SGS-THOMSON MICROELECTRONICS

MJE340
MJE350

COMPLEMETARY SILICON POWER TRANSISTORS

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

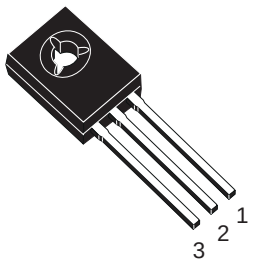
APPLICATIONS

- LINEAR AND SWITCHING INDUSTRIAL EQUIPMENT

DESCRIPTION

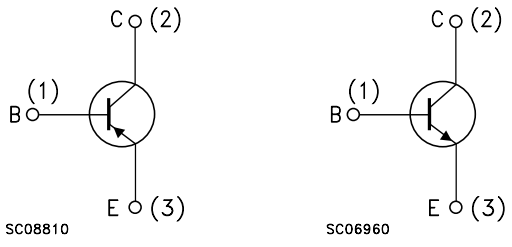
The MJE340 is a silicon epitaxial planar NPN transistor intended for use in medium power linear and switching applications.It is mounted in SOT-32.

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 (IC = 0)		3	V
I_C	Collector Current		0.5	A
P_{tot}	Total Power Dissipation at $T_{case} \leq 25\ ^oC$		20.8	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

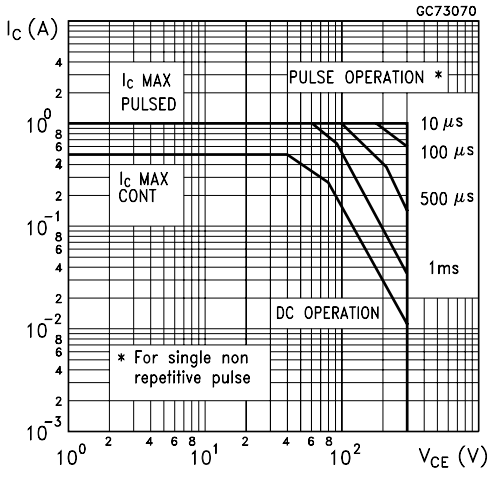
$R_{thj\text{-}case}$	Thermal Resistance Junction-case	Max	6.0	$^oC/W$

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

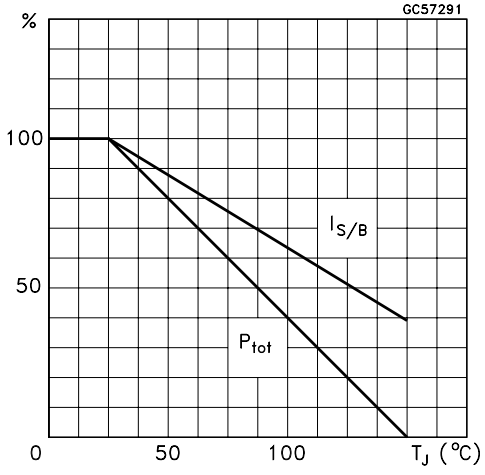
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut-off Current (I_E = 0)	V_{CB} = 300 V			100	µA
I_{EBO}	Emitter Cut-off Current (I_C = 0)	V_{EB} = 3 V			100	µA
$V_{CEO(sus)}$*	Collector-Emitter Sustaining Voltage (I_B = 0)	I_C = 1 mA	300			V
h_{FE}	DC Current Gain	I_C = 50 mA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

