SGS-THOMSON
MICROELECTRONICS

MJD340
MJD350

COMPLEMENTARY SILICON POWER TRANSISTORS

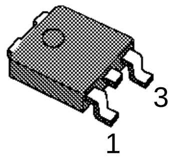
- SGS-THOMSON PREFERRED SALESTYPES
- HIGH VOLTAGE CAPABILITY
- SURFACE-MOUNTING TO-252 (DPAK) POWER PACKAGE IN TAPE & REEL (SUFFIX ”T4”)
- ELECTRICAL SIMILAR TO MJE340 AND MJE350

APPLICATIONS

- SOLENOID/RELAY DRIVERS
- GENERAL PURPOSE SWITCHING AND AMPLIFIER

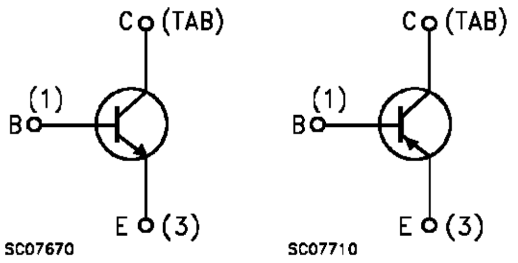
DESCRIPTION

The MJD340 and MJD350 form complementary PNP - NPN pairs.
They are manufactured using Medium Voltage Epitaxial Planar technology, resulting in a rugged high performance cost-effective transistor.



DPAK
TO-252
(Suffix ”T4”)

INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage ($I_E = 0$)	300	V
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)	300	V
V_{EBO}	Emitter-Base Voltage ($I_C = 0$)	3	V
I_C	Collector Current	0.5	A
I_{CM}	Collector Peak Current ($t_p < 5ms$)	0.75	A
P_{tot}	Total Dissipation at $T_c = 25\ ^oC$	15	W
T_{stg}	Storage Temperature	-65 to 150	^oC
T_j	Max. Operating Junction Temperature	150	^oC

For PNP type voltage and current values are negative.

THERMAL DATA

$R_{thj\text{-}case}$	Thermal Resistance Junction-case	Max	8.33	^{o}C/W
$R_{thj\text{-}amb}$	Thermal Resistance Junction-ambient	Max	100	^{o}C/W

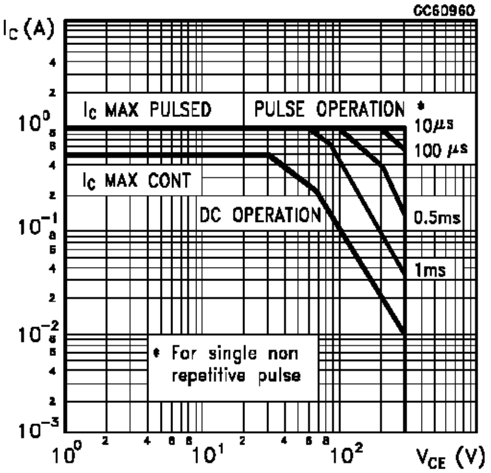
ELECTRICAL CHARACTERISTICS (T_{case} = 25 ^{o}C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut-off Current (v_{bE} = 0)	V_{CB} = 300 V			0.1	mA
I_{EBO}	Emitter Cut-off Current (I_C = 0)	V_{EB} = 3 V			0.1	mA
$V_{CEO(sus)}$	Collector-Emitter Sustaining Voltage	I_C = 1 mA	300			V
h_{FE}∗	DC Current Gain	I_C = 50 mA V_{CE} = 10 V	30		240	

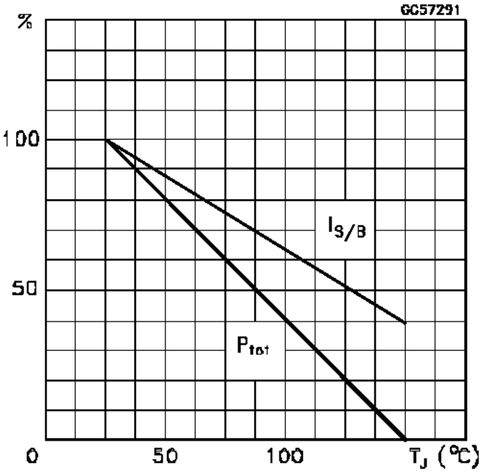
∗ Pulsed: Pulse duration = 300 µs, duty cycle ≤ 2 %

For PNP type voltage and current values are negative.

