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Stocking Distributor

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Diodes Incorporated
MJD350-13

For any questions, you can email us directly:
sales@integrated-circuit.com

NEW PRODUCT

Lead-free Green

MJD350

HIGH VOLTAGE PNP SURFACE MOUNT TRANSISTOR

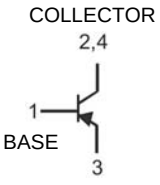
Features

- Epitaxial Planar Die Construction
- High Collector-EmitterVoltage
- Ideally Suited for Automated Assembly Processes
- Ideal for Power Switching or Amplification Applications
- **Lead Free By Design/RoHS Compliant (Note 1)**
- **"Green" Device (Note 2)**

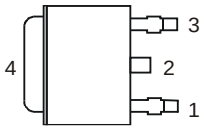
Mechanical Data

- Case: DPAK
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Finish — Matte Tin annealed over Copper Leadframe (Lead Free Plating). Solderable per MIL-STD-202, Method 208
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.34 grams (approximate)

Top View



Device Schematic



Pin Out Configuration

Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-300	V
Collector-Emitter Voltage	V_{CEO}	-300	V
Emitter-Base Voltage	V_{EBO}	-3	V
Continuous Collector Current	I_C	-0.5	A
Peak Pulse Collector Current	I_{CM}	-0.75	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation @T_C = 25°C	P_D	15	W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	8.33	°C/W
Power Dissipation @T_A = 25°C (Note 3)	P_D	1.56	W
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	81	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS						
Collector-Emitter Sustaining Voltage (Note 4)	$V_{(SUS)CEO}$	-300	—	—	V	I_C = -1mA, I_B = 0
Collector Cutoff Current	I_{CBO}	—	—	-100	µA	V_{CB} = -300V, I_E = 0
Emitter Cutoff Current	I_{EBO}	—	—	-100	µA	V_{EB} = - 3V, I_C = 0
ON CHARACTERISTICS (Note 4)						
DC Current Gain	h_{FE}	30	—	240	—	V_{CE} = -10V, I_C = -50mA

Notes:
1. No purposefully added lead.
2. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
3. Device mounted on FR-4 PCB with the minimum pad size recommended.
4. Measured under pulsed conditions. Pulse width = 300µs. Duty cycle ≤2%.

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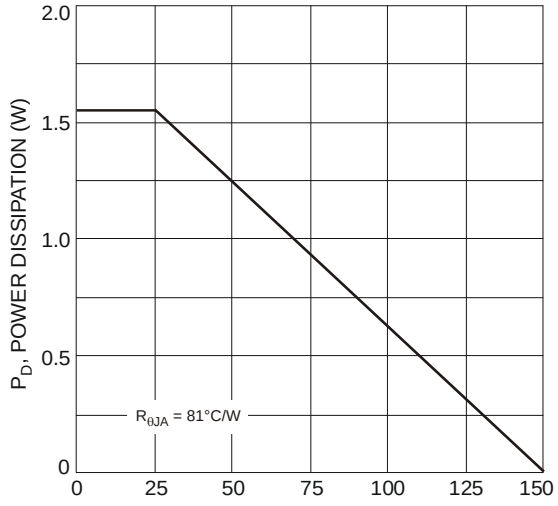

Fig. 1 Power Dissipation
vs. Ambient Temperature (Note 3)

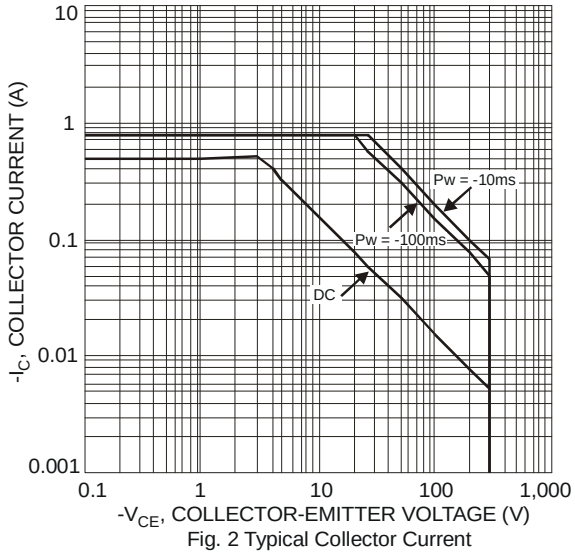

Fig. 2 Typical Collector Current
vs. Collector-Emitter Voltage (Note 3)

