



## COMPLEMENTARY SILICON POWER TRANSISTORS

- STMicroelectronics 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

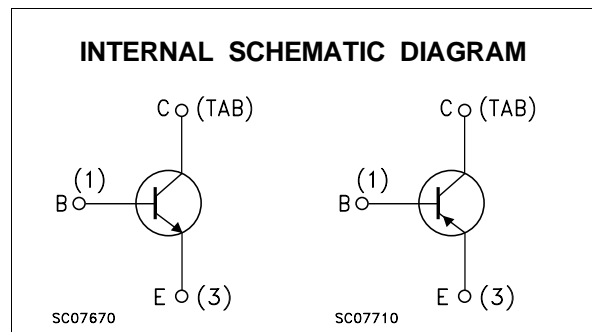
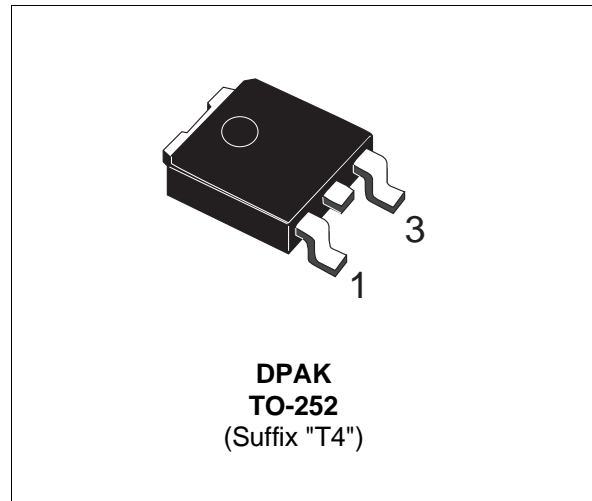
### APPLICATIONS

- 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.



### ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit
		NPN	MJD340	
		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 ( $t_p = 25\text{ }^\circ\text{C}$ )		0.75	A
$P_{tot}$	Total Power Dissipation at $T_{case} \leq 25\text{ }^\circ\text{C}$		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.

# MJD340 / MJD350

## THERMAL DATA

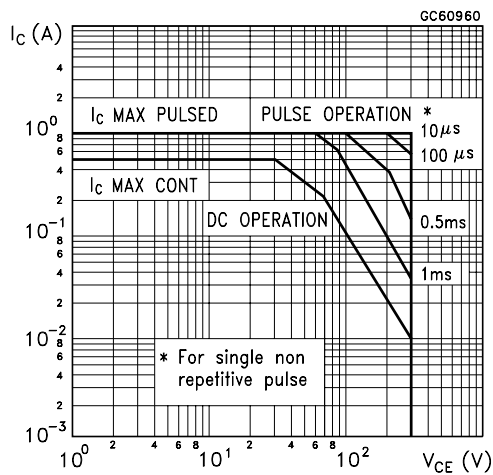
R <sub>thj-case</sub>	Thermal Resistance Junction-case	Max	8.33	°C/W
R <sub>thj-amb</sub>	Thermal Resistance Junction-ambient	Max	100	°C/W

## ELECTRICAL CHARACTERISTICS (T<sub>case</sub> = 25 °C unless otherwise specified)

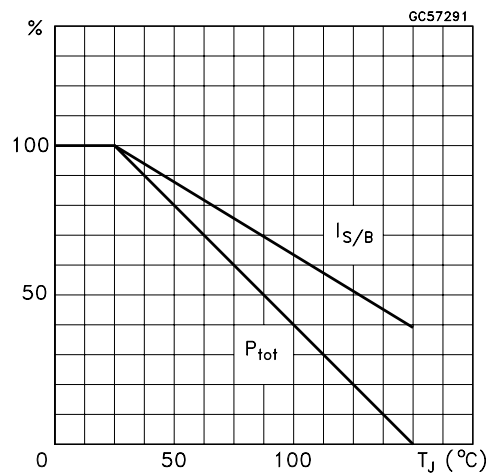
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I <sub>CBO</sub>	Collector Cut-off Current (V <sub>BE</sub> = 0)	V <sub>CB</sub> = 300 V			0.1	mA
I <sub>EBO</sub>	Emitter Cut-off Current (I <sub>C</sub> = 0)	V <sub>EB</sub> = 3 V			0.1	mA
V <sub>CEO(sus)*</sub>	Collector-Emitter Sustaining Voltage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

