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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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80V DUAL NPN SMALL SIGNAL SURFACE MOUNT TRANSISTOR
Features & Benefits

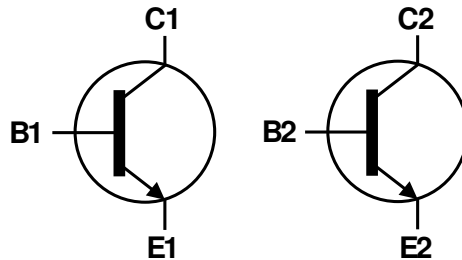
- $BV_{CEO} > 80V$
- $I_{CM} = 1A$ Peak Pulse Current
- General purpose NPN transistors ideally suited for low power amplification and switching applications
- Dual transistors in a single SOT26 package taking half the footprint of two equivalent transistors in SOT23
- Epitaxial Planar Die Construction
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **Qualified to AEC-Q101 Standards for High Reliability**

Mechanical Data

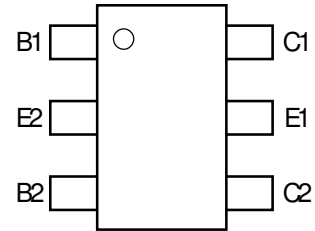
- Case: SOT26
- Case Material: Molded Plastic, "Green" Molding Compound; UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin Finish Annealed over Copper Leadframe; Solderable per MIL-STD-202, Method 208 (E3)
- Weight: 0.015 grams (Approximate)



Top View



Device Symbol


 Top View
Pin-Out

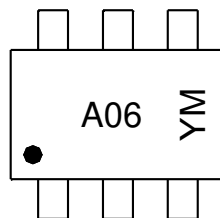
Ordering Information (Note 4)

Product	Marking	Reel size (inches)	Tape width (mm)	Quantity per reel
MMDTA06-7	A06	7	8	3,000

- Notes:
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant.
 2. See http://www.diodes.com/quality/lead_free.html for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. For packaging details, go to our website at <http://www.diodes.com/products/packages.html>.

Marking Information

SOT26



A06 = Product Type Marking Code
 YM = Date Code Marking
 Y or \bar{Y} = Year (ex: C = 2015)
 M or \bar{M} = Month (ex: 9 = September)

Date Code Key

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Code	C	D	E	F	G	H	I	J	K	L	M	
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

Absolute Maximum Ratings (@T_A = +25°C unless otherwise specified)

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	100	V
Collector-Emitter Voltage	V _{CEO}	80	V
Emitter-Base Voltage	V _{EBO}	6	V
Continuous Collector Current	I _C	500	mA
Peak Pulse Collector Current	I _{CM}	1	A

