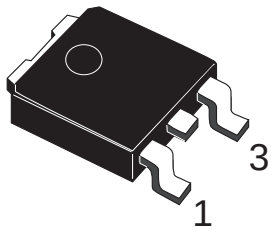
MJD340
MJD350

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



DPAK
TO-252
(Suffix "T4")

APPLICATIONS

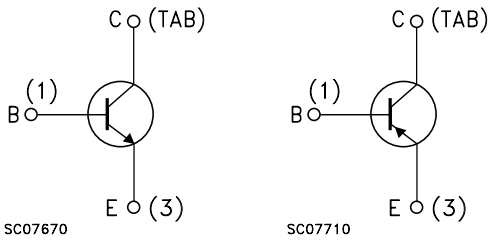
- SOLENOID/RELAY DRIVERS
- GENERAL PURPOSE SWITCHING AND AMPLIFIER

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.

INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter		Value	Unit
		NPN	MJD340	
		PNP	MJD350	
V_{CBO}	Collector-Base Voltage (IE = 0)		300	V
V_{CEO}	Collector-Emitter Voltage (I_B = 0)		300	V
V_{EBO}	Emitter-Base Voltage (IC = 0)		3	V
I_C	Collector Current		0.5	A
I_{CM}	Collector Peak Current (tp = 25 ^oC)		0.75	A
P_{tot}	Total Power Dissipation at $T_{case} \leq 25\ ^oC$		15	W
T_{stg}	Storage Temperature		-65 to 150	^oC
T_j	Max Operating Junction Temperature		150	^oC

For PNP types voltage and current values are negative.

THERMAL DATA

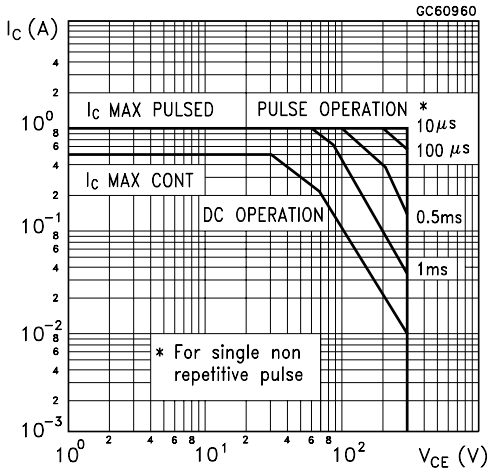
$R_{thj\text{-}case}$	Thermal Resistance Junction-case	Max	8.33	$^oC/W$
$R_{thj\text{-}amb}$	Thermal Resistance Junction-ambient	Max	100	$^oC/W$

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

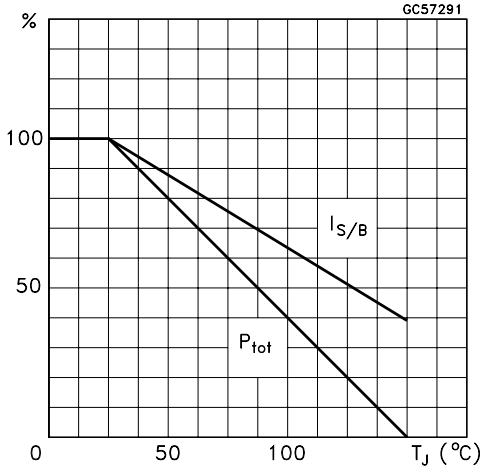
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut-off Current (v_{BE} = 0)	V_{CB} = 300 V			0.1	mA
I_{EBO}	Emitter Cut-off Current (I_C = 0)	V_{EB} = 3 V			0.1	mA
$V_{CEO(sus)}$*	Collector-Emitter Sustaining Voltage (I_B = 0)	I_C = 1 mA	300			V
h_{FE}*	DC Current Gain	I_C = 50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

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

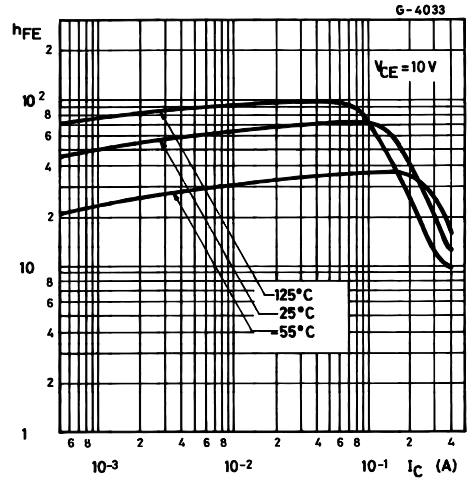
Safe Operating Area



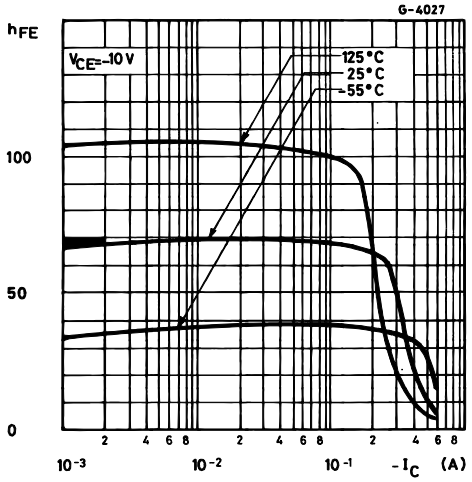
Derating Curve



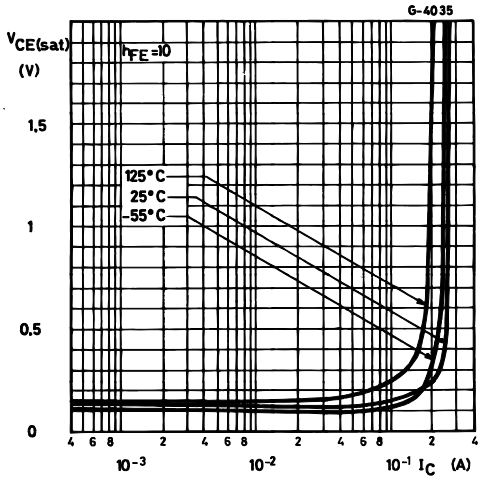
DC Current Gain (NPN type)



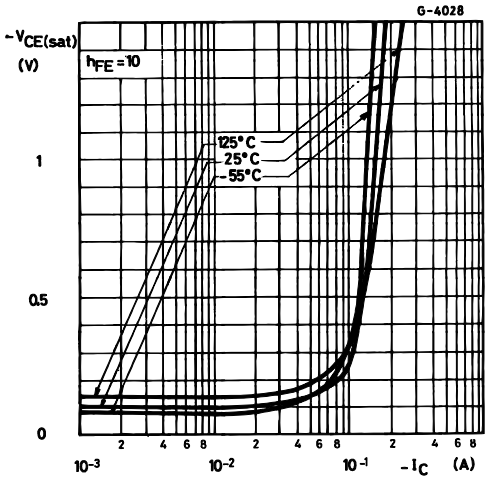
DC Current Gain (PNP type)



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	2.20		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