

# MJE340 MJE350

# COMPLEMETARY SILICON POWER TRANSISTORS

- STMicroelectronics PREFERRED SALESTYPES
- COMPLEMENTARY PNP NPN DEVICES

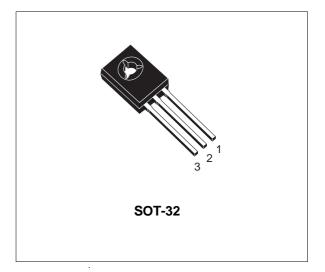
#### **APPLICATIONS**

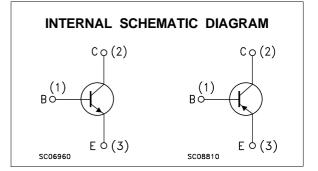
 LINEAR AND SWITCHING INDUSTRIAL EQUIPMENT

#### 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 <sub>B</sub> = 0)		300	V	
V <sub>EBO</sub>	Emitter-Base Voltage $(I_C = 0)$		3	V	
Ic	Collector Current		0.5	Α	
P <sub>tot</sub>	Total Power Dissipation at $T_{case} \le 25 \ ^{\circ}C$		20.8	W	
T <sub>stg</sub>	Storage Temperature		-65 to 150	°C	
Tj	Max Operating Junction Temperature		150	°C	

For PNP types voltage and current values are negative.

## THERMAL DATA

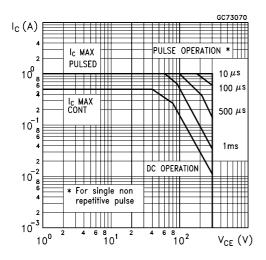
R <sub>thj-case</sub> Thermal Resistance Junction-case	Max	6.0	°C/W	
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# **ELECTRICAL CHARACTERISTICS** ( $T_{case} = 25 \ ^{\circ}C$ unless otherwise specified)

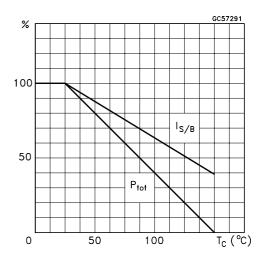
Symbol	Parameter	Test Conditions	Min.	Тур.	Max.	Unit
I <sub>CBO</sub>	Collector Cut-off Current (I <sub>E</sub> = 0)	V <sub>CB</sub> = 300 V			100	μA
I <sub>EBO</sub>	Emitter Cut-off Current $(I_C = 0)$	$V_{EB} = 3 V$			100	μA
V <sub>CEO(sus)</sub> *	Collector-Emitter Sustaining Voltage $(I_B = 0)$	I <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 =  $300\mu s$ , duty cycle  $\leq 2\%$ 

#### Safe Operating Area

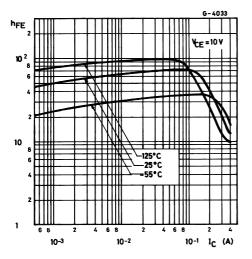


## **Derating Curve**

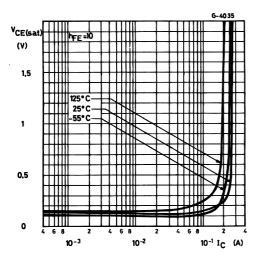


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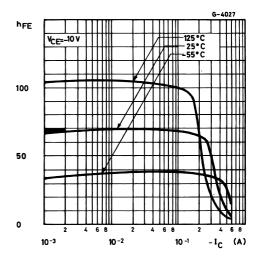
## DC Current Gain (NPN type)



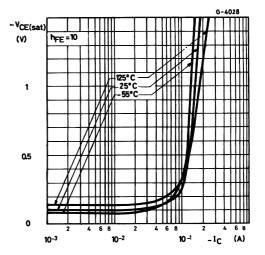
Collector-Emitter Saturation Voltage (NPN type)



DC Current Gain (PNP type)



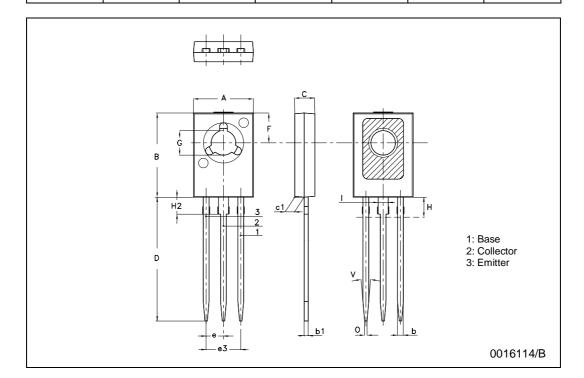
Collector-Emitter Saturation Voltage (PNP type)



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DIM.		mm			inch	
Dini.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
А	7.4		7.8	0.291		0.307
В	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
С	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
е		2.2			0.087	
e3		4.4			0.173	
F		3.8			0.150	
G	3		3.2	0.118		0.126
Н			2.54			0.100
H2		2.15			0.084	
I		1.27			0.05	
0		0.3			0.011	
V		10 <sup>°</sup>			10 <sup>°</sup>	





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