

## COMPLEMENTARY SILICON POWER TRANSISTORS

- SGS-THOMSON PREFERRED SALESTYPES
- COMPLEMENTARY PNP - NPN DEVICES

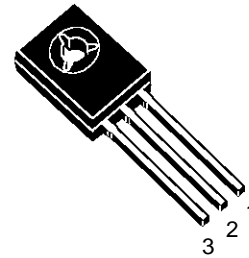
### APPLICATIONS

- LINEAR AND SWITCHING INDUSTRIAL EQUIPMENT

### DESCRIPTION

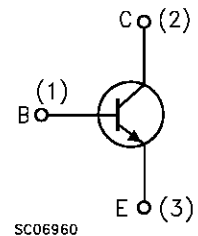
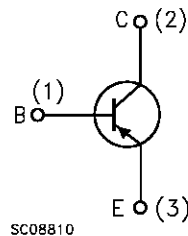
The MJE340 is a silicon epitaxial planar NPN transistor intended for use in medium power linear and switching applications. It is mounted in SOT-32.

The complementary PNP type is MJE350.



**SOT-32**

### INTERNAL SCHEMATIC DIAGRAM



### ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter		Value	Unit
		NPN	MJE340	Unit
		PNP	MJE350	Unit
$V_{CEO}$	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 $T_{case} \leq 25^\circ C$		20.8	W
$T_{stg}$	Storage Temperature		-65 to 150	$^\circ C$
$T_j$	Max Operating Junction Temperature		150	$^\circ C$

For PNP types voltage and current values are negative.

# MJE340 / MJE350

## THERMAL DATA

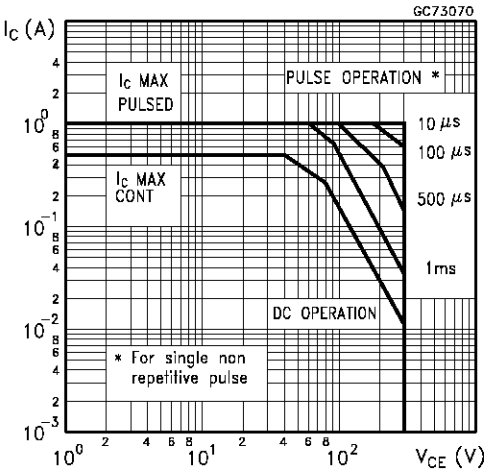
$R_{thj-case}$	Thermal Resistance Junction-case	Max	6.0	$^{\circ}C/W$
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## ELECTRICAL CHARACTERISTICS ( $T_{case} = 25^{\circ}C$ unless otherwise specified)

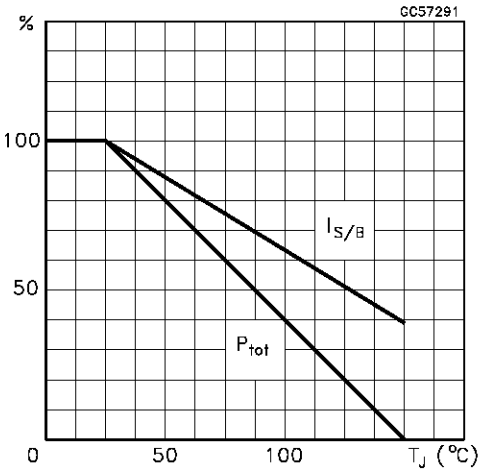
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$I_{CBO}$	Collector Cut-off Current ( $I_E = 0$ )	$V_{CB} = 300\text{ V}$			100	$\mu A$
$I_{EBO}$	Emitter Cut-off Current ( $I_C = 0$ )	$V_{EB} = 3\text{ V}$			100	$\mu A$
$V_{CEO(sus)}^*$	Collector-Emitter Sustaining Voltage ( $I_B = 0$ )	$I_C = 1\text{ mA}$	300			V
$h_{FE}$	DC Current Gain	$I_C = 50\text{ mA}$ $V_{CE} = 10\text{ V}$	30		240	

