

COMPLEMENTARY SILICON POWER TRANSISTORS

- STMicroelectronics PREFERRED SALESTYPES
- COMPLEMENTARY PNP - NPN DEVICES

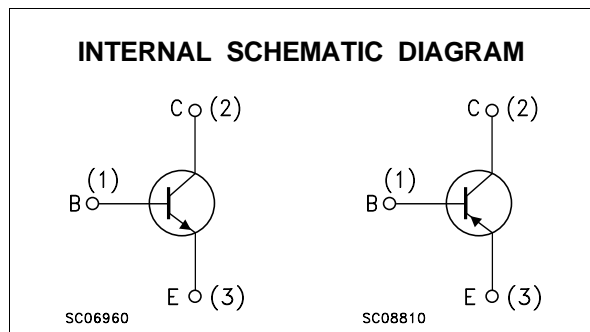
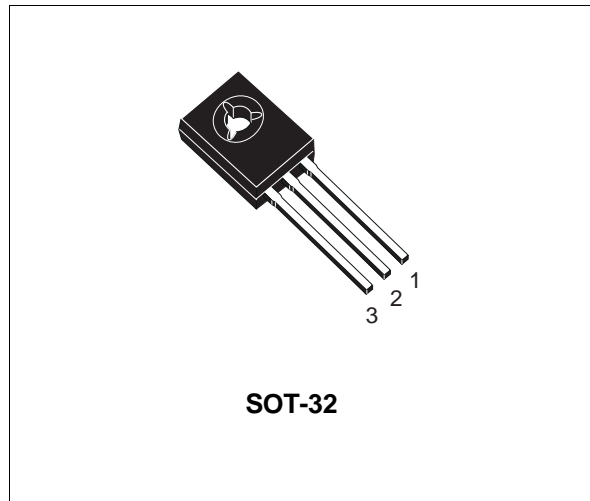
APPLICATIONS

- LINEAR AND SWITCHING INDUSTRIAL EQUIPMENT

DESCRIPTION

The MJE340 is a Silicon Epitaxial Planar NPN transistor intended for use in medium power linear and switching applications. It is mounted in SOT-32.

The complementary PNP type is MJE350.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit
		NPN	MJE340	
		PNP	MJE350	
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
P_{tot}	Total Power Dissipation at $T_{case} \leq 25\text{ }^\circ\text{C}$		20.8	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.

MJE340 / MJE350

THERMAL DATA

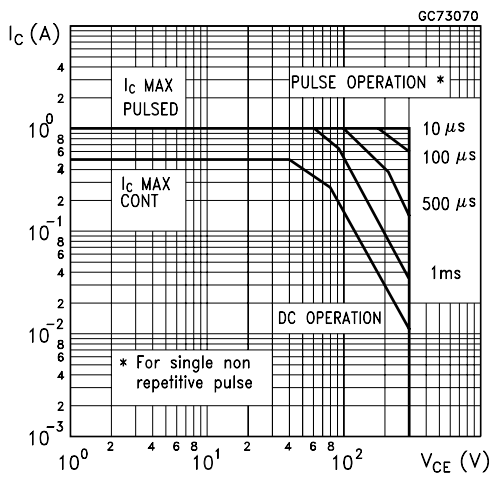
R _{thj-case}	Thermal Resistance Junction-case	Max	6.0	°C/W
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ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

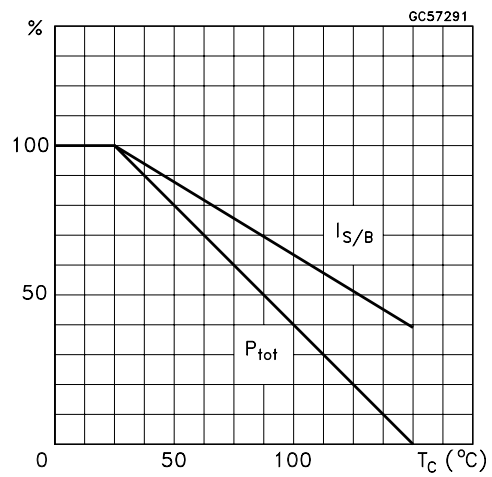
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CBO}	Collector Cut-off Current (I _E = 0)	V _{CB} = 300 V			100	μA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} = 3 V			100	μA
V _{CEO(sus)*}	Collector-Emitter Sustaining Voltage (I _B = 0)	I _C = 1 mA	300			V
h _{FE}	DC Current Gain	I _C = 50 mA V _{CE} = 10 V	30		240	

