

MJD112/MJD117

THERMAL DATA

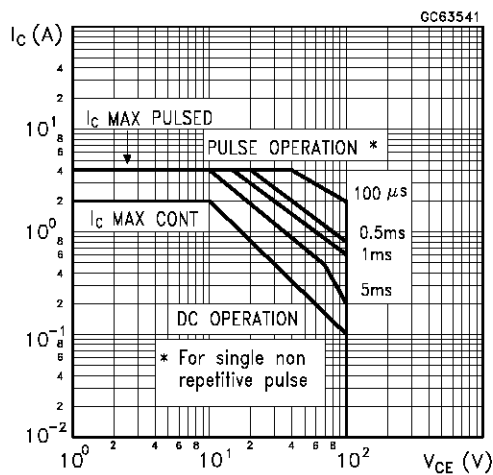
R _{thj-case}	Thermal Resistance Junction-case	Max	6.25	°C/W
R _{thj-amb}	Thermal Resistance Junction-ambient	Max	100	°C/W

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

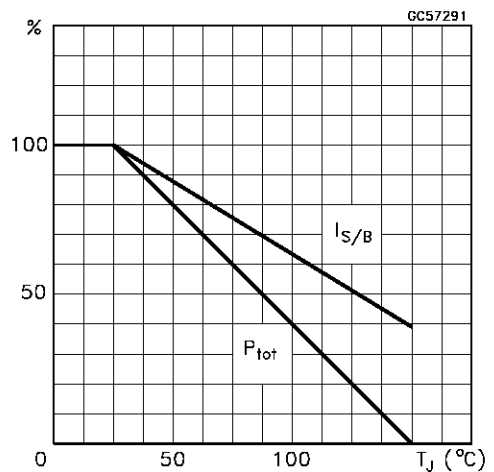
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CBO}	Collector Cut-off Current (I _E = 0)	V _{CB} = 100 V			0.02	mA
		V _{CB} = 80 V			0.01	mA
I _{CEO}	Collector Cut-off Current (I _B = 0)	V _{CE} = 50 V			0.02	mA
I _{CEX}	Collector Cut-off Current	V _{CB} = 80 V V _{BE} = -1.5V			0.01	mA
		V _{CB} = 80 V V _{BE} = -1.5V T _C = 125 °C			0.5	mA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} = 5 V			2	mA
V _{CEO(sus)}	Collector-Emitter Sustaining Voltage	I _C = 30 mA	100			V
V _{CE(sat)*}	Collector-Emitter Saturation Voltage	I _C = 2 A I _B = 8 mA			2	V
		I _C = 4 A I _B = 40 mA			3	V
V _{BE(sat)*}	Collector-Base Saturation Voltage	I _C = 4 A I _B = 40 mA			4	V
V _{BE(on)*}	Base-Emitter Voltage	I _C = 2 A V _{CE} = 3 V			2.8	V
h _{FE*}	DC Current Gain	I _C = 0.5 A V _{CE} = 3 V	500		12000	
		I _C = 2 A V _{CE} = 3 V	1000			
		I _C = 4 A V _{CE} = 3 V	200			

