

COMPLEMENTARY SILICON POWER TRANSISTORS

- SGS-THOMSON PREFERRED SALESTYPES
- COMPLEMENTARY PNP - NPN DEVICES
- MEDIUM VOLTAGE CAPABILITY
- SURFACE-MOUNTING TO-252 (DPAK)
POWER PACKAGE IN TAPE & REEL
(SUFFIX "T4")
- ELECTRICAL SIMILAR TO MJE340 AND
MJE350

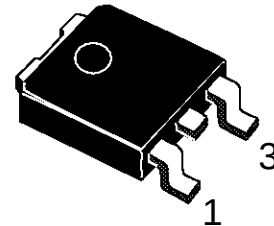
APPLICATIONS

- SOLENOID/RELAY DRIVERS
- GENERAL PURPOSE SWITCHING AND
AMPLIFIER

DESCRIPTION

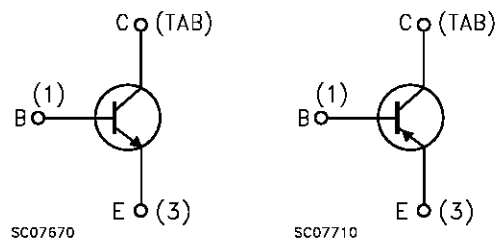
The MJD340 and MJD350 form complementary NPN - PNP pairs.

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	NPN	Value	Unit
		PNP	MJD350	
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 ($t_p = 25^\circ\text{C}$)		0.75	A
P_{tot}	Total Power Dissipation at $T_{case} \leq 25^\circ\text{C}$		15	W
T_{stg}	Storage Temperature		-65 to 150	$^\circ\text{C}$
T_j	Max Operating Junction Temperature		150	$^\circ\text{C}$

For PNP types voltage and current values are negative.

THERMAL DATA

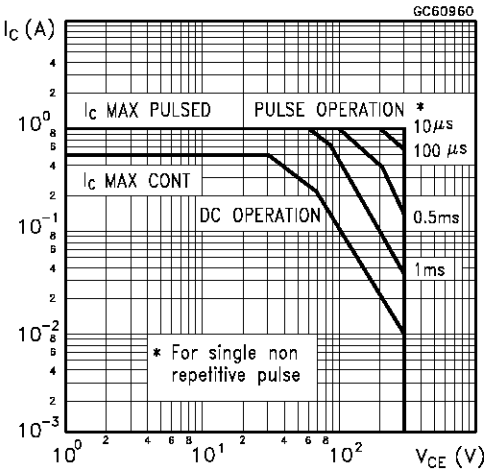
R _{thj-case}	Thermal Resistance Junction-case	Max	8.33	°C/W
R _{thj-amb}	Thermal Resistance Junction-ambient	Max	100	°C/W

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

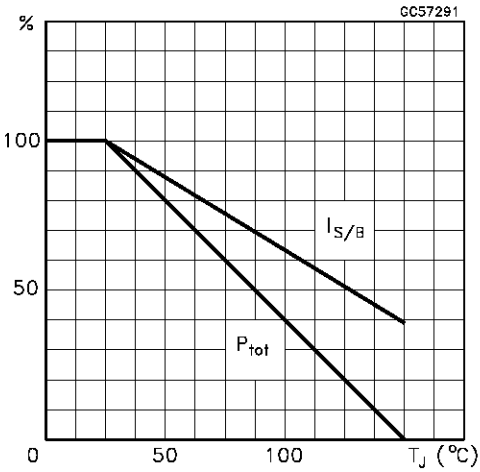
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CBO}	Collector Cut-off Current (V _{BE} = 0)	V _{CB} = 300 V			0.1	mA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} = 3 V			0.1	mA
V _{CEO(sus)}	Collector-Emitter Sustaining Voltage	I _C = 1 mA	300			V
h _{FE} *	DC Current Gain	I _C = 50 mA V _{CE} = 10 V	30		240	

* Pulsed: Pulse duration = 300 μs, duty cycle ≤ 2 %
For PNP type voltage and current values are negative.

