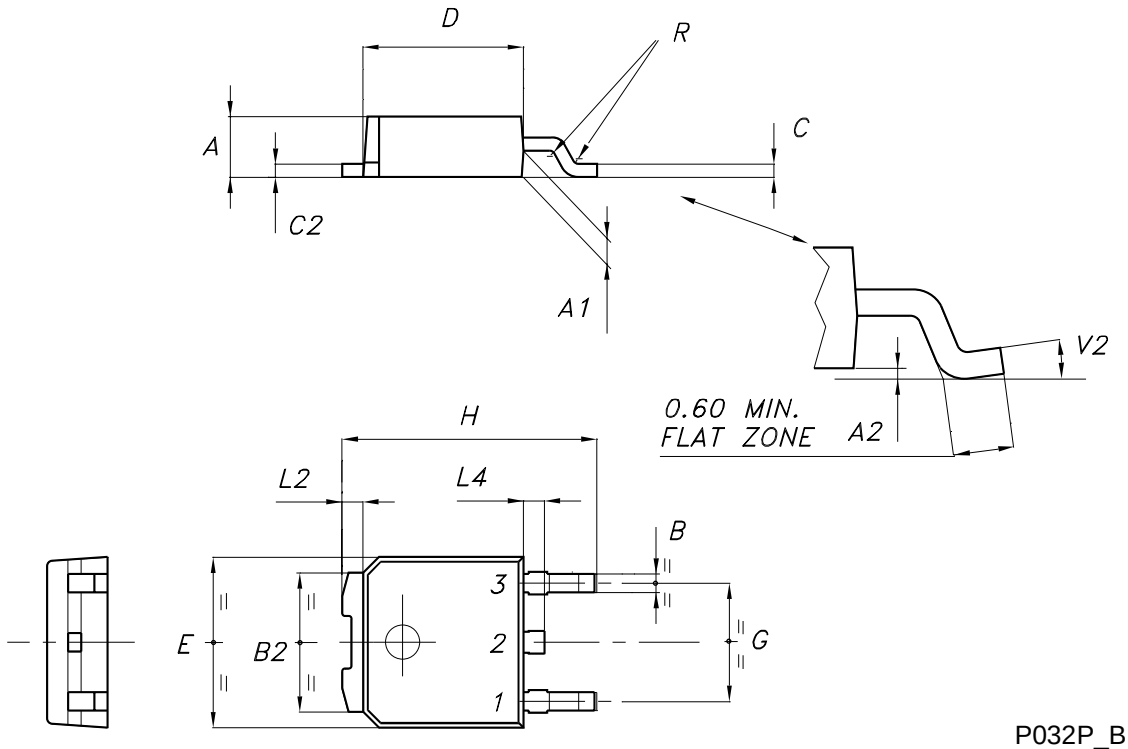


Transition Frequency (PNP type)



TO-252 (DPAK) MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	2.20		2.40	0.087		0.094
A1	0.90		1.10	0.035		0.043
A2	0.03		0.23	0.001		0.009
B	0.64		0.90	0.025		0.035
B2	5.20		5.40	0.204		0.213
C	0.45		0.60	0.018		0.024
C2	0.48		0.60	0.019		0.024
D	6.00		6.20	0.236		0.244
E	6.40		6.60	0.252		0.260
G	4.40		4.60	0.173		0.181
H	9.35		10.10	0.368		0.398
L2		0.8			0.031	
L4	0.60		1.00	0.024		0.039
V2	0^o		8^o	0^o		0^o



P032P_B

Target specification