* Pulsed: Pulse duration = 300 μs, duty cycle ≤ 2 %

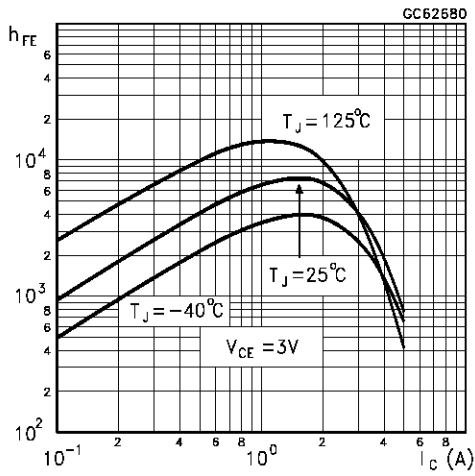
Safe Operating Areas



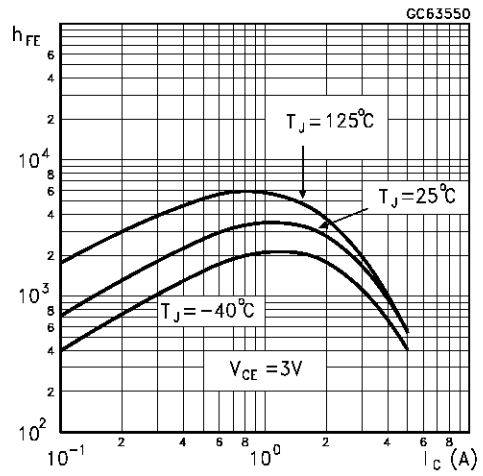
Derating Curve



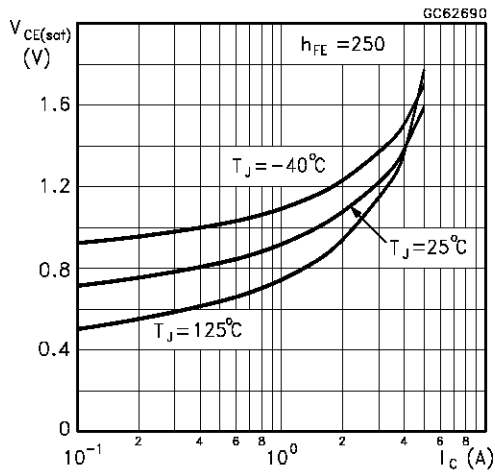
DC Current Gain (NPN type)



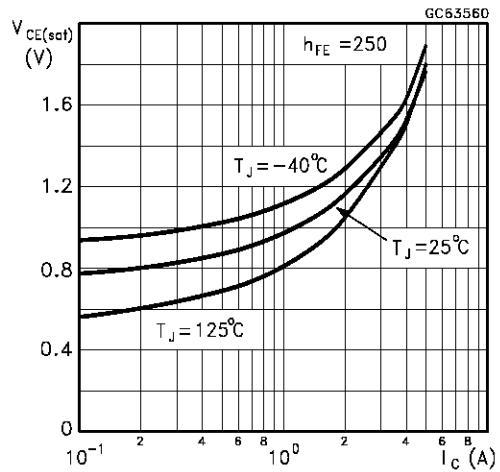
DC Current Gain (NPN type)



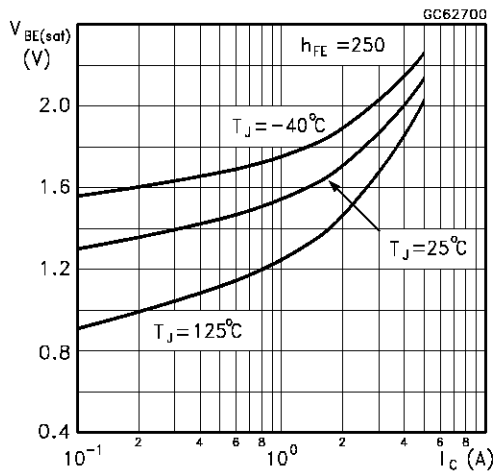
Collector-Emitter Saturation Voltage (NPN type)



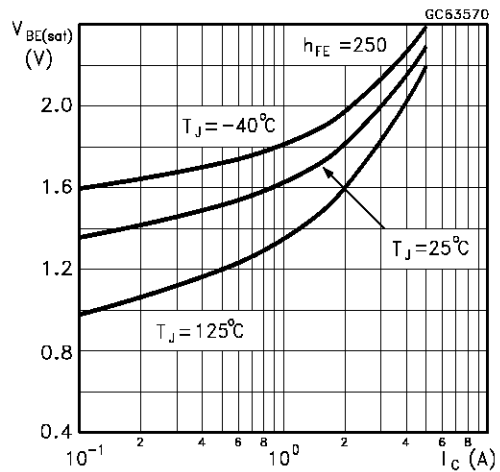
Collector-Emitter Saturation Voltage (PNP type)



