MJE340G

Plastic Medium-Power NPN Silicon Transistor

This device is useful for high-voltage general purpose applications.

Features

- Suitable for Transformerless, Line-Operated Equipment
- High Power Dissipation Rating for High Reliability
- These Devices are Pb-Free and are RoHS Compliant*
- Complementary to MJE350

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V _{CEO}	300	Vdc
Emitter-Base Voltage	V _{EB}	3.0	Vdc
Collector Current - Continuous	I _C	500	mAdc
Total Power Dissipation @ T _C = 25°C Derate above 25°C	P _D	20 0.16	W mW/°C
Operating and Storage Junction Temperature Range	T _J , T _{stg}	-65 to +150	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

THERMAL CHARACTERISTICS

Characteristic

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction-to-Case	θ_{JC}	6.25	°C/W

ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted)

Symbol Min Max Unit

1

	,						
OFF CHARACTERISTICS							
Collector–Emitter Sustaining Voltage (I _C = 1.0 mAdc, I _B = 0)	V _{CEO(sus)}	300	_	Vdc			
Collector Cutoff Current (V _{CB} = 300 Vdc, I _E = 0)	I _{CBO}	-	100	μAdc			
Emitter Cutoff Current (V _{EB} = 3.0 Vdc, I _C = 0)	I _{EBO}	_	100	μAdc			

ON CHARACTERISTICS

DC Current Gain (I _C = 50 mAdc, V _{CE} = 10 Vdc)	h _{FE}	30	240	-
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Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

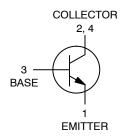


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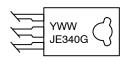
0.5 AMPERE POWER TRANSISTOR NPN SILICON 300 VOLTS, 20 WATTS

SCHEMATIC





MARKING DIAGRAM



Y = Year

WW = Work Week

JE340 = Device Code

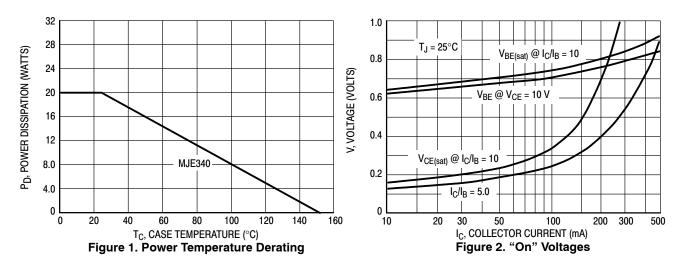
G = Pb-Free Package

ORDERING INFORMATION

Device	Package	Shipping
MJE340G	TO-225 (Pb-Free)	500 Units/Box

^{*}For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

MJE340G



ACTIVE-REGION SAFE OPERATING AREA

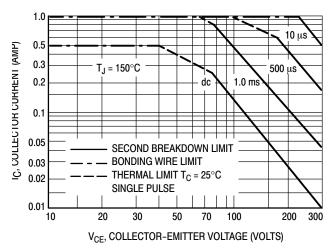
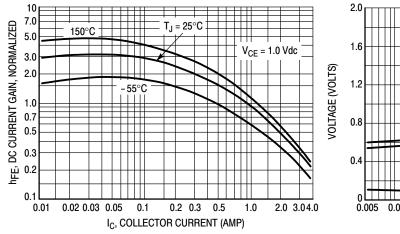


Figure 3. MJE340

There are two limitations on the power handling ability of a transistor: average junction temperature and second breakdown. Safe operating area curves indicate I_C – V_{CE} limits of the transistor that must be observed for reliable operation; i.e., the transistor must not be subjected to greater dissipation than the curves indicate.The data of Figure 3 is based on $T_{J(pk)}=150\,^{\circ}\mathrm{C};\ T_C$ is variable depending on conditions. Second breakdown pulse limits are valid for duty cycles to 10% provided $T_{J(pk)}\leq150\,^{\circ}\mathrm{C}.$ At high case temperatures, thermal limitations will reduce the power that can be handled to values less than the limitations imposed by second breakdown.