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

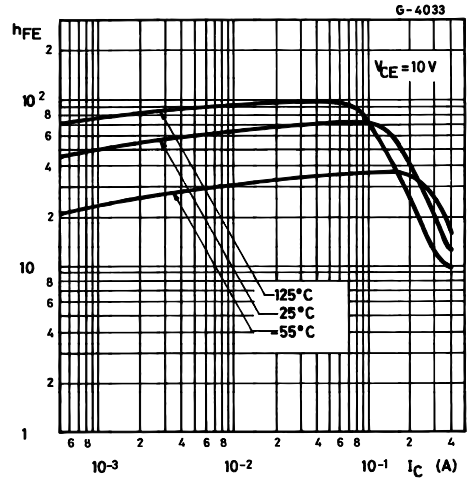
Safe Operating Area



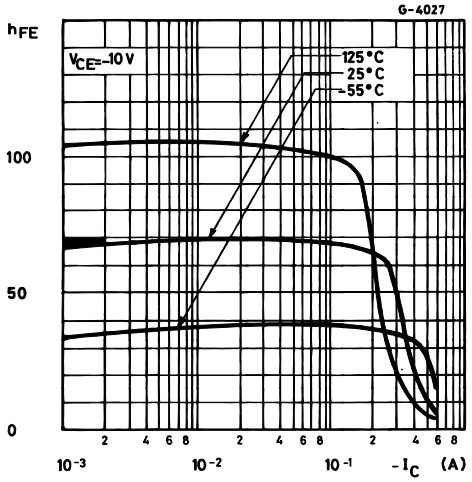
Derating Curve



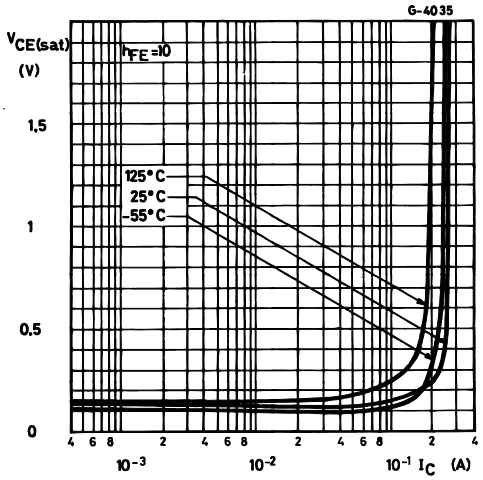
DC Current Gain (NPN type)



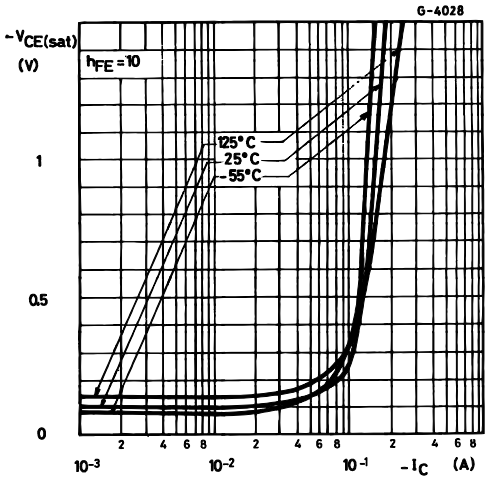
DC Current Gain (PNP type)



Collector Emitter Saturation Voltage (NPN type)

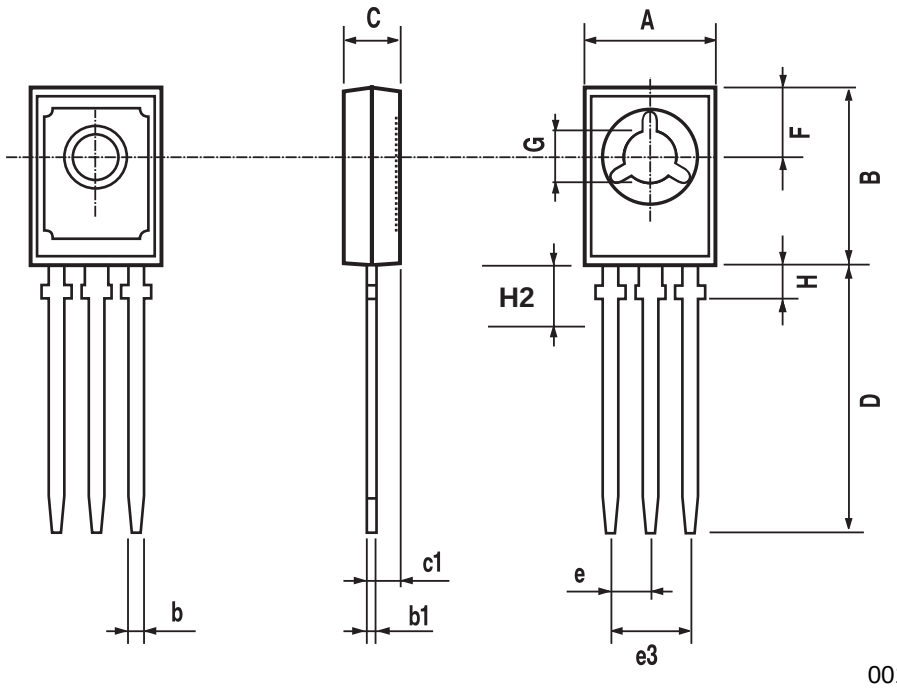


Collector Emitter Saturation Voltage (PNP type)



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		0.445
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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