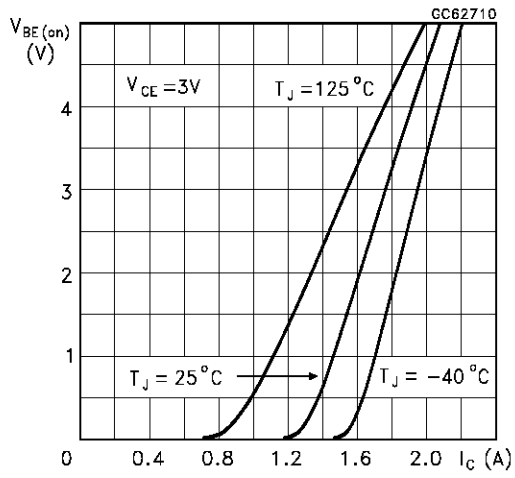
Base-Emitter Saturation Voltage (NPN type)



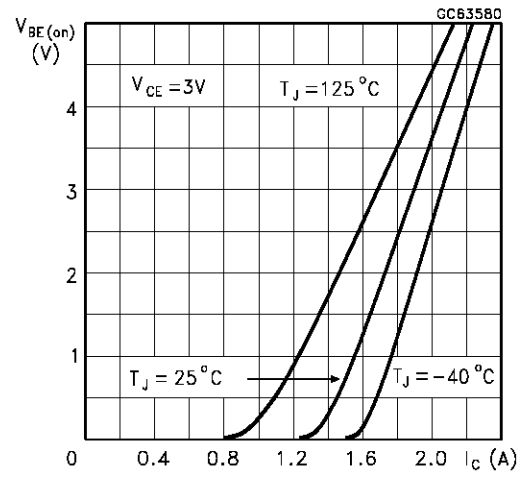
Base-Emitter Saturation Voltage (PNP type)



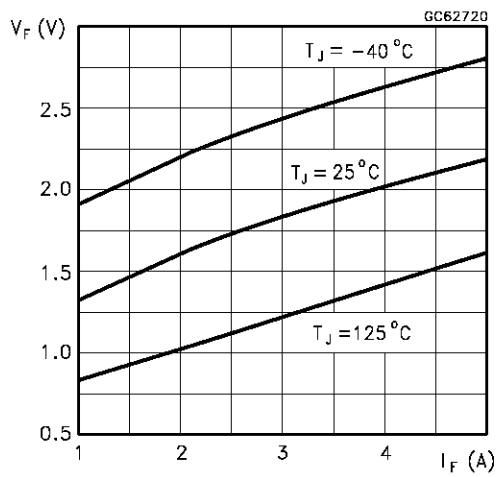
Base-Emitter On Voltage (NPN type)



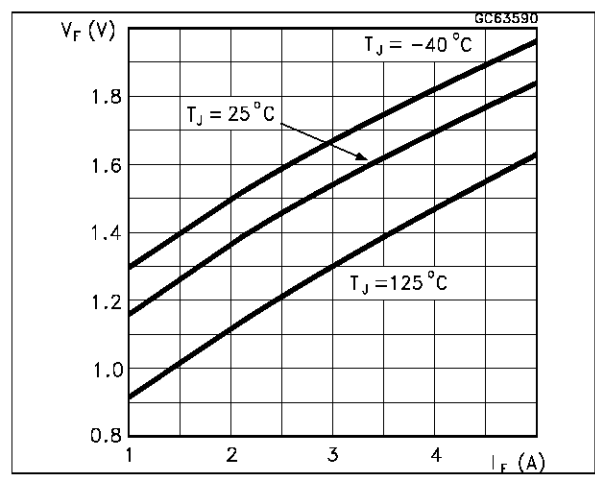
Base-Emitter On Voltage (PNP type)