MJE340G



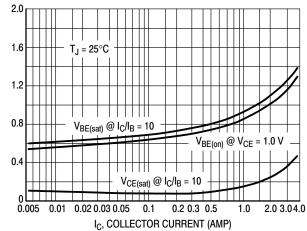


Figure 4. DC Current Gain

Figure 5. "On" Voltage

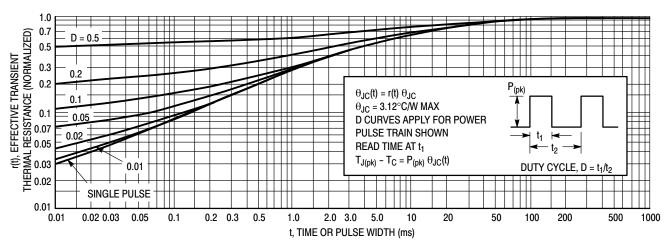


Figure 6. Thermal Response

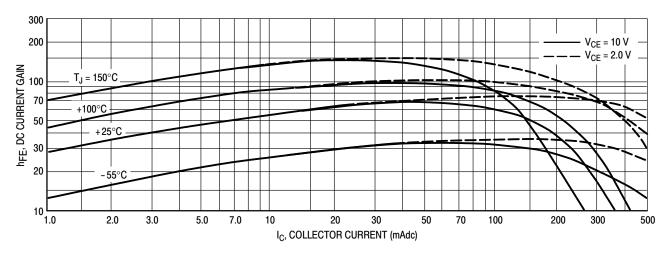
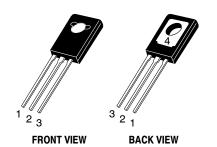


Figure 7. DC Current Gain

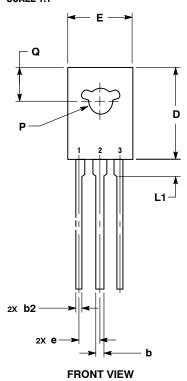


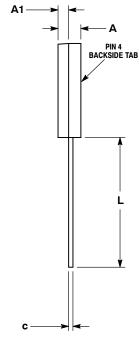


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DATE 25 MAR 2015

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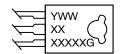


SIDE VIEW

- NOTES: 1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994. 2. CONTROLLING DIMENSION: MILLIMETERS. 3. NUMBER AND SHAPE OF LUGS OPTIONAL.

	MILLIMETERS			
DIM	MIN	MAX		
Α	2.40	3.00		
A1	1.00	1.50		
b	0.60 0.90			
b2	0.51	0.88		
С	0.39	0.63		
D	10.60	11.10		
E	7.40	7.80		
е	2.04 2.54			
L	14.50	16.63		
L1	1.27	2.54		
P	2.90	3.30		
Q	3.80 4.20			

GENERIC MARKING DIAGRAM*



= Year

ww = Work Week XXXXX = Device Code

= Pb-Free Package

*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "•", may or may not be present. Some products may not follow the Generic Marking.

STYLE 1: PIN 1. 2., 4. 3.	EMITTER COLLECTOR BASE	STYLE 2: PIN 1. 2., 4. 3.	STYLE 3: PIN 1. 2., 4. 3.	BASE COLLECTOR EMITTER	STYLE 4: PIN 1. 2., 4. 3.	ANODE 1 ANODE 2 GATE	2., 4.	MT 1 MT 2 GATE
STYLE 6: PIN 1. 2., 4. 3.	CATHODE GATE ANODE	STYLE 7: PIN 1. 2., 4. 3.	STYLE 8: PIN 1. 2., 4. 3.	SOURCE GATE DRAIN	STYLE 9: PIN 1. 2., 4. 3.	GATE DRAIN SOURCE	STYLE 10: PIN 1. 2., 4. 3.	SOURCE DRAIN

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