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

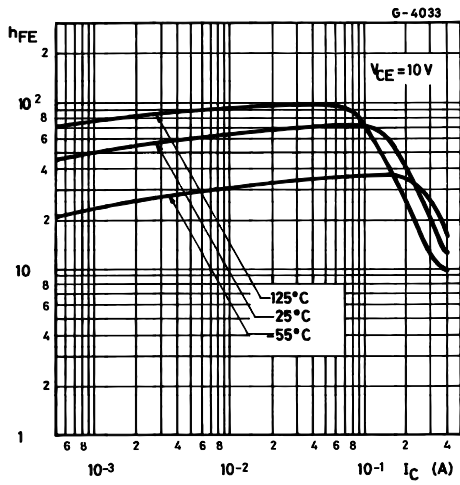
### Safe Operating Area



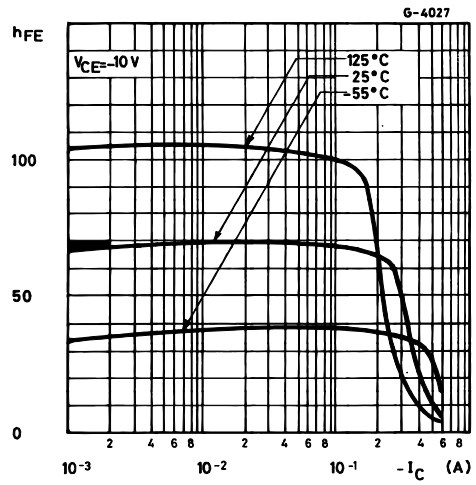
### Derating Curve



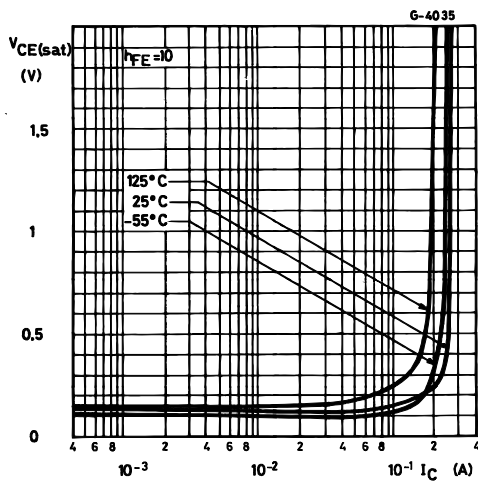
DC Current Gain (NPN type)



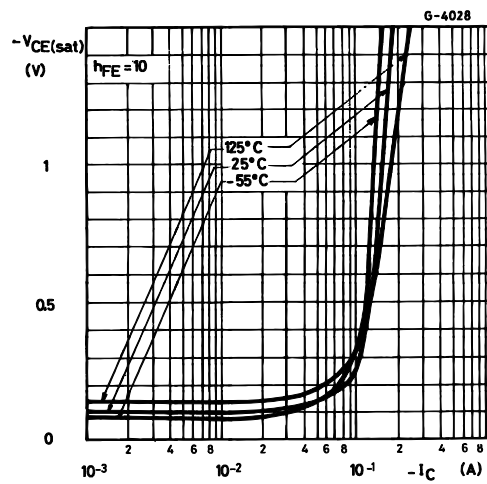
DC Current Gain (PNP type)



Collector Emitter Saturation Voltage (NPN type)

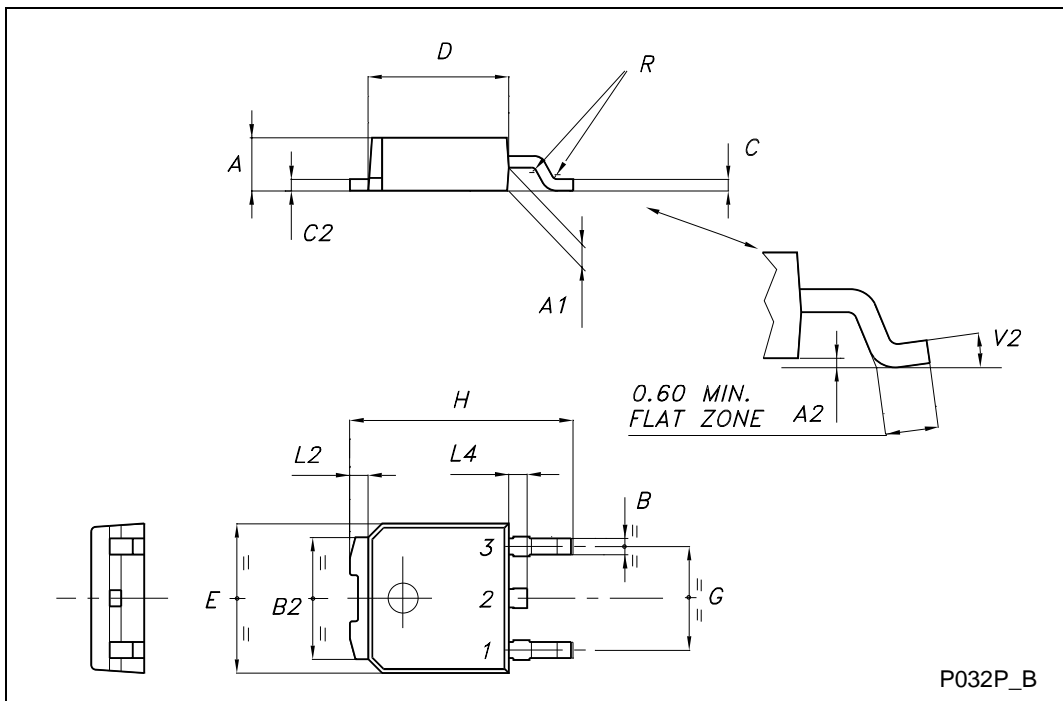


Collector Emitter Saturation Voltage (PNP type)



**TO-252 (DPAK) MECHANICAL DATA**

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	2.20		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°		8°	0°		0°



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