\* Pulsed: Pulse duration = 300 $\mu s$ , duty cycle  $\leq 2\%$

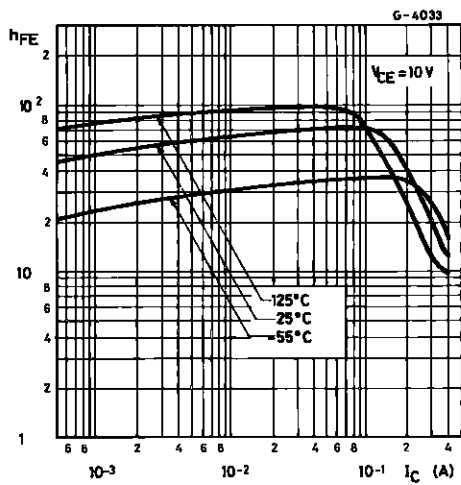
Safe Operating Area



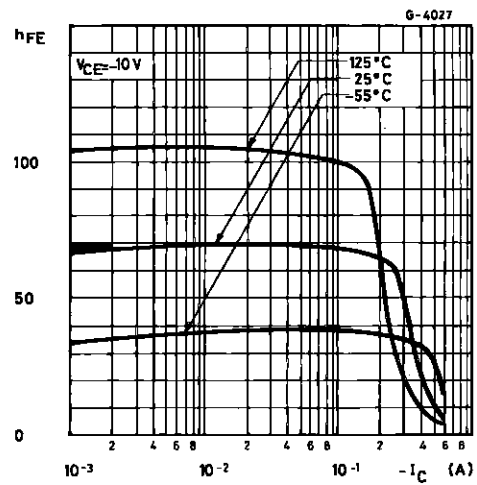
Derating Curve



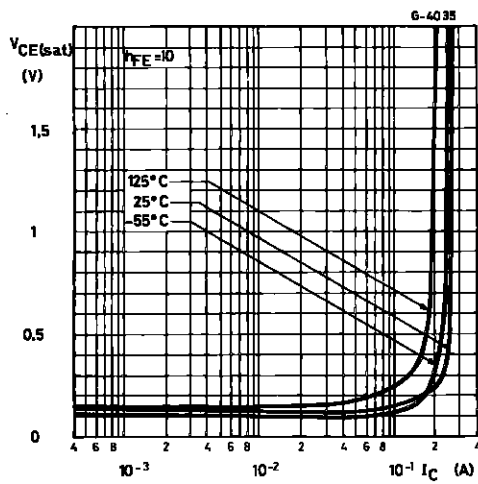
DC Current Gain (NPN type)



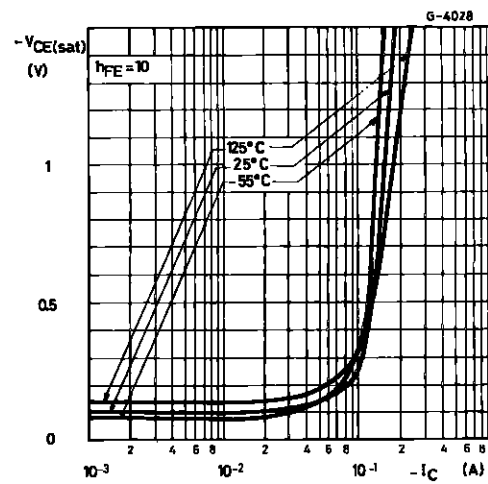
DC Current Gain (PNP type)



Collector Emitter Saturation Voltage (NPN type)

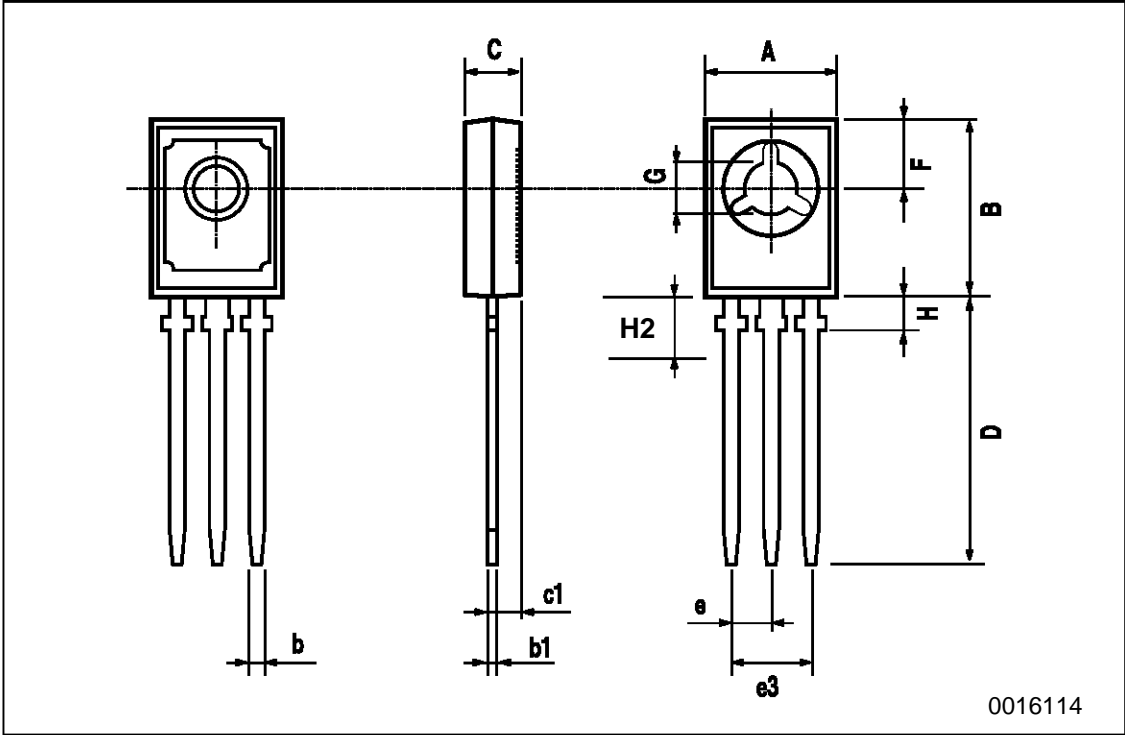


Collector Emitter Saturation Voltage (PNP type)



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		0.445
b	0.7		0.9	0.028		0.035
b1	0.49		0.75	0.019		0.030
C	2.4		2.7	0.040		0.106
c1	1.0		1.3	0.039		0.050
D	15.4		16.0	0.606		0.629
e		2.2			0.087	
e3	4.15		4.65	0.163		0.183
F		3.8			0.150	
G	3		3.2	0.118		0.126
H			2.54			0.100
H2		2.15			0.084	



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