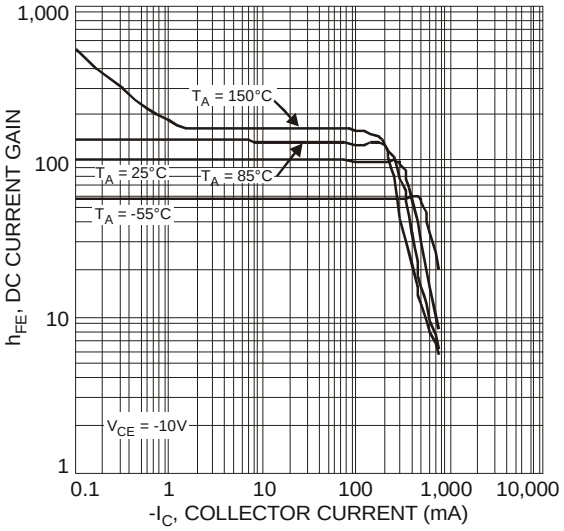

Fig. 3 Typical DC Current Gain vs. Collector Current

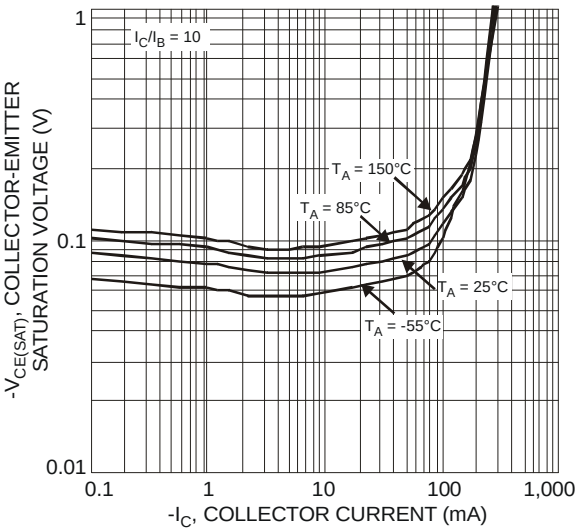

Fig. 4 Typical Collector-Emitter Saturation Voltage
vs. Collector Current

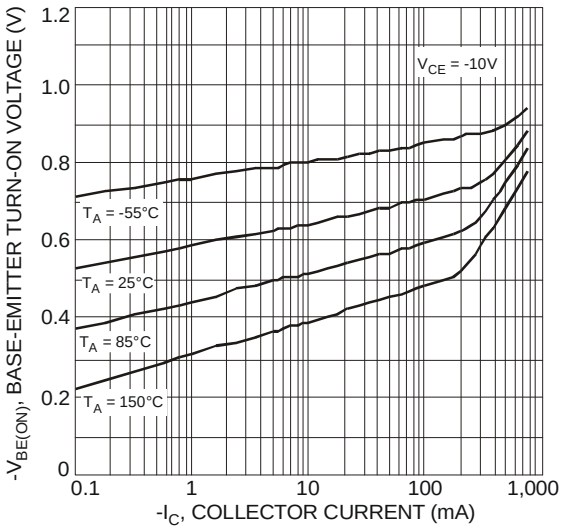

Fig. 5 Typical Base-Emitter Turn-On Voltage
vs. Collector Current

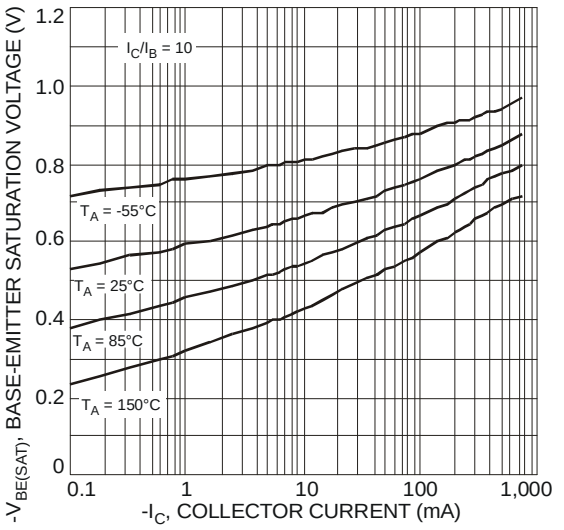

Fig. 6 Typical Base-Emitter Saturation Voltage
vs. Collector Current

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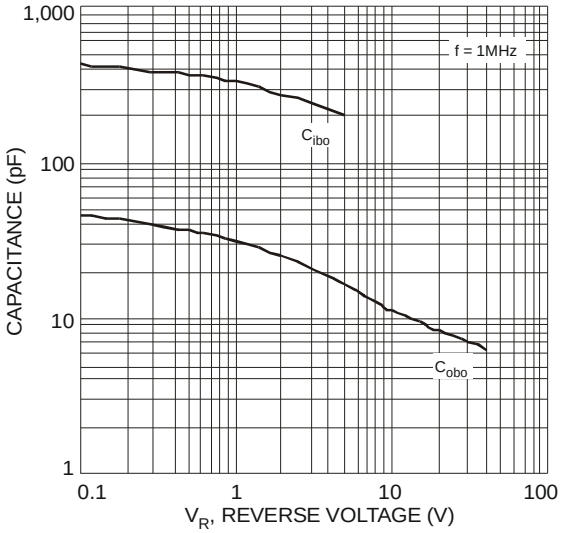