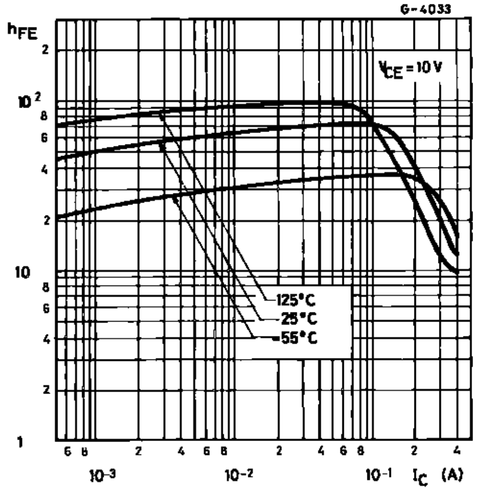
Safe Operating Areas



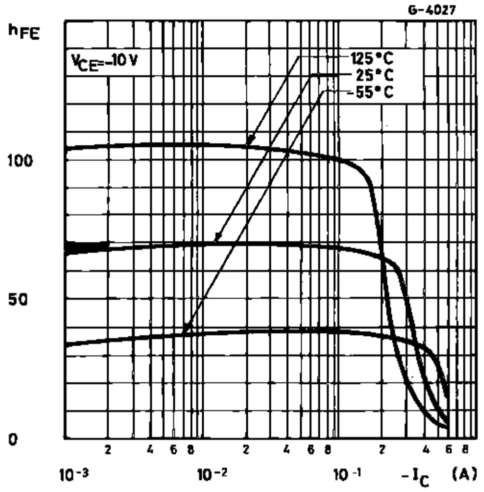
Derating Curve



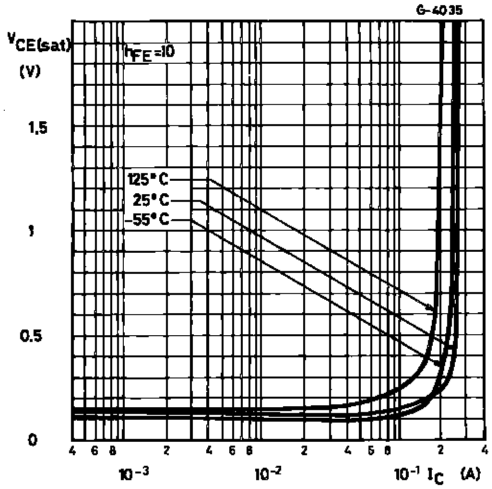
DC Current Gain (NPN type)



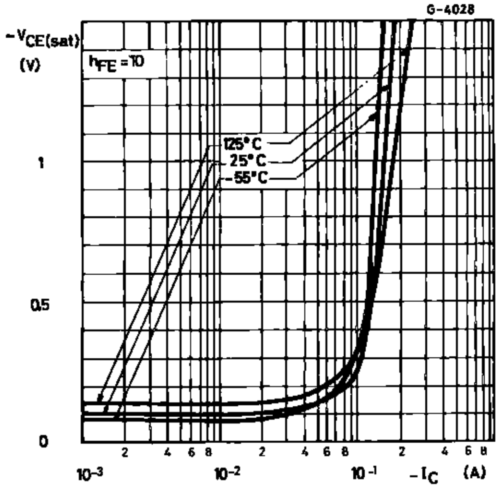
DC Current Gain (PNP type)



Collector-Emitter Saturation Voltage (NPN type)

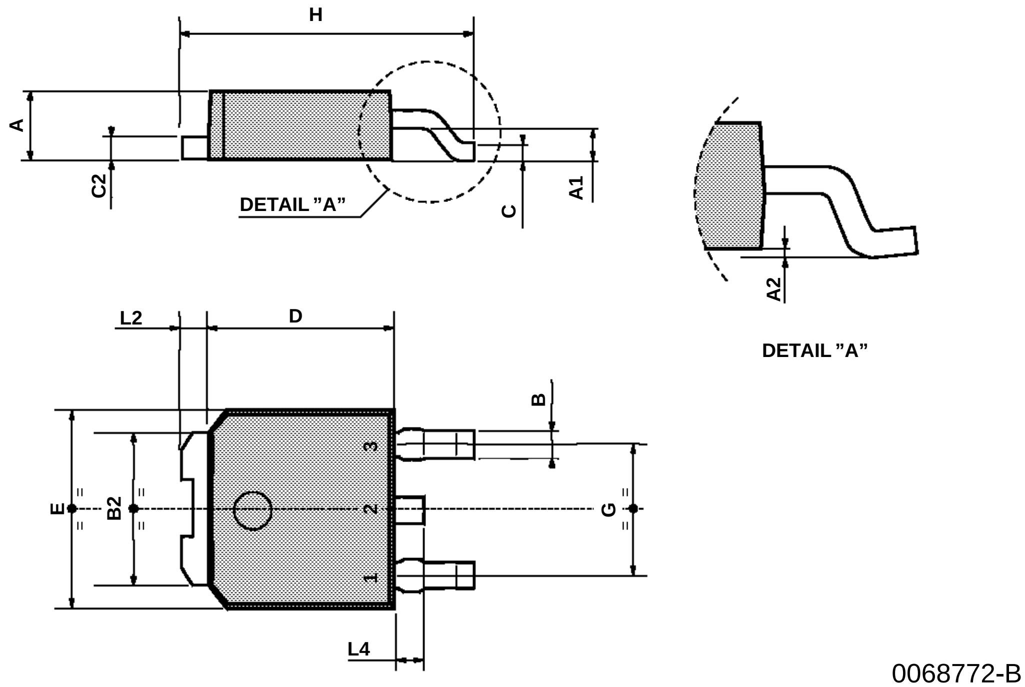


Collector-Emitter Saturation Voltage (PNP type)



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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