Thermal Characteristics @T_A = 25°C unless otherwise specified

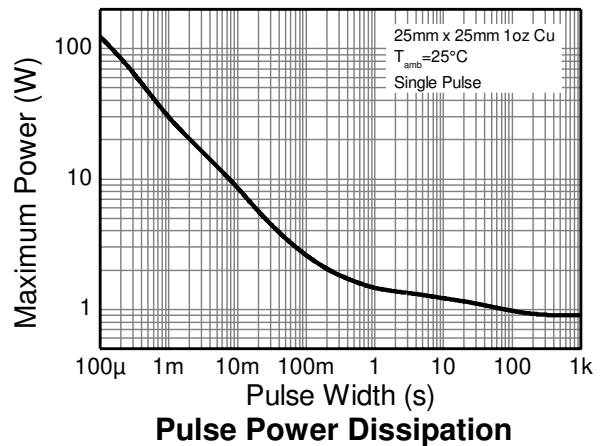
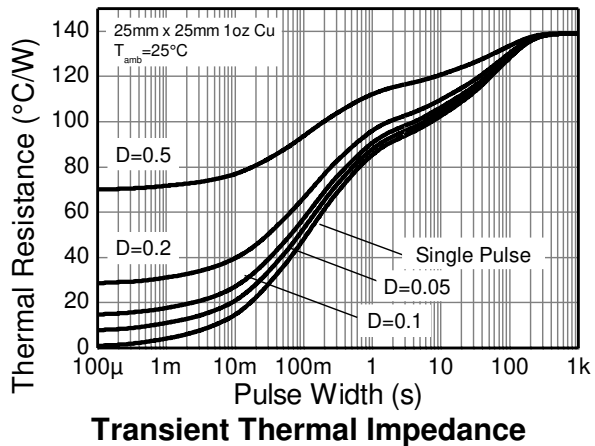
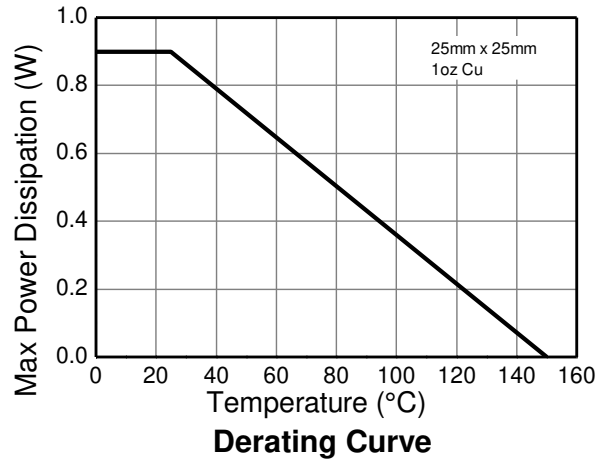
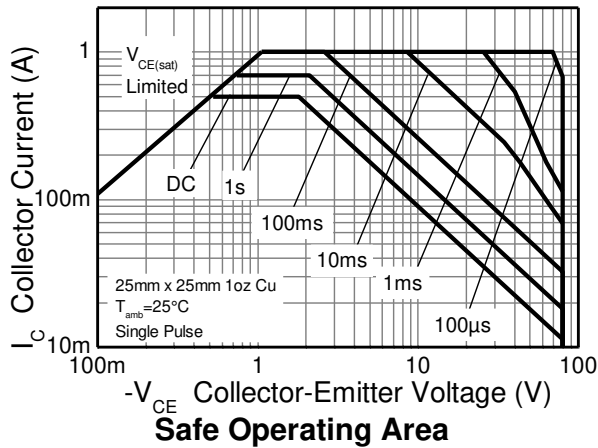
Characteristic	Symbol	Value	Unit
Power Dissipation Linear Derating Factor	P _D	1.28	W
		10.3	
Thermal Resistance, Junction to Ambient	R _{θJA}	0.90	mW/°C
		7.14	
Thermal Resistance, Junction to Lead	R _{θJL}	97	°C/W
		140	
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

ESD Ratings (Note 9)

Characteristic	Symbol	Value	Unit	JEDEC Class
Electrostatic Discharge - Human Body Model	ESD HBM	4,000	V	3A
Electrostatic Discharge - Machine Model	ESD MM	400	V	C

- Notes:
5. For a device surface mounted on 25mm x 25mm x 1.6mm FR4 PCB with high coverage of single sided 1oz copper, in still air conditions; the device is measured when operating in a steady-state condition.
 6. Same as Note 5, except the device is measured at t ≤ 5 seconds.
 7. For a dual device with one active die.
 8. Thermal resistance from junction to solder-point (at the end of the collector lead).
 9. Refer to JEDEC specification JESD22-A114 and JESD22-A115.