Freewheel Diode Forward Voltage (NPN types)

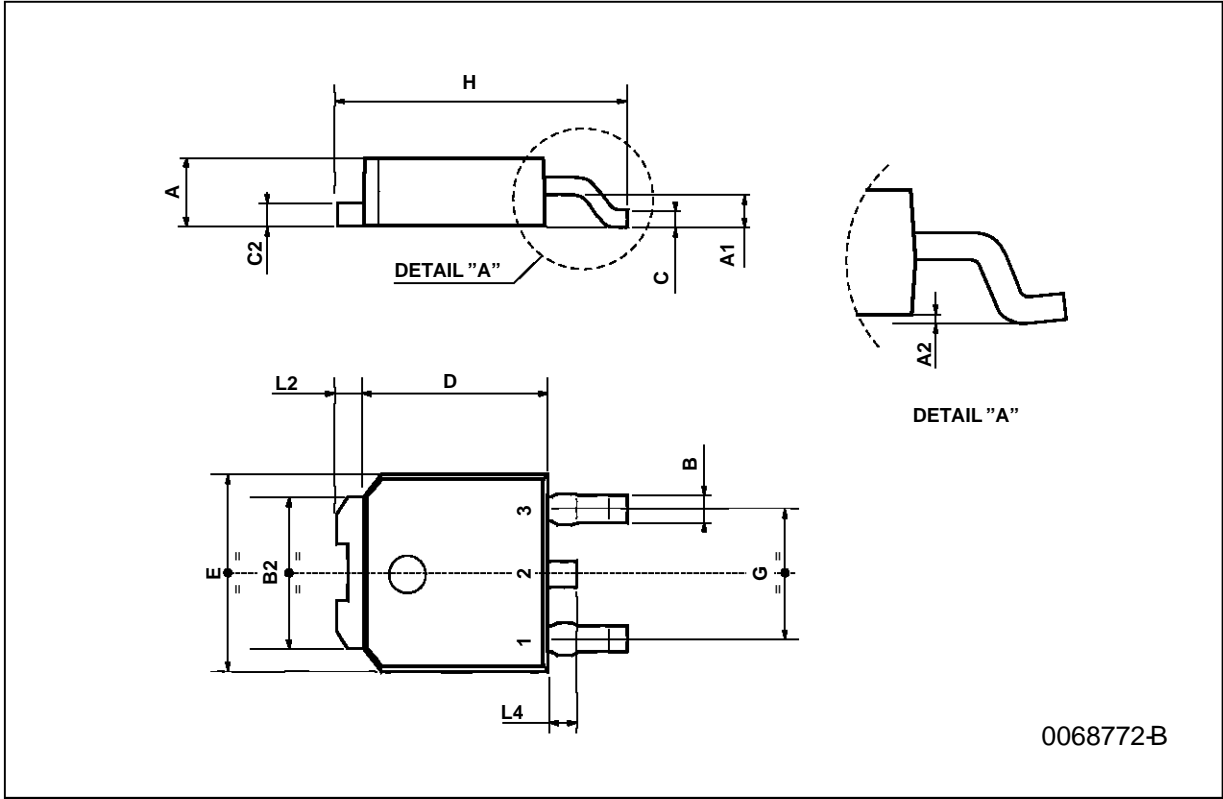


Freewheel Diode Forward Voltage (PNP types)



TO-252 (DPAK) MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	2.2		2.4	0.086		0.094
A1	0.9		1.1	0.035		0.043
A2	0.03		0.23	0.001		0.009
B	0.64		0.9	0.025		0.035
B2	5.2		5.4	0.204		0.212
C	0.45		0.6	0.017		0.023
C2	0.48		0.6	0.019		0.023
D	6		6.2	0.236		0.244
E	6.4		6.6	0.252		0.260
G	4.4		4.6	0.173		0.181
H	9.35		10.1	0.368		0.397
L2		0.8			0.031	
L4	0.6		1	0.023		0.039



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