Fig. 7 Typical Capacitance Characteristics

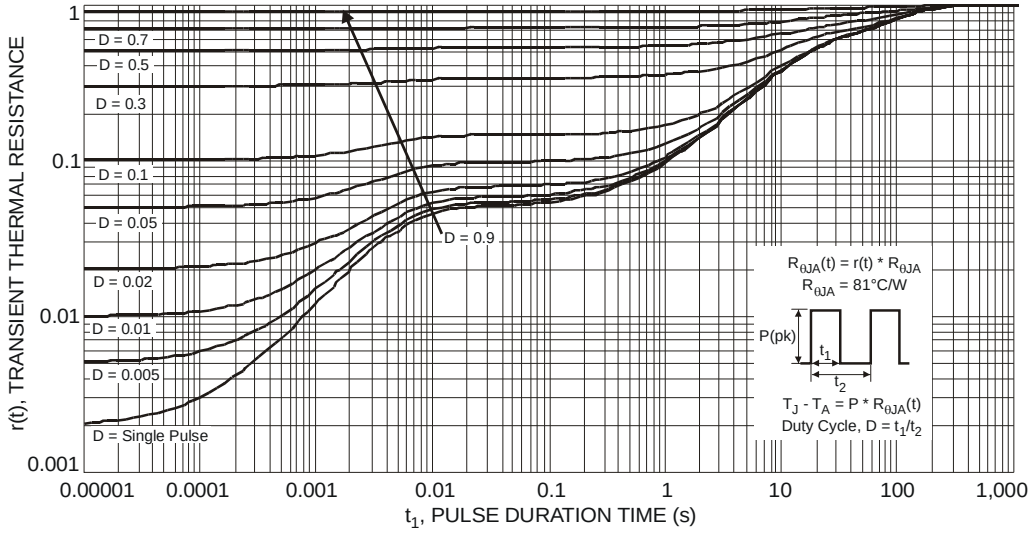


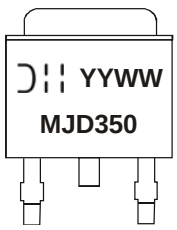
Fig. 8 Transient Thermal Response (Note 3)

Ordering Information (Note 5)

Part Number	Case	Packaging
MJD350-13	DPAK	2500/Tape & Reel

Notes: 5. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



MJD350 = Product Type Marking Code
= Manufacturers' code marking
YYWW = Date Code Marking
YY = Last Digit of Year, (ex: 08 = 2008)
WW = Week Code 01-52

NEW PRODUCT

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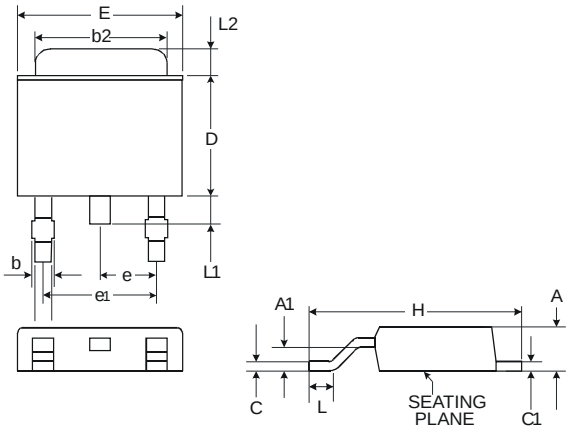
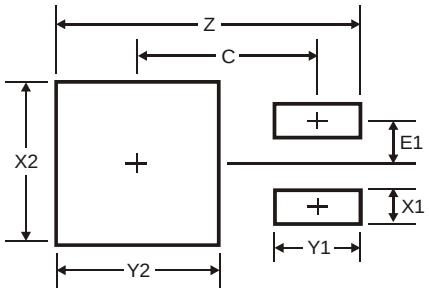
Package Outline Dimensions



DPAK		
Dim	**Min**	**Max**
A	2.18	2.40
A1	0.89	1.14
b	0.61 Typ	
b2	5.20	5.50
C	0.45	0.58
C1	0.45	0.58
D	5.40	6.20
E	6.35	6.80
e	2.28 Typ	
e1	4.57 Typ	
H	9.00	10.40
L	0.51	—
L1	0.64	1.02
L2	0.88	1.27
All Dimensions in mm		

Suggested Pad Layout



Dimensions	Value (in mm)
Z	11.6
X1	1.5
X2	7.0
Y1	2.5
Y2	7.0
C	6.9
E1	2.3