Thermal Characteristics and Derating Information

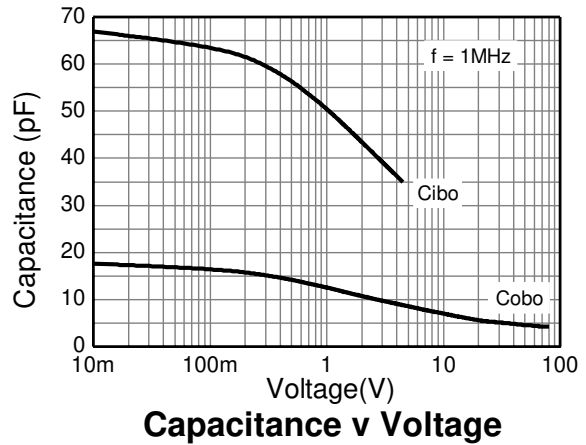
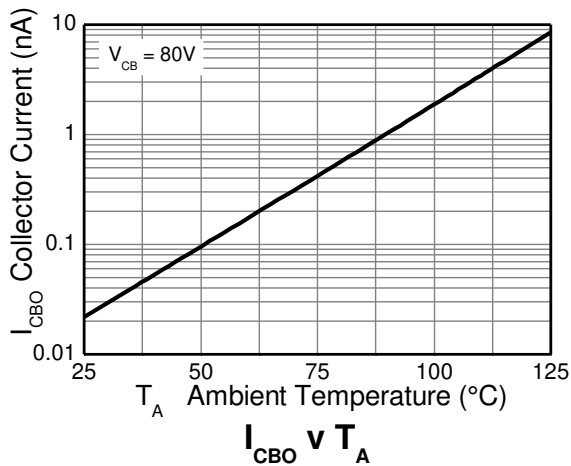
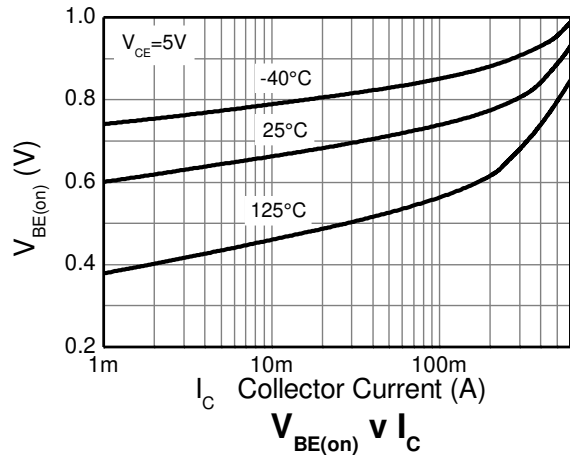
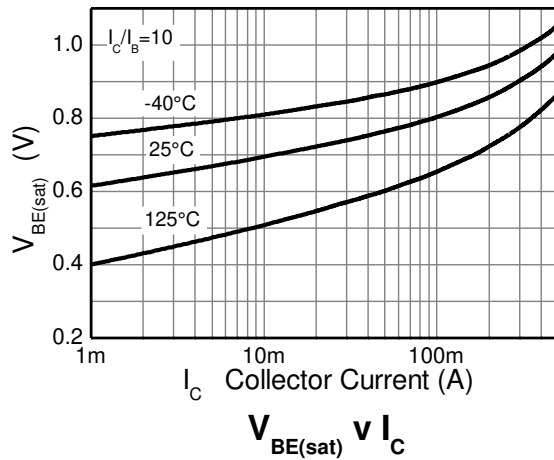
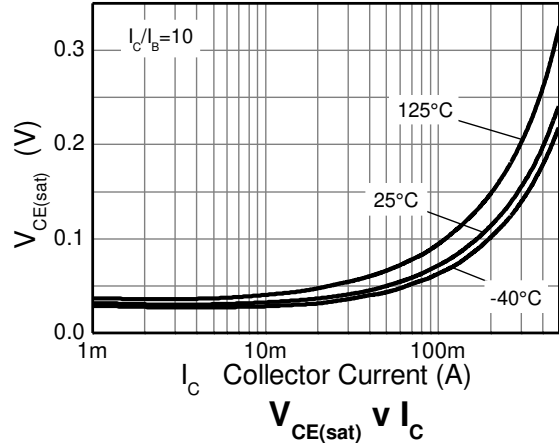
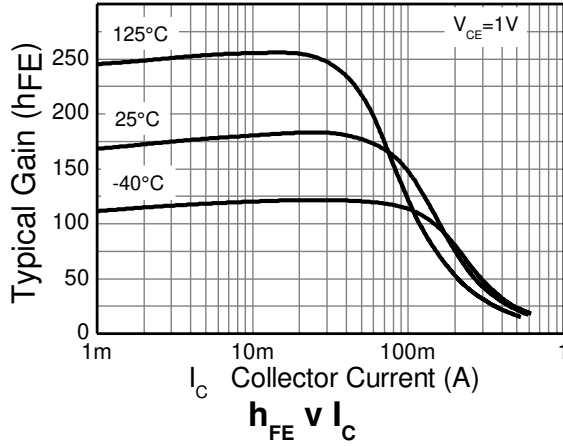


Electrical Characteristics (@T_A = +25°C unless otherwise specified.)