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

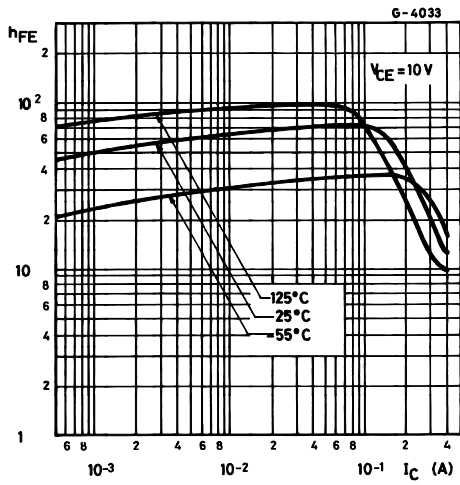
Safe Operating Area



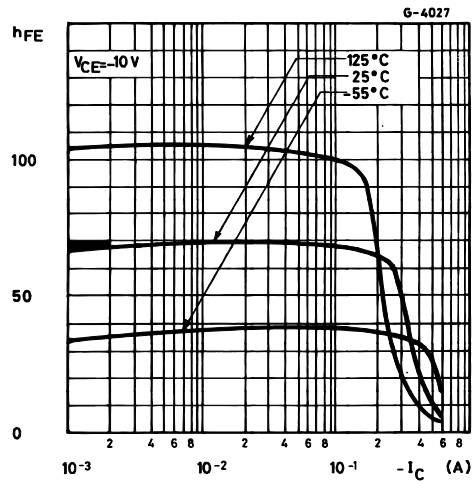
Derating Curve



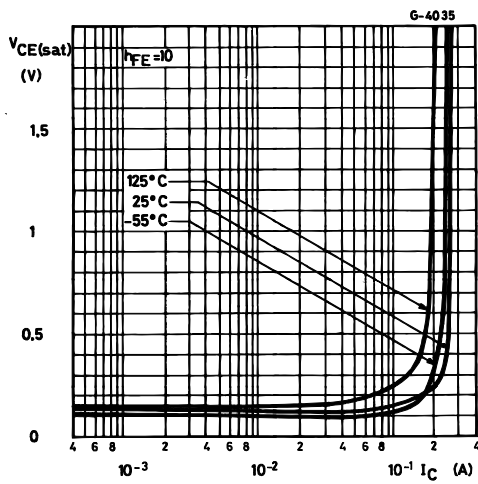
DC Current Gain (NPN type)



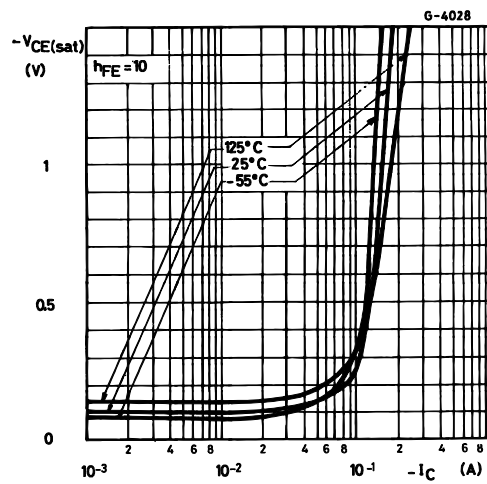
DC Current Gain (PNP type)



Collector-Emitter Saturation Voltage (NPN type)

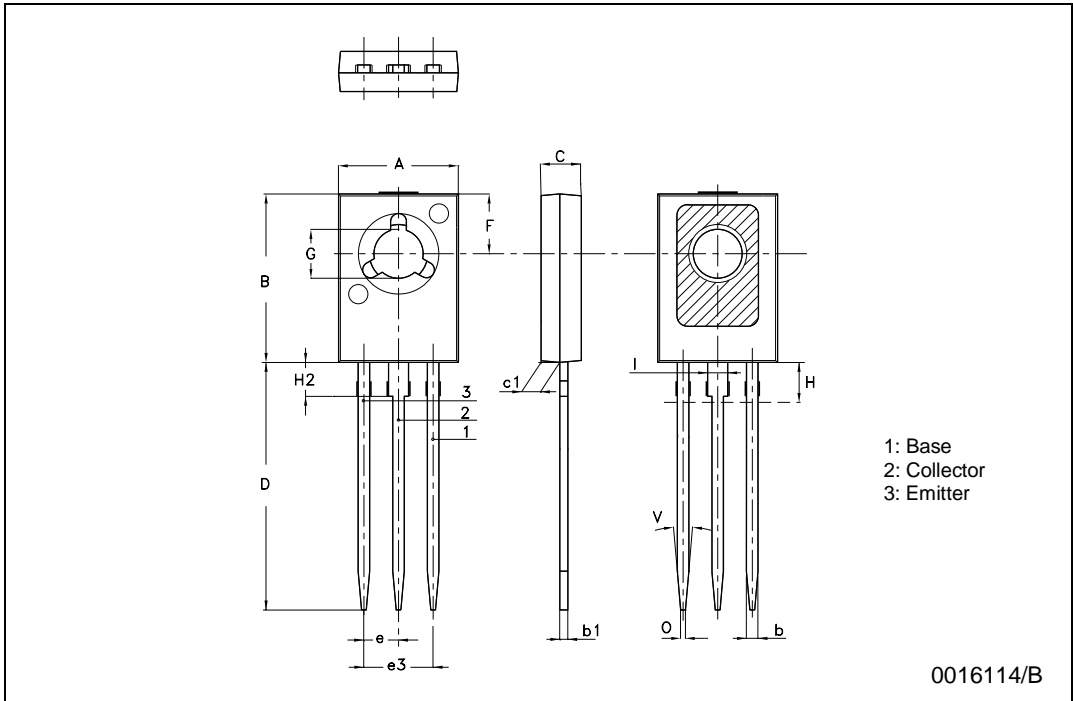


Collector-Emitter Saturation Voltage (PNP type)



SOT-32 (TO-126) MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	7.4		7.8	0.291		0.307
B	10.5		10.8	0.413		0.425
b	0.7		0.9	0.028		0.035
b1	0.40		0.65	0.015		0.025
C	2.4		2.7	0.094		0.106
c1	1.0		1.3	0.039		0.051
D	15.4		16.0	0.606		0.630
e		2.2			0.087	
e3		4.4			0.173	
F		3.8			0.150	
G	3		3.2	0.118		0.126
H			2.54			0.100
H2		2.15			0.084	
I		1.27			0.05	
O		0.3			0.011	
V		10°			10°	



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