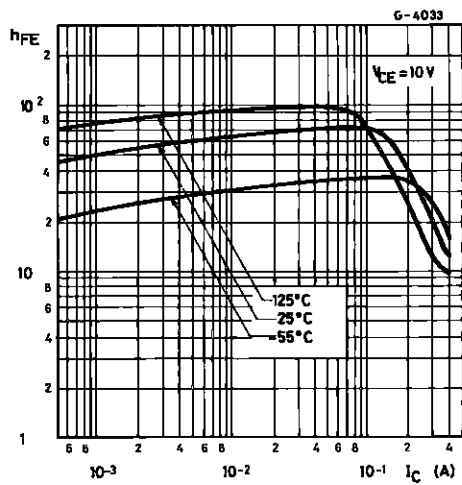
Safe Operating Area



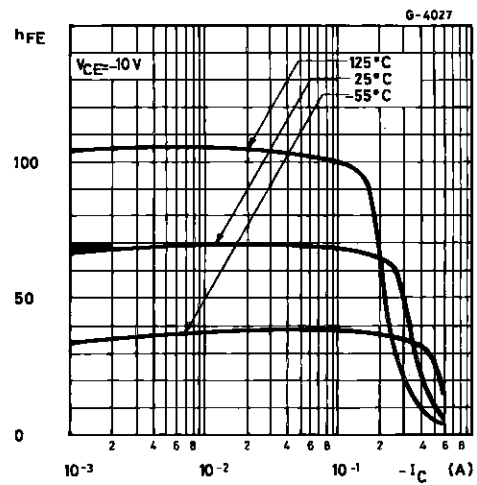
Derating Curve



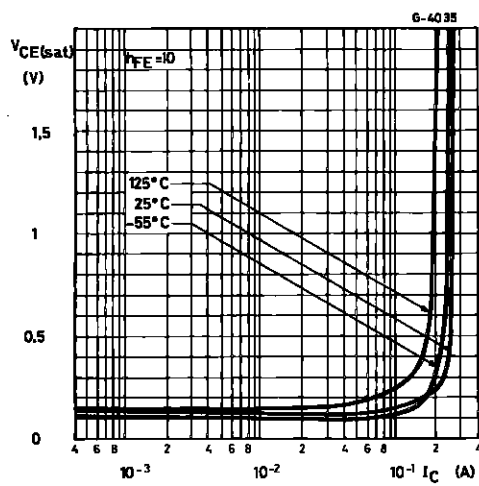
DC Current Gain (NPN type)



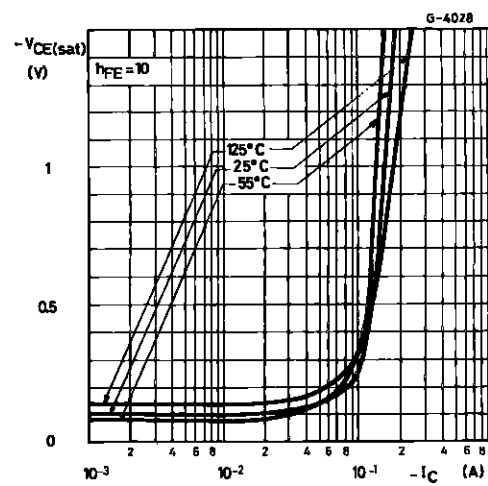
DC Current Gain (PNP type)



Collector Emitter Saturation Voltage (NPN type)

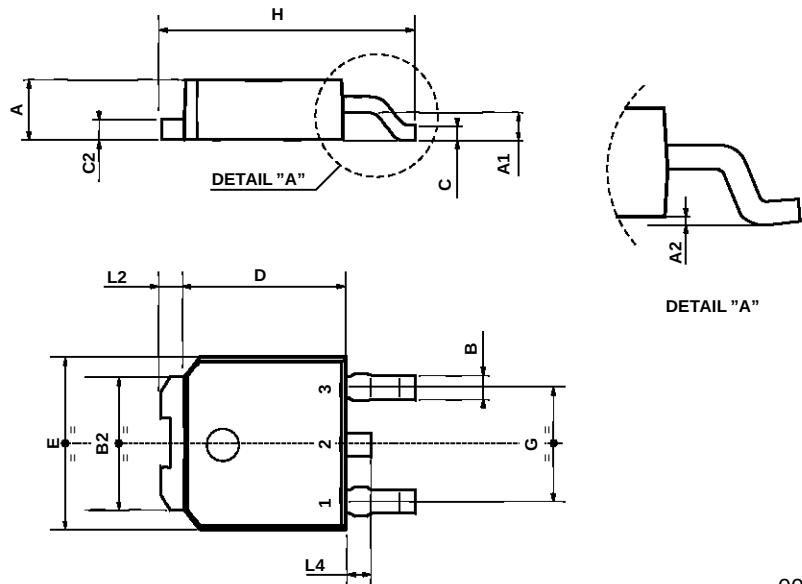


Collector Emitter Saturation Voltage (PNP type)



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



0068772-B

Information furnished is believed to be accurate and reliable. However, SGS-THOMSON Microelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of SGS-THOMSON Microelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. SGS-THOMSON Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of SGS-THOMSON Microelectronics.

© 1997 SGS-THOMSON Microelectronics - Printed in Italy - All Rights Reserved

SGS-THOMSON Microelectronics GROUP OF COMPANIES

Australia - Brazil - Canada - China - France - Germany - Hong Kong - Italy - Japan - Korea - Malaysia - Malta - Morocco - The Netherlands - Singapore - Spain - Sweden - Switzerland - Taiwan - Thailand - United Kingdom - U.S.A