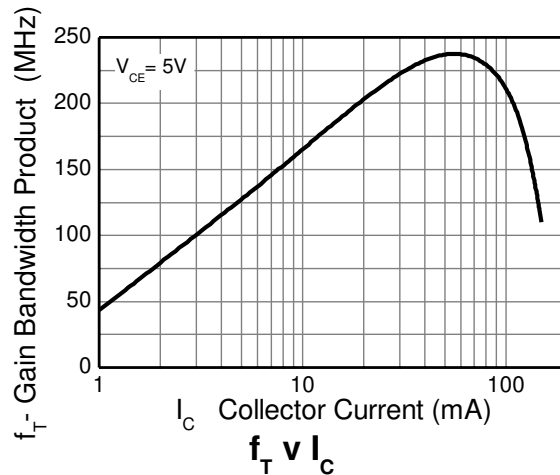
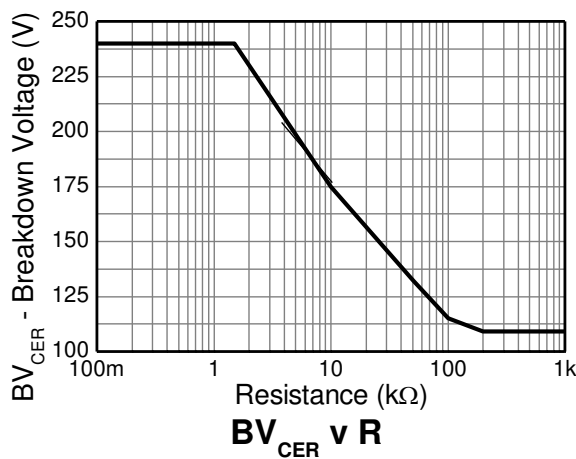
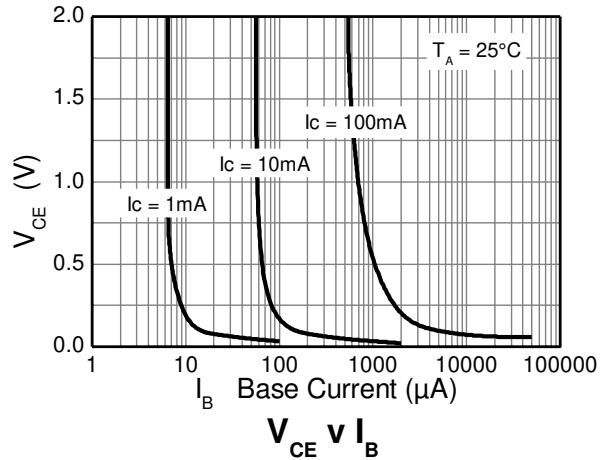
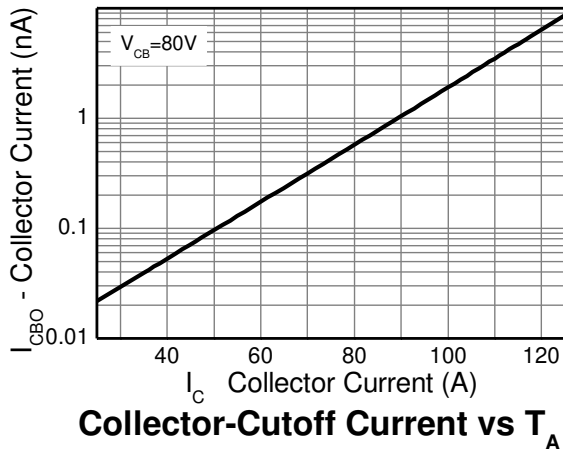
Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS						
Collector-Base Breakdown Voltage	BV _{CBO}	100	—	—	V	I _C = 100μA, I _E = 0
Collector-Emitter Breakdown Voltage (Note 10)	BV _{CEO}	80	—	—	V	I _C = 1mA, I _B = 0
Emitter-Base Breakdown Voltage	BV _{EBO}	6	—	—	V	I _E = 100μA, I _C = 0
Collector-Base Cut-Off Current	I _{CBO}	—	—	100	nA	V _{CB} = 80V, I _E = 0
Collector-Emitter Cut-Off Current	I _{CES}	—	—	100	nA	V _{CE} = 80V, I _B = 0
Emitter-base Cut-Off Current	I _{EBO}	—	—	100	nA	V _{EB} = 5V, I _C = 0
ON CHARACTERISTICS (Note 10)						
DC Current Gain	h _{FE}	100	—	—	—	I _C = 10mA, V _{CE} = 1V
		100	—	—		I _C = 100mA, V _{CE} = 1V
Collector-Emitter Saturation Voltage	V _{CE(sat)}	—	—	0.25	V	I _C = 100mA, I _B = 10mA
Base-Emitter Turn-On Voltage	V _{BE(on)}	—	—	1.20	V	I _C = 100mA, V _{CE} = 1V
SMALL SIGNAL CHARACTERISTICS						
Current Gain-Bandwidth Product	f _T	100	163	—	MHz	V _{CE} = 2V, I _C = 10mA, f = 100MHz
Output Capacitance	C _{obo}	—	7	—	pF	V _{CB} = 10V, f = 1MHz

