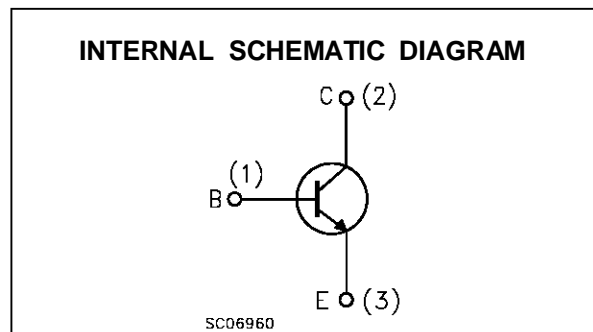
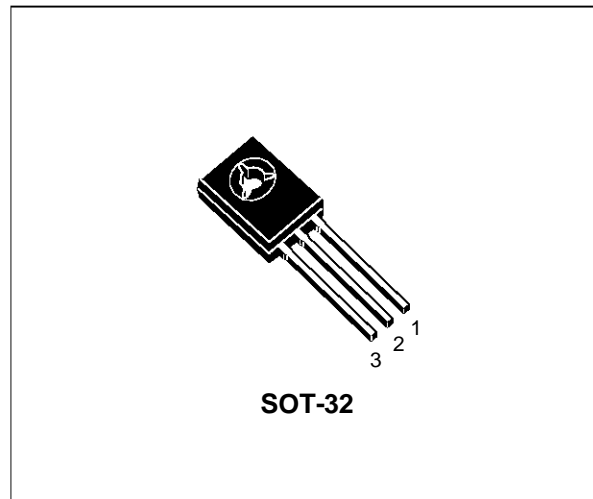


SILICON NPN TRANSISTOR

■ SGS-THOMSON PREFERRED SALESTYPE

DESCRIPTION

The MJE3440 is a NPN silicon epitaxial planar transistors in SOT-32 plastic package. It is designed for use in consumer and industrial line-operated applications.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CB0}	Collector-Base Voltage ($I_E = 0$)	350	V
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)	250	V
V_{EBO}	Emitter-Base Voltage ($I_C = 0$)	5	V
I_C	Collector Current	0.3	A
I_B	Base Current	0.15	A
P_{tot}	Total Power Dissipation at $T_{case} \leq 25^\circ C$	15	W
T_{stg}	Storage Temperature	-65 to +150	$^\circ C$
T_j	Max. Operating Junction Temperature	150	$^\circ C$

MJE3440

THERMAL DATA

$R_{thj-case}$	Thermal Resistance Junction-case	Max	8.33	$^{\circ}C/W$
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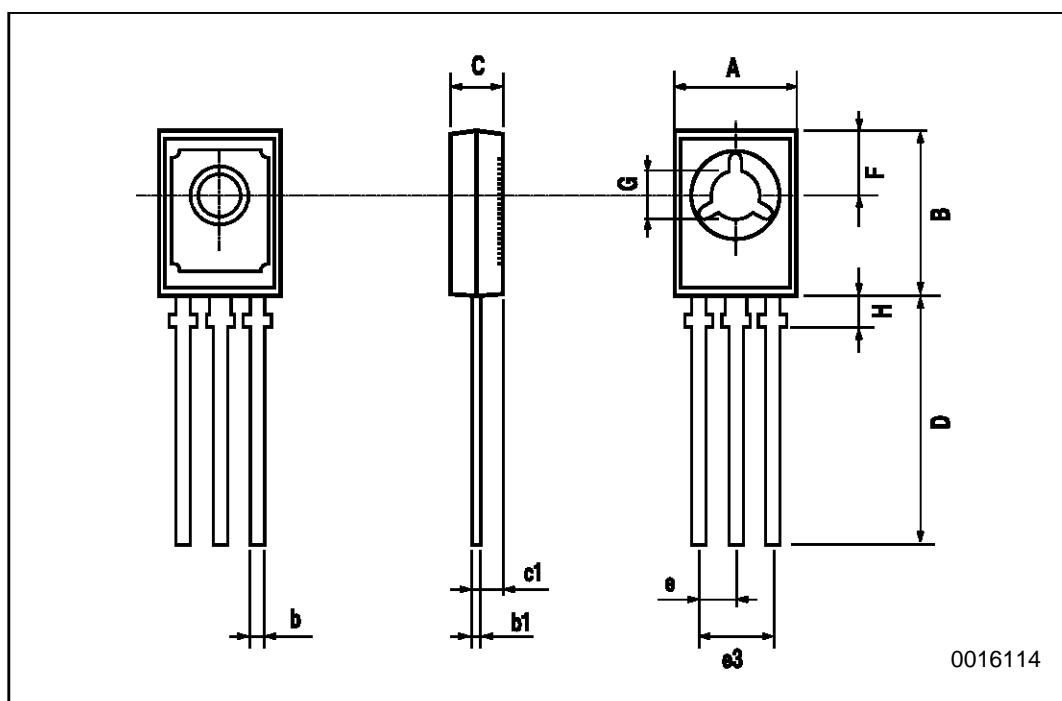
ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut-off Current ($I_E = 0$)	$V_{CB} = 250 V$			20	μA
I_{CEV}	Collector Cut-off Current ($V_{BE} = -1.5V$)	$V_{CE} = 300 V$			500	μA
I_{CEO}	Collector Cut-off Current ($I_B = 0$)	$V_{CE} = 200 V$			50	μA
I_{EBO}	Emitter Cut-off Current ($I_C = 0$)	$V_{EB} = 5 V$			20	μA
$V_{CE(sat)*}$	Collector-Emitter Saturation Voltage	$I_C = 50 mA$ $I_B = 4 mA$			0.5	V
$V_{BE(sat)*}$	Base-Emitter Saturation Voltage	$I_C = 50 mA$ $I_B = 4 mA$			0.3	V
V_{BE*}	Base-Emitter Voltage	$I_C = 50 mA$ $V_{CE} = 10 V$			0.8	V
h_{FE*}	DC Current Gain	$I_C = 2 mA$ $V_{CE} = 10 V$ $I_C = 20 mA$ $V_{CE} = 10 V$	30 50		200	
h_{fe}	Small Signal Current Gain	$I_C = 5 mA$ $V_{CE} = 10 V$ $f = 1 KHz$	25			
f_T	Transistor Frequency	$I_C = 10 mA$ $V_{CE} = 10 V$ $f = 5 MHz$	15			MHz
C_{CBO*}	Collector-Base Capacitance	$V_{CB} = 10 V$ $I_E = 0$ $f = 1 MHz$			10	pF

* Pulsed: Pulse duration = 300 μs , duty cycle $\leq 1.5\%$

SOT-32 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	0.04		0.106
c1		1.2			0.047	
D		15.7			0.618	
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



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