

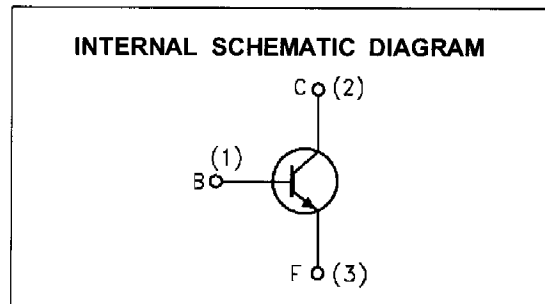
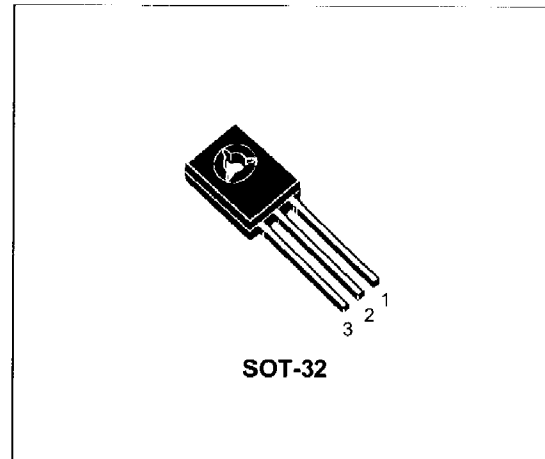
MJE3440

SILICON NPN TRANSISTOR

■ NPN TRANSISTOR

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_{CBO}	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	$^\circ C$

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THERMAL DATA

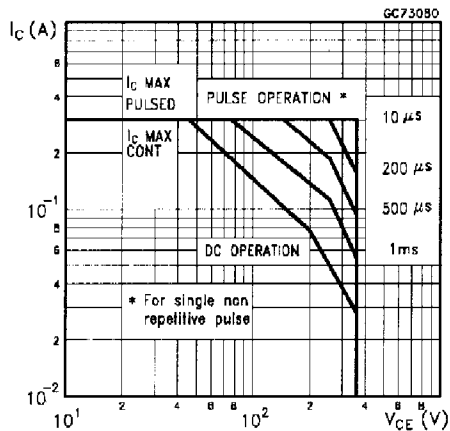
$R_{thj-case}$	Thermal Resistance Junction-case	Max	8.33	$^{\circ}C/W$
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ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise specified)

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	$I_C = 2 mA$ $I_C = 20 mA$	$V_{CE} = 10 V$ $V_{CE} = 10 V$	30 50		200	
h_{fe}	Small Signal Current Gain	$I_C = 5 mA$ $f = 1 KHz$	$V_{CE} = 10 V$	25			
f_T	Transistor Frequency	$I_C = 10 mA$ $f = 5 MHz$	$V_{CE} = 10 V$	15			MHz
C_{CBO*}	Collector-Base Capacitance	$V_{CB} = 10 V$ $f = 1 MHz$	$I_E = 0$			10	pF

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

Safe Operating Area



Derating Curve