Note: 10. Measured under pulsed conditions. Pulse width ≤ 300μs. Duty cycle ≤ 2%.

Typical Electrical Characteristics (@ $T_A = +25^\circ\text{C}$ unless otherwise specified.)

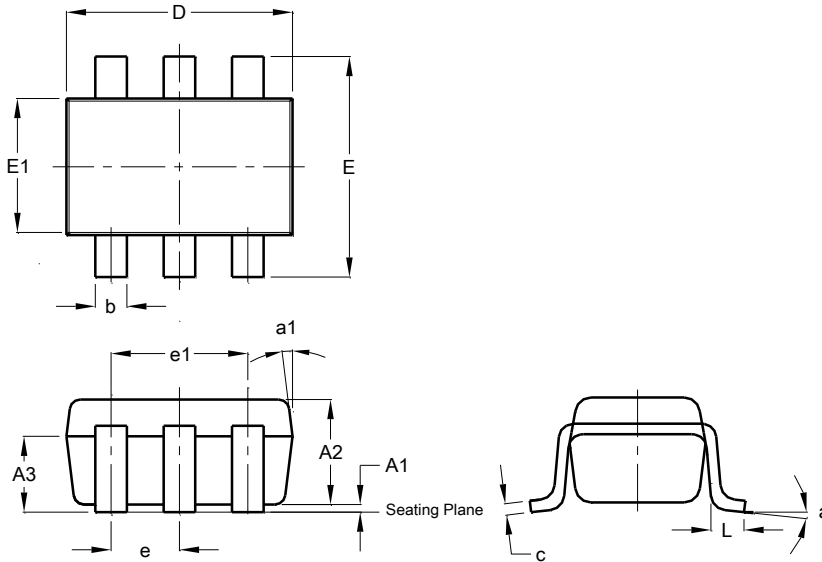


Typical Electrical Characteristics – Continued (@ $T_A = +25^\circ\text{C}$ unless otherwise specified.)



Package Outline

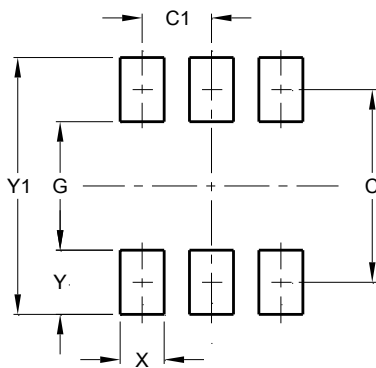
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.



SOT26			
Dim	Min	Max	Typ
A1	0.013	0.10	0.05
A2	1.00	1.30	1.10
A3	0.70	0.80	0.75
b	0.35	0.50	0.38
c	0.10	0.20	0.15
D	2.90	3.10	3.00
e	-	-	0.95
e1	-	-	1.90
E	2.70	3.00	2.80
E1	1.50	1.70	1.60
L	0.35	0.55	0.40
a	-	-	8°
a1	-	-	7°
All Dimensions in mm			

Suggested Pad Layout

Please see AP02001 at <http://www.diodes.com/datasheets/ap02001.pdf> for the latest version.



Dimensions	Value (in mm)
C	2.40
C1	0.95
G	1.60
X	0.55
Y	0.80